Tracing the Aesthetics of Nuclear (In)Visibility: A Comparative Study of European Audiovisual Material from the mid-20th and 21st Centuries

Alessandra Sau

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy

The University of Sheffield
Faculty of Arts and Humanities
School of Languages and Cultures

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Abstract

Nuclear production, for both military and civilian purposes, entails a common, continuous, contradictory aesthetics of visibility and invisibility. This thesis examines European audio-visual representations in which a hidden or displaced nuclear trace resurfaces from, and fuses with, violent and traumatic events (namely, the Holocaust, the Second World War, the Algerian war, Soviet imperialism, and the Cold War), which are temporally and spatially diverse.

In this study, I engage in a series of close readings, starting from the recent Netflix series Dark (2017-2020), then discussing the post-war French films *Hiroshima Mon Amour* (1959) and *La Jetée* (1962), before circling back to the present via the Danish documentary and the Lithuanian art film *Into Eternity* (2010) and *Burial* (2022). Across all these texts, I argue that the (in)visibility of the nuclear threat was a representational concern already in post-war visual culture, and has continued to be challenged, re-conceptualised, and re-contextualised into the present. I recover the ongoing tension between erasure and revelation through critical conceptions of cultural memory, forgetting, and time itself. The tension of (in)visibility becomes manifest in the aesthetic concepts of the palimpsest, nuclear sublime, and nuclear uncanny. The palimpsest enables me to map out stories re-materialising from the past. The nuclear sublime and the nuclear uncanny in turn construct, paradoxically, the identity of invisibility that is central to the nuclear aesthetic, framed within the broader visual and verbal framework of the nuclear in military and industrial senses. That is to say, representations of atomic explosions and even nuclear power plants are awe-inspiring spectacles placed outside of discursivity. Conversely, but complementarily, the nuclear uncanny enables imperceptible yet pervasive entities, such as radioactivity and buried nuclear waste, to enter into and colonise everyday life, occupying an ambiguous space between life and death, reality and hallucination. With a broad timespan and multilingual corpus, this study of nuclear aesthetics calls into question and explores the scholarly tendency towards highly differentiated, though in fact surface-level periodisations of European nuclear - and indeed memory – cultures.

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Declaration

I, the author, confirm that the Thesis is my own work. I am aware of the University's Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means). This work has not been previously been presented for an award at this, or any other, university.

Introduction

The audio-visual representation of nuclear production, both for military and civilian purposes, is expressed through a common, complex and, at times, contradictory aesthetics of visibility and invisibility, which affects both human and non-human life. This thesis examines European audio-visual materials where a hidden or displaced nuclear trace resurfaces from and intersects with violent and traumatic personal and collective events, which are temporally and spatially diverse. Drawing upon the broader field of Nuclear Culture, this tension between erasure and revelation will be disclosed through notions of cultural memory, forgetting, and time, which will further ramify into theories of the palimpsest, the nuclear sublime, and the nuclear uncanny.

These themes and concepts will be explored through a series of close readings of the German Netflix online Sci-Fi series *Dark* (Chapter I),[1] the French post-war arthouse film *Hiroshima Mon Amour*[2] and the art film *La Jetée* (Chapter II),[3] which are also read comparatively (Chapter III).[4] Finally, I will circle back to the present day via the Danish documentary film *Into Eternity*[5] and the Lithuanian art film *Burial* (Chapter IV).[6] Through these texts, I shall argue that the (in)visibility of the nuclear threat was a representational concern already in post-war audio-visual materials, which has continued to be challenged, re-conceptualised, and re-framed in the twenty-first century. The notion of the palimpsest and palimpsestic memory will be used as an interpretative tool to detect a complex network of histories rematerialising from the past and haunting the present, such as the Holocaust, the Second World War, the Algerian War, Soviet Imperialism, and the Cold War, as they converge and mix together in the fictional realm of these texts. In addition to the idea of the palimpsest, I will explore the concepts of the nuclear sublime and the nuclear uncanny, insofar as they participate in the construction of the identity of invisibility

[1] Baran bo Odar and Jantje Friese, *Dark* (Netflix, 2017-2020) <https://www.netflix.com/title/80100172> [Accessed 25 February 2024].
[2] Alain Resnais, *Hiroshima Mon Amour*, (Cocinor & Daiei, 1959) <https://www.amazon.co.uk/gp/video/detail/B01F97EI6U/ref=atv_hm_vid_c_baeECJ_1_7> [Accessed 25 February 2024].
[3] Chris Marker, *La Jetée*, (Argos Films, 1962) <https://tv.apple.com/gb/movie/la-jetee/umc.cmc.6e5xeppciapho2jw50gcau3rz> [Accessed 25 February 2024].
[4] While the titles throughout this thesis will be translated into English, some of them will be kept in their original language: among those, *Hiroshima Mon Amour*, *La Jetée*, and *Le Joli Mai*.
[5] Michael Madsen, *Into Eternity*, (Films Transit International, 2010) <https://www.amazon.co.uk/gp/video/detail/B01N1RJCOW/ref=atv_hm_vid_c_baeECJ_1_5> [Accessed 25 February 2024].
[6] Emilija Škarnulytė, *Burial*, (Just A Moment; Mer Film, 2022) <https://www.truestory.film/videos/burial> [Accessed 25 February 2024].

characterising the aesthetic discourse at the heart of the nuclear-military-industrial complex, as well as creating a disorder of space and time, for which time is not conceived in a linear fashion. As such, the representation of atomic explosions, and, to a certain degree, nuclear power plants will be addressed as exceptional, awe-inspiring, and sublime spectacles, whose aesthetic value positions them outside of history, rather than in connection with it. Conversely, the notion of the nuclear uncanny will be used to detect an environment in which imperceptible, yet pervasive entities, such as radioactivity and buried nuclear waste, enter and colonise the realm of every-day life and domesticity, occupying an ambiguous space between life and death, reality and hallucination. The structure of my chapters will echo the conception of nonlinear time emerging from these individual texts, as I begin with a recent series like *Dark*, for then go back to a period temporarily proximate to the bombing of Hiroshima and Nagasaki, and finally return to contemporary responses to the issue of nuclear waste. Furthermore, this design, as well as the heterogeneity of my choice of corpus will allow me to touch upon a variety of problematic aspects connected with the production of nuclear energy, namely nuclear accidents and nuclear waste, as well as the continuous threat of atomic warfare.

This study offers a contribution to the fields of nuclear culture, nuclear aesthetics, and cultural memory, drawing, expanding on, and connecting pre-existing theories related to the visual representation of nuclear themes with memory studies, which emerge from close readings of the primary materials. While acknowledging that the politics of representation of nuclear issues are influenced by the geographical contexts in which they arise, this thesis insists upon the transnational and transcultural orientation of these texts. In this way, the nuclear phenomenon is conceived as able to transcend nationally circumscribed boundaries and can be placed in dialogue with diverse pasts and memories circulating within a European context.

This introduction is structured to first contextualise this work within the wider field of Nuclear Culture and the anti-nuclear debates and representation in the twenty-first century, in order to offer a broader concept of this area of study which will allow me to position and compare critically the multiplicity of primary materials selected. At this stage, I will justify my choice of films and tv series, contextualising them and putting them into dialogue with other related films, art works and series. A second step will consist of the detection and mapping out of four main themes which cross the four chapters contained in this thesis. After this, a brief discussion of the methodology used will enable me to explain how the reading and analysis of the primary material will take place. Finally, a short breakdown of the chapters will be included.

Nuclear Culture

Among the works that have influenced the direction of this thesis, Jonathan Hogg's book, *British Nuclear Culture: Official and Unofficial Narratives in the Long 20th Century* has been a starting point for some reflections, allowing me to build my argument in line with and in opposition to some of the ideas and methods he sets out in his work. In his historical, cultural, and social account of British nuclear history, Hogg defines British Nuclear Culture as:

> The distinct corner of British culture characterised by the development of the nuclear state and the complex and varied ways in which people controlled, responded to, resisted or represented the complex influence of nuclear science and technology, the official nuclear state and the threat of nuclear war. As we shall see, the range of 'control, response, resistance and representation' and the influence of the nuclear state, including its material, psychosocial and spatial consequences, were considerable.[7]

In this context, Hogg addresses the "range of responses to nuclear technology", both cultural and social, which characterise the 20th century, and are related to specific British contexts.[8] In the same vein, and specifying the breath and purpose of British Nuclear Culture, in a special edition of a volume dedicated to the broader field, Jeff Hughes states that:

> To move forward we need to think more explicitly about the different social, political and ideological groups involved in the production, dissemination, mediation and reception of nuclear science and technology and their many and diverse representations and sites; we need to consider the political and ideological relations between these groups; and we need properly to historicise the flux of interpretations in the cultural production and consumption of the nuclear.[9]

Both Hogg and Hughes emphasise the need to detail the specific connotations of British Nuclear Culture, by avoiding vague and all-encompassing categories, such as "nuclear theatre", "nuclear fiction", "nuclear film",[10] which, as Sastre-Juan and Valentines-Alvarez articulate, bring about a

[7] Jonathan Hogg, *British Nuclear Culture: Official and Unofficial Narratives in the Long 20th Century* (New York: Bloomsbury Academic, an imprint of Bloomsbury Publishing Plc, 2016). P.7. Ebook Central ebook.
[8] Ibid., p.3.
[9] Jeff Hughes, 'What Is British Nuclear Culture? Understanding Uranium 235', *The British Journal for the History of Science*, 45.4 (2012), 495–518 (p.504) <https://doi.org/10.1017/S0007087412001021>.
[10] Ibid., p.504.

reification of nuclear culture, depicting it as a "monolithic category."[11] Therefore, rather than universalising and generalising the discourse around the causes, origins and responses to nuclear issues, the authors advocate for "contextualised analyses of the production, circulation, and appropriation of specific cultural practices."[12] They also evidence the importance of framing these arguments within specific geographical contexts, in order to draw conclusions about the state of nuclear culture through a historical, cultural and social lens.[13]

In his work specifically, Hogg pinpoints a tension between "official narratives" channelled by the "nuclear state", namely "those source materials that have a state-institutional origin and are linked directly to political and military policy making, civil defence and foreign policy",[14] and "unofficial narratives." The category of "unofficial narratives" is employed by Hogg to address discourses constructed by the media, popular culture, fiction, as well as "reflections on everyday life in the Cold War era."[15] Hogg bases his analysis on a wide range of cultural materials, including "literature, film, music, art, television, radio, video games and cartoon [...] pamphlets, music, posters and other paraphernalia", as well as "architecture and design [...] urban planning and broader motifs that can be found in visual culture."[16] When talking about popular culture and audio-visual production, he focuses on cultural outputs whose relation with the "official narratives" and "the nuclear state" varies depending on the historical period in which they are created, and which either stand in opposition to the nuclear complex, or generate less critical responses to it.[17]

According to Hogg, in the period between the 1950s and the 1980s, fictional narratives reckoning with the nuclear threat were characterised by satirical tones and more "extreme representations of the nuclear war",[18] which allowed them to pursue a trenchant critique of the atomic state, and to identify "the absurdity of the global nuclear situation" particularly in the 1980s.[19] As Hogg points out:

[11] Jaume Sastre-Juan and Jaume Valentines-Álvarez, 'Fun and Fear: The Banalization of Nuclear Technologies through Display', *Centaurus*, 61.1-2 (2019), 2-13 (p.6) <https://doi-org.sheffield.idm.oclc.org/10.1111/1600-0498.12223>.
[12] Ibid., p.6.
[13] The authors explain this perspective by pointing out that "emotions are context-specific social constructions". Sastre-Juan and Valentines-Álvarez, 'Fun and Fear', 61, p.6.
[14] Hogg, *British Nuclear Culture*, p.9.
[15] Hogg, *British Nuclear Culture*, p.5.
[16] Ibid, p.4.
[17] Ibid, p.9.
[18] Ibid., p. 132.
[19] Ibid., p.154.

> These narratives reminded the British that the nuclear state was not a natural, permanent part of life, although this was the impression often given by official narratives, as well as from histories of the nuclear century written with the illusion of neutrality and 'objectivity'.[20]

Hogg maintains that the radical "unofficial nuclear narratives" developing in this period were running in parallel with an anti-nuclear movement, which was increasingly more explicit in its criticism of nuclear policies, and responded to the pervasive menace of nuclear annihilation in the Cold War period, rendered more tense and imminent by events like the Missile Crisis in Cuba.[21] In this context of growing anxieties, Hogg suggests that "the rise in anti-nuclear thought led to direct and confident challenges to nuclear policy, often reflected in fiction and film." (132) This trend would continue into the 1980s, a decade characterised by "the rise of an increasingly vocal and radical anti-nuclear agenda".[22]

In opposition to this trend, Hogg pins down a crucial shift in the perception of the nuclear threat, which found its place in fiction in the period between 1990 to 2015. In this stretch of time, Hogg notices that the politically charged representations of a dreaded atomic conflict and nuclear armament characterising the years until the end of the 1980s[23] are superseded by "nostalgic, politically passive" and fragmented depictions of the nuclear threat.[24] The central difference between these most recent unofficial narratives and those from the 1960s to the 1980s is that the nuclear state has become more and more depoliticised and less predominant in the concerns of the public, and, therefore, of fiction. As Hogg points out:

> Scenarios are constructed primarily for comedy, and the most negative aspects of nuclear survivor fiction – namely death, psychological trauma, radioactive contamination or genetic mutation – are either ignored, downplayed or played for laughs. The central difference between these most recent unofficial narratives in comparison to the satire of the 1960s and 1980s is that the humour stems, in part, from the unreality and depoliticization of the nuclear weapons state.[25]

[20] Ibid., p.9.
[21] Ibid., p.132.
[22] Ibid., p.132.
[23] Hogg, *British Nuclear Culture*, 145-146.
[24] Ibid., p.164.
[25] Ibid., p.165.

In synthesis, Hogg believes that, regarding British culture, the nuclear issue has become a fading phenomenon, and this impression is echoed, on a representational level, by a variety of de-politicised, ironic or flattened out fictional narratives dealing with nuclear themes.[26]

In order to explicate this trend, Hogg offers a variety of examples in popular culture, especially television series, films, music and graphic novels, which bring to the surface "a set of assumptions on audience response that reflects a broader shift in nuclear perceptions."[27] Hogg reaches the conclusion that the progressively depoliticised public response to the British nuclear state is represented by a shift in depiction of the mushroom cloud, which, from an icon of the nuclear age, has become a "kitsch", hollow, and innocuous symbol, whose evocation of war and destruction belongs to the past. In Hogg's words, in the period between 1995 and 2015:

> Nuclear representation has reached a depoliticized, sanitised stage, where the nuclear state is rendered invisible by the familiar and repetitive iconography of the mushroom cloud, where victimhood or nuclear legacies are rarely explored. Rather, nuclear kitsch is mobilised to recreate a lost and harmless past, doing the work of depoliticization in its absence of critical engagement with the politics of the nuclear state or its denial of after-effects and victimhood. It is here that nuclear subjectivity falls away to reveal the emptiness of nuclear iconography.[28]

If Hogg utilises a spectrum of influences, and cultural material that is broad and various in order to create a detailed historical and cultural analysis of nuclear culture in the UK, which in turn allows him to draw "a set of assumptions" concerning audiences' responses to the issue,[29] the aim of this thesis is not to retrace a nuclear history of Europe through audio-visual outputs. Conversely, the idea is to narrow down the scope of analysis in order to offer a deeper cultural and aesthetic understanding of the films and series selected through the methods of close reading and cultural analysis, as well as identifying a trend in cultural discourse related to nuclear technologies as an evolving issue, but one that is still keenly felt. If Hogg believes that, in the period post-1995, "Nuclear representation has reached a depoliticized, sanitised stage" for which ""nuclear kitsch is mobilised to recreate a lost and harmless past",[30] this thesis will maintain that in the second decade of the twenty-first century the nuclear discourse in films, tv series, and documentaries has reasserted itself through a critical outlook, which challenges representations

[26] Ibid., p.165.
[27] Ibid., p.165.
[28] Ibid., p.172.
[29] Hogg, *British Nuclear Culture*, p.165.
[30] Ibid., 172.

of nuclear kitsch, and responds to a variety of events linked to nuclear technologies. As will be argued in Chapter I of this thesis, for example, the German Netflix series *Dark* utilises the icon of the mushroom cloud to observe that, unlike the depictions found in fictional representations from the 1960s to the 1980s critiqued by Hogg, nuclear technologies are "not necessarily a natural, permanent part of life."[31]

Another aspect of the changing politics of representation of the nuclear threat that Hogg puts forward, and I challenge, refers to the fact that the latter has assumed a less preponderant position in some recent fictional narratives. In this context, Hogg notices that the characters' individual narratives have replaced the nuclear explosion and its consequences. He maintains that:

> The detonation of a nuclear device over an urban centre and the depiction of panic, death, contamination and mutation, are downplayed in favour of in-depth development of characters and their complex life stories.[32]

The assumption of a shift from the centrality of the nuclear issue to more general storylines will be contested in this thesis, putting forward case studies from outside the British context. In Chapter II, a transnationally successful film like Alain Resnais' *Hiroshima Mon Amour*[33] and a widely influential film like Chris Marker's *La Jetée* will be used to indicate how personal stories are positioned in the foreground of the narrative, while the nuclear element remains in the background, as well as constituting the milieu within which other "histories" are commented upon and explored already in the 1950s and 1960s.[34] Both films share common politico-aesthetic themes, which use filmic language to reflect on war, memory, and forgetting critically. In both

[31] Ibid., p.9.
[32] Ibid., p.166.
[33] As Resnais observes about the reception of *Hiroshima Mon Amour*, the film was successful "everywhere but Japan. It was especially well-received in Italy, South America, Belgium, England…" In Alain Resnais, 'Hiroshima Mon Amour: A Composite Interview with Alain Resnais', in *Film: Book 2: Films of Peace and War*, ed. by Robert Hughes (New York: Grove Press, 1962), pp.49-64 (p.60).
[34] In relation to the influence of *La Jetée* on cinema, Nora M. Alter states: "*La Jetée* has generated the greatest amount of critical attention of all of Marker's films and has achieved the status of a cult classic, largely because of the theoretical discussions it has provoked. [...] Yet its appeal also derives from the fact that it is the only work of narrative fiction in Marker's oeuvre thus far. This filmic genre addresses a much broader audience than the others within which Marker operates." In Nora M Alter, *Chris Marker*, (Champaign: University of Illinois Press, 2006), p.67. iPad Bookstore ebooks.
By the same token, Cohen maintains: "Chris Marker's *La Jetée* (1962), an extremely intelligent and technical film, remains a constant reference in the history of cinema 40 years after its creation." In, Alain J.-J. Cohen, '12 Monkeys, Vertigo and La Jetée. Postmodern Mythologies and Cult Films', *New Review of Film and Television Studies*, 1.1 (2003), 149–64 (149) <https://doi-org.sheffield.idm.oclc.org/10.1080/17400300320001376O3>.

cases, the nuclear theme offers a backdrop on which "a classic love story,"[35] as Resnais addresses it, or a "banal story" in the words of Duras, is recounted.[36] These examples will also serve to argue that the nuclear bomb had set up a cultural and aesthetic imaginary through which to discuss and confront a variety of themes already current in the 1950s and 1960s. In *Hiroshima Mon Amour*, for example, the nuclear context functions as an inverted mirror through which to observe the unstoppable rise of a post-war consumerist society, in which affects such as indifference and apathy towards war-related contemporaneous issues (such as the Algerian War, as I will argue later in this introduction), and the past (including the bombing of Hiroshima and Nagasaki) were conceived as two interlacing themes. The issue of indifference emerges, in fact, from the screenplay of *Hiroshima Mon Amour*.[37] As Sandrine Sanos points out: "In their early discussions, Resnais wanted to stress French indifference to the Hiroshima bombing."[38]
In this sense, both films engage in a palimpsestic relationship with a variety of history overlapping within the same space of the films.

Audio-Visual Productions and Anti-Nuclear Debates in the Twenty-First Century

As observed above, Hogg reveals the invisibility of the nuclear phenomenon in recent fictional narratives up until 2015, by maintaining that "the nuclear state is rendered invisible by the familiar and repetitive iconography of the mushroom cloud, where victimhood or nuclear legacies are

[35] Translation from the original sentence uttered by Resnais "une histoire d'amour savait dire classique" at minute [00:08:42]. In: Adriana Guzmán, *Alain Resnais Interview 2*, online video recording, YouTube, 11 January 2013, <https://www.youtube.com/watch?v=S_WSCZzi2rk> [accessed: 26 February 2024].
[36] "Histoire banale." Marguerite Duras, *Hiroshima Mon Amour - Scénario et Dialogue.* (Paris: Éditions Gallimard, 2013). iPad Bookstore ebooks, p.5.
[37] This idea of indifference affecting people in relation to the bomb is evoked by Georges Bataille in the text dedicated to Hersey's *Hiroshima* and written in 1947. The essay starts with a general comment about the perception of the bomb, which is met with both "indifference" and "panic." Bataille writes: "The double current of panic (in the realm of discourse) and indifference (practically total in the realm of decisionmaking, and quite substantial in the realm of feeling) is almost the same as it was ten years ago." (p.222). Bataille continues his initial considerations on the bomb thus: "The remoteness of where the bomb fell is not merely geographic; one cannot deny that the spiritual bonds between the Nipponese world and our own are weak. Thus the bomb that fell on Hiroshima and Nagasaki offer more for reflection than for feeling. One has to admit that had they fallen on Bordeaux or on Bremen [...] the bombs would not have had for us the sense of quasi-scientific experiments – whose magnitude overwhelms the imagination, but whose tragic effect is no less outside of sensory representation than it is undeniable." In Caruth, Cathy, *Trauma: Explorations in Memory* (Baltimore, MD: Johns Hopkins University Press, 1995), p.223. It is, therefore, fair to assume that Resnais might have been influenced by these philosophical reflections on Hiroshima. I will further return to Bataille's text via Didi-Huberman interpretation of it in Chapter III of this thesis, to discuss the "sensory representation" of the atomic bomb.
[38] Sandrine Sanos, ''My Body was Aflame with His Memory': War, Gender and Colonial Ghosts in Hiroshima mon amour (1959)', *Gender & history*, 28.3 (2016), 728–753 (p.736) < https://doi-org.sheffield.idm.oclc.org/10.1111/1468-0424.12247>.

rarely explored".[39] Hogg uses, as an example, the representation of nuclear energy depicted in the animated series *The Simpsons* to support his theory, addressing it as the epitome of a trend through which to signal "the depoliticization of nuclear representation, influencing cultural perceptions of nuclear power through the repetitious use of the three-eyed fish, perhaps the postmodern icon of popular nuclear perceptions."[40] Contrary to this trend detected by Hogg, at the time of writing, innumerable fictional outputs, aided by the diffusion of video-on demand and streaming media services like Netflix, have focussed on the discussion, analysis, and fictionalisation of the nuclear phenomenon. In addition to *Dark*, which, as it will be argued in Chapter I and Chapter III, bases its fictional universe on the complexity of nuclear legacies as well as implicitly tackling dynamics of victimisation and trauma, in recent years Netflix has produced a variety of films, series and docu-series which confront problematic aspects of nuclear technologies. Audio-visual fiction and non-fiction products, therefore, play a significant role in rekindling debates around the dangers of nuclear technologies, while also pointing out the growing interest of streaming media platforms in offering viewers transnational perspectives on nuclear accidents. Among Netflix's original programming between 2017 and 2023, for example, a variety of productions from different countries and languages focus on nuclear disasters. Besides *Dark*, which came out in 2017 and will be discussed in detail in this thesis, it is worth listing the following: the 2021 Russian film *Chernobyl 1986*, which responds to the 1986 Chernobyl nuclear energy accident;[41] the 2022 American docu-series *Meltdown: Three Mile Island*, which retraces the events surrounding the 1979 nuclear power plant accident in Pennsylvania;[42] and the 2023 Japanese series *The Days*, which navigates the 2011 Fukushima Daiichi nuclear power plant disaster.[43] Additionally, one episode of the 2019 documentary series *Dark tourist* is dedicated to the site of the Daiichi nuclear power plant accident,[44] while a docudrama on Albert Einstein called *Einstein and the bomb* came out in February 2024.[45]

[39] Hogg, British Nuclear Culture, p.172.
[40] Hogg, *British Nuclear Culture*, p.164.
[41] Danila Kozlovskiy, *Chernobyl 1986* (Netflix 2021) <https://www.netflix.com/gb/title/81435414> [Accessed 26 February 2024].
[42] Kief Davidson, *Meltdown: Three Mile Island* (Netflix 2022) <https://www.netflix.com/title/81198239> [Accessed 26 February 2024].
[43] Masaki Nishiura and Hideo Nakata, *The Days* (Netflix 2023) <https://www.netflix.com/title/81233755> [Accessed 26 February 2024].
[44] David Farrier et al., 'Japan', *Dark Tourist* (Netflix 2019) <https://www.netflix.com/title/80189791> [Accessed 26 February 2024].
[45] Anthony Philipson, *Einstein and the Bomb* (Netflix 2024) <https://www.netflix.com/title/81474469> [Accessed 26 February 2024].

Beyond Netflix, a successful series which brought back attention to the nuclear energy accident in Ukraine in 1986 is the 2019 HBO series *Chernobyl*,[46] based on Svetlana Alexievich's book *Chernobyl Prayer: A Chronicle of the Future*.[47] As Gambarato, Heuman and Lindberg point out:

> High-quality cultural productions such as *Chernobyl* have the potential to (1) spread information and awareness of historical events to vast and diverse audiences worldwide, (2) to reignite discussions on complex and controversial topics such as nuclear power, (3) to alter local and global perceptions of the past as mentioned by Alexievich, and (4) to powerfully connect and combine personal and collective memories which can teach us about ourselves, our times, and our cultures.[48]

Without delving too deeply into these audio-visual materials, it is crucial to say that each product has a similar topic in common, namely nuclear accidents. At the same time, these events take place in diverse contexts as well as offering multiple perspectives which, moreover, differ depending on the genre (whether they be fictional or non-fictional, series or films), and how their structure and aims vary from one platform to another. In this context, however, it suffice to say that the cultural significance of these productions in confronting nuclear themes is echoed by the way they generate debate beyond the specific topic of nuclear safety. In her analysis of the Netflix series *Dark*, Lorena Silos Ribas observes that:

> Further events - such as the accident at Fukushima, and the ongoing debate worldwide over the safety of nuclear plants, together with the global success of Chernobyl, the series launched by HBO in May 2019 - have contributed to widespread suspicion of nuclear power in other countries.[49]

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[46] Renira Rampazzo, Gambarato, Johannes Heuman, and Ylva Lindberg, 'Streaming Media and the Dynamics of Remembering and Forgetting: The Chernobyl Case', *Memory Studies*, 15.2 (2022), 271–86 (p.272) <https://doi-org.sheffield.idm.oclc.org/10.1177/17506980211037287>. For the HBO original series, see: Chernobyl (HBO, Sky Atlantic 2019) <https://www.nowtv.com/watch/chernobyl/iYEQZ2rcf32XNZDFHaYhzo> [Accessed 26 February 2024]. Significantly, in response to the HBO series *Chernobyl*, a Russian series offering another version of the events on Chernobyl came out in 2022. See for example: Kyle Swenson, 'Unhappy with HBO's 'Chernobyl,' Russia is planning its own series - blaming the CIA', *The Washington Post*, 7 June 2019 <https://www.washingtonpost.com/nation/2019/06/07/unhappy-with-hbos-chernobyl-russia-is-planning-its-own-series-blaming-cia/> [Accessed 26 February 2024].
Andrew Roth, 'Russian TV to air its own patriotic retelling of Chernobyl story', *The Guardian*, 7 June 2019 <https://www.theguardian.com/world/2019/jun/07/chernobyl-hbo-russian-tv-remake> [Accessed 26 February 2024].
This is relevant insofar as it further stresses the major influence of the series *Chernobyl* in reigniting the political debate around the nuclear accident beyond safety concerns.

[47] Svetlana Aleksievich, *Chernobyl Prayer: A Chronicle of the Future*, trans. by. Anna Gunin and A. L. Tait (London: Penguin Classics, 2016)

[48] Gambarato, Heuman and Lindberg, 'Streaming Media and the Dynamics of Remembering and Forgetting', p.282.

[49] Lorena Silos Ribas, 'Looking into the Abyss: The Transnational Puzzle in Dark', in Entertaining German Culture: Contemporary Transnational Television and Film ed. by Stephan Ehrig, Benjamin Schaper, and

In addition to providing an outlet in which to express concerns about nuclear technologies, as Silos Ribas claims, Gambarato, Heuman and Lindberg observe that "Chernobyl serves as a catalyst for discussion of important issues in contemporary culture, such as climate change, fake news, and state corruption."[50] Since the series touches upon a variety of topics which resonate with the wider public vis-à-vis contemporary issues, the representation of nuclear technology and accidents becomes a reactor reigniting wider political and social unease.

Further to the capacity of some of these shows to reignite public discussions on nuclear topics, another aspect of these series is the complex relationship they establish with the past, also in terms of nostalgia. As noticed above, Hogg identifies nostalgia appearing in post-1995 texts as a contributing factor to either framing the military and civilian use of nuclear technology as benign, or as informing an empty and spectacular representation of the "nuclear weapons culture."[51] As will be discussed in Chapter I, the postmodern phenomenon of nostalgia is part of the aesthetics of *Dark*. As Silos Ribas points out: "The thesis that streaming platforms - just like film or television before them - capitalise on nostalgia is not new; they do so in order to develop a sense of community and/or generational identity in viewers."[52] The streaming platform Netflix specifically has been analysed as a conduit of various types of nostalgic tendencies, not just in terms of content, but also with regards to the structural nature of the platform. In the edited collection *Netflix Nostalgia*, Kathryn Pallister observes that "Netflix fuels and is fueled by audience desire for nostalgic content, as both a platform for audiences to rewatch beloved content from the past and a creator of original content with nostalgic impulses."[53] This is to say that nostalgia is a complex concept which can either be conceived as a limit to progress, as Svetlana Boym frames it,[54] but it can also initiate a productive dialogue with memory. In this sense, for example, as Giulia Taurino remarks:

> As "new media" were able to generate a sedimentation of content not only in physical archives, but also in virtual repositories, they freed nostalgia from the

Elizabeth Ward (New York, Oxford: Berghahn Books, 2023), pp. 259-282 (p.272) <https://doi.org/10.3167/9781805390558>.

[50] Gambarato, Heuman and Lindberg, 'Streaming Media and the Dynamics of Remembering and Forgetting', p.279.

[51] Hogg, *British Nuclear Culture*, p.167.

[52] Silos Ribas, 'Looking into the Abyss', p.270.

[53] Kathryn Pallister, 'Introduction', in *Netflix Nostalgia: Streaming the Past on Demand*, ed. by Kathryn Pallister (London: Lexington, 2019), pp.4-8 (p.1). iPad Bookstore ebooks.

[54] Svetlana Boym, *The Future of Nostalgia* (New York:Basic Books, 2001), p.7.

> constraints and frailties of human memory. Today nostalgia is not so much about memory as it is about the media industry itself.[55]

In this way, nostalgia is enabled by a "virtual repository" which renegotiates between the individual and the collective in the generation of memory. This is a crucial aspect to highlight since, as Gambarato, Heuman and Lindberg further articulate in relation to *Chernobyl* and the reconfiguration of nuclear issues:

> Instead of leading to a collapse of memory, as has been suggested regarding the increasing impact of television since the 1990s, retrospection and nostalgia are, on the contrary, important assets of streaming media.[56]

In this sense, the role of nostalgia which Hogg emphasises as generating flattened-out representations of nuclear war can be discussed in more complex terms if confronted by an approach to the past which uses nostalgia as a productive and dialectical process, rather than one aimed at conceiving "depoliticized representations of the nuclear past."[57] In a series like *Dark*, for example, the employment of a nostalgic mode both on an aesthetic and narrative level contributes to the creation of a structure of continuity and discontinuity between past and present germane to its non-linear narrative, as well as feeding into the ambiguous sense of the familiar and unfamiliar through the Freudian uncanny and the nuclear uncanny, which characterise the series. Ultimately, rather than suppressing extreme representations of nuclear danger and rendering them harmless, *Dark*'s nostalgia is part of a narrative aimed at creating a constant feeling of horror in relation to nuclear energy and anticipation of atomic explosions, through an uncanny encounter of past, present and future.

These reflections, concerning a modified mass media landscape in which nuclear themes resurface, capturing the interest of the public, led me to consider a new era of nuclear aesthetics in audio-visual productions. It is with this question in mind that I selected a variety of texts to analyse closely and compare. As Hogg further comments in his book: "There continue to be more artistic responses to the nuclear century, increasingly reflecting upon the legacy and meaning of the actions of nuclear states."[58] Therefore, rather than drawing upon a conception of Nuclear

[55] Giulia Taurino, 'Crossing Eras: Exploring Nostalgic Reconfigurations in Media Franchises', in *Netflix Nostalgia: Streaming the Past on Demand*, ed. by Kathryn Pallister (London: Lexington, 2019), pp. 8-23 (p.10). iPad Bookstore ebooks

[56] Gambarato, Heuman and Lindberg, 'Streaming Media and the Dynamics of Remembering and Forgetting', p.273.

[57] Hogg, *British Nuclear Culture*, p.164.

[58] Ibid., p.166.

Culture which is based exclusively on the behaviours, traditions and characteristics related to the industry, the aim of this thesis is to focus on the cultural forms framed in their various articulations as popular culture, artistic expressions and documentary practices. This diversity of outputs enables a reflection on, and a critique and analysis of the limitations and dangers of the nuclear complex. In this context, art is addressed not as a peripheral component of culture, but as a central form of expression, whose activism and public interventions offer a fundamental and strategic contribution in changing the discourse around the nuclear industry, both by challenging its status quo and having a direct impact, rendering visible the problematic aspects of nuclear technologies. In briefly discussing art forms as offering concrete ideas and significant alternatives to the nuclear complex, Hogg observes:

> In terms of art and design, nuclear imagery continues to inspire, and intellectual movements have developed that reflect more consciously on the problematic links between the nuclear state and artistic expression. Recent work curated by Ele Carpenter explored the ways in which artists can contribute to the decommissioning of nuclear submarines.[59]

Therefore, instead of addressing Nuclear Culture by lingering on one category over another, my intention is to put into dialogue diverse critical viewpoints expressed through artistic and cultural creations. I will draw aspects in common and evidence differences in representation to map out the evolving nature of representation in relation to nuclear technologies, expressed across time and space within a European context.

There were other productions belonging to this time frame that I could have added to the list of art films, documentaries, and series on which I have chosen to focus. Many of the examples put forward above in the introduction deal with different aspects of invisibility in relation to the nuclear threat, either outlining the tendency to hide the truth about nuclear accidents, as in the case of the docu-series about *Three Mile Island*, or dealing with the invisibility of radioactivity, as in the series devoted to the Fukushima Daiichi accident. However, my choice was motivated by the legacies of the atomic bomb combined with the Chernobyl accident. In this sense, the purpose of this thesis is to sketch out a European aesthetic discourse which begins with the atomic bombing of Hiroshima and Nagasaki, passes through the Chernobyl nuclear accident, and, more recently, reckons with the material and long-term consequences of the nuclear production cycle, namely the nuclear waste, and how this could be detected in both fictional and non-fictional productions. Since my approach is not only historical, I will be analysing these texts in a structural way, which

[59] Hogg, *British Nuclear Culture*, p.167.

means that I will detect the internal and multiple structures of these texts, while also putting them in dialogue with one another via the same inner structure emerging from their analysis. This approach also justifies the eclecticism of my theoretical framework, which will be functional to the themes emerging from the texts through an inductive method. By reading in this way, I will therefore identify the numerous texts which contribute to the structure of these audio-visual productions, while also bringing them together, transcending their temporal and spatial distance.

Contextualisation and Choice of Primary Materials

As mentioned above in this introduction, the choice of mixing diverse genres fits into this strategy, although it might appear as a hazardous task. However, as in the nuclear uncanny (a key theme that will be explored below) the threshold between reality and hallucination is crossed constantly, and the two aspects mix together on an aesthetic level, as will be argued in this thesis, so these audio-visual productions play with the uncertain boundaries between fact and speculation. As will be discussed in Chapter II, films like *Hiroshima Mon Amour* and *La Jetée* are fictional works, which use factual sources to complement their structure. *Hiroshima Mon Amour* was conceived initially as a documentary by director Alain Resnais, who, moreover, in the first stages of research, was aided by Chris Marker. Yūko Shibata remarks that: "Resnais spent six months surveying dozens of films on Hiroshima and other related themes, in collaboration with another French documentary filmmaker, Chris Marker."[60] The two had worked together in previous documentaries, such as the 1953 work *Statues Also Die*,[61] and *Night and Fog*, which came out in 1955.[62] Subsequently Marker abandoned the project, and *Hiroshima Mon Amour*, through Marguerite Duras' contribution, became a fiction feature. However, some intertextual elements can still be detected by reading the two texts comparatively, particularly as regards how the spectre of the atomic bomb haunts them aesthetically and discursively, even though its apparent invisibility. As will be discussed in more depth in Chapter II and Chapter III, *Hiroshima Mon Amour* establishes a productive dialogue with the documentary genre, and particularly with works of Japanese filmmakers appearing at the beginning of the film, whose ghostly presence influences

[60] Yūko Shibata, *Producing Hiroshima and Nagasaki: Literature, Film, and Transnational Politics* (Honolulu: University of Hawai'i Press, 2018), p.8. EBSCOhost Ebooks ebook.
[61] Derek, *Les Statues Meurent Aussi (1953) ENGSUB*, online video recording, YouTube, 22 June 2022, <https://www.youtube.com/watch?v=ZzxX5SYU31c> [accessed 26 February 2024]. The original French title of the film is *Les Statues Meurent Aussi* (1953).
[62] Alain Resnais, *Night and Fog*, (Argos Films, 1955) <https://tv.apple.com/gb/movie/night-and-fog/umc.cmc.44gm7we7l422ue74q176rlete?action=play> [Accessed 26 February 2024]. The original title of the film is *Nuit et Brouillard* (1955).

its structure and aesthetics, as argued by Yūko Shibata.[63] In this sense, *Hiroshima Mon Amour* is positioned at the threshold between its essence as a missed documentary, still playing the role of documenting, albeit indirectly, the facts of Hiroshima and the atomic bomb. This ambiguity is also embodied by *La Jetée*. As guest curator of the Sheffield DocFest, Asif Kapadia curated a programme *A Documentary Journey with Asif Kapadia*, which included, among a variety of documentaries, *La Jetée*. He justified his choice as follows:

> I could have included Chris Marker's *Sans Soleil*. But *La Jetée* was more of an inspiration for me. It's not strictly a documentary, but it is documenting a life – albeit a fictional one – through still images. It's like so many documentaries, like so many films, which exist beyond easy definition and draw on so many different styles.[64]

It is this quality of *La Jetée* of existing "beyond easy definition" which drew me to choose it for this thesis, alongside other aspects of the film which allow it to be put side by side with the other texts, as will be argued below.

Despite the fact that the series *Dark* is fictional, its analysis will offer me the opportunity to put it into dialogue with a complex historical context, which emerges from the series through aesthetic and obscure references and allusions, in turn reflecting the history of nuclear energy and anti-nuclear resistance in Germany.[65] The series was created, directed and written by German-Swiss director and screenwriter Baran bo Odar, and German writer and producer Jantje Friese and ran from 2017 to 2020, for a total of three seasons. Both writer and director claimed that the inspiration for their show was the Chernobyl nuclear power plant accident, which occurred in Ukraine in 1986, as I will further discuss in Chapter I.[66]

Further to *Hiroshima Mon Amour* and *La Jetée*, the Artist's film *Burial* creates poetic and creative connections between temporally and spatially distant realities, inviting the viewer to engage in the concept of deep time vis-à-vis nuclear waste and nuclear legacies in an imaginative and

[63] Shibata, *Producing Hiroshima and Nagasaki*, p.5-6.
[64] K.J. Yossman, 'Asif Kapadia, Sheffield DocFest Guest Curator, Unveils Hand-Picked 'Documentary Journey' Program', *Variety*, 9 May 2022 <https://variety.com/2022/film/news/asif-kapadia-sheffield-docfest-program-1235261819/> [Accessed 26 February 2024].
[65] Due to the complexity of the plot, a short synopsis of *Dark* has been provided as an Appendix to this thesis.
[66] Thomas Rogers, 'With 'Dark,' a German Netflix Series, Streaming Crosses a New Border', *The New York Times*, 23 November 2017 <https://www.nytimes.com/2017/11/23/arts/television/dark-a-german-netflix-series.html> [Accessed 26 February 2024].

speculative way. In this same spirit, *Into Eternity* is divided into a variety of chapters tracing the processes, issues, and concerns related to the construction of a deep geological repository for nuclear waste. These chapters are connected by interceding vignettes where the director speaks directly to a hypothetical human being from the future, narrating the story of the hidden nuclear waste as a fable or a myth.

Into Eternity and *Burial* are also loosely connected by a third work, the USA film *Containment* (2015), created and directed by Peter Galison and Robb Moss.[67] This film will not be discussed in this thesis, but it is essential to contextualise *Into Eternity* and *Burial* within the field. As the description on the website of the film points out, *Containment* is "part observational essay filmed in weapons plants, Fukushima and deep underground — and part graphic novel",[68] therefore it also presents the elements of hybridity detected in the other films and tv series discussed in this thesis. *Containment* deals with some of the themes confronted by *Into Eternity* first and *Burial* more recently, focusing on the issue of creating a set of monuments and "warning markers" (00:21:55) recognisable by people into the future (at least for the next 10,000 years), in order to communicate the dangers connected to the sites where nuclear waste is housed. The film navigates the complexities and multiplicity of nuclear waste production, from the exploration of plants producing weaponry (e.g. the Savannah River Site facility in Georgia, USA), to the issues of radioactivity in Fukushima and waste management in underground facilities, as well as radioactive material leakage and related dangers. For example, from minute [01:12:59] the film explores the news story in which "on February 14, 2014, a waste barrel ignited and burst underground at WIPP", namely the Waste Isolation Pilot Plant in New Mexico, with the consequent release of "trace amounts of plutonium and americium" in the surrounding environment."[69] Furthermore, Galison and Moss's film links waste management and the Fukushima meltdown, which gives a contemporary context to radiological concerns in Japan. In this way, *Containment*, along the lines of *Into Eternity* and *Burial*, creates speculative and imaginative links between past, present and future, articulating doubts and highlighting issues about the difficult legacy of the nuclear industry via a transgenerational perspective. The film dwells on the ethical responsibility of western and Global North industry practices and humanity in dealing with nuclear waste for future generations.

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[67] Peter Galison and Robb Moss, *Containment* (film, 2015) <https://tv.apple.com/us/movie/containment/umc.cmc.67or03l8rf2wwvrbaemqajn30>.
[68] Containment, 'Can We Contain Some of the Deadliest, Most Long-Lasting Substances Ever Produced?', *Containment*, 2016 <https://www.containmentmovie.com/>.
[69] Containment, 'Can We Contain Some of the Deadliest, Most Long-Lasting Substances Ever Produced?', min. [01:13:54].

Furthermore, these audio-visual materials, brought together, present a variety of common traits, insofar as they engage in nonlinear, complex narratives, while they also create networks with a variety of histories which interlace with the nuclear complex. In this sense, they are conceived in their porosity, as texts which not only can be read individually, as separate, independent entities belonging to specific historical periods, but also as processing and reconfiguring a response to nuclear technologies through a certain degree of continuity and discontinuity between past and present, and in light of various histories influencing their aesthetics and narratives. However, as I observed so far in this introduction in relation to the multiple audio-visual productions centring on nuclear themes and populating the contemporary media environment, many of them deal with the legacies of Chernobyl and Fukushima, both nuclear energy accidents. A question might arise regarding the reasons behind the choice of mixing two apparently different nuclear themes, one concerning the military use of the nuclear technology, and one aimed at creating energy supplies. The reasons, which will be argued in the subsequent chapters, are driven by the fact that, in these same texts, the nuclear energy accidents are haunted by the spectre of the atomic bomb, and the Cold War, not only generating a relationship of continuity between past and present, but also of coexistence of the two issues. In *Radioactive Ghosts*, Gabrielle Schwab uses the expression nuclear-military-industrial complex to signal "the overall dangers posed by the nuclear energy industry and the nuclear weapons industry," insofar as it has an impact on "not only physical health but also mental health."[70] The term "military-industrial complex" derives from an expression first introduced by USA President Dwight Eisenhower in a speech he gave at the end of his presidency. In his address Eisenhower indicated the "military-industrial complex" as a menace to the stability of democracy. According to Eisenhower the concurrence of the military and the weapons industry was acquiring an "unwarranted influence, whether sought or unsought."[71] This connection between the two different kinds of technologies will emerge from the recent productions, particularly *Dark* and *Burial*, which are positioned at the beginning and at the end of this thesis.

Bringing together these different texts also allows me to trace an evolution of the perception of nuclear technologies as it emerges from a series of close readings. In this sense, the nuclear danger is articulated in both its continuous and discontinuous reconfiguration, insofar as its causes, contexts, and influences are renegotiated constantly, and viewed through the shifting

[70] Gabriele Schwab, *Radioactive Ghosts* (London: University of Minnesota Press, 2020), p. 12. Ebook Central ebook.
[71] NPR Staff, 'Ike's Warning of Military Expansion, 50 Years Later', *npr*, 17 January 2011 <https://www.npr.org/2011/01/17/132942244/ikes-warning-of-military-expansion-50-years-later> [Accessed 6 July 2024]

dynamics stratified within the irregular genealogical tree created by these texts. In this way, I will consider that the films from the post-war period deal with the bombing of Hiroshima, influenced by the temporal proximity they establish with the employment of the atomic bomb not for atomic experiments and the beginning of the Cold War. In this context, the atomic bomb serves as a generative point of reference through which to create relationality with other histories underpinning World War II and the post-war period, such as those underlying concentration camps, the Algerian War, nuclear experiments and less visible histories of the war-time period, emerging from texts like *La Jetée*, *Hiroshima Mon Amour* and *Dark*, as will be discussed in Chapter II and Chapter III. By the same token, more recent texts become repositories in which strata of historical events, "the deep time of the radioactive half-life of things" signalled by Ele Carpenter,[72] interlace, and whose memory is hidden and re-emerges fragmentarily, as well as being renegotiated within the texts. This continuous, discontinuous and non-linear aesthetic narrative which connects these texts together is part of a heterogeneous landscape in which a diversity of memories both connected and disconnected with nuclear technologies are rekindled. This network of resistance fits into what Ele Carpenter believes to be the role that culture and the arts should play in preserving the memory of nuclear technologies and their effect on human and non-human life, namely to "maintain[...] a living record of material, aesthetic and social legacies of contamination and waste."[73]

This comparative approach helps me to discern the intricacies of the convoluted palimpsestic structure present both within each single text, and within the (dis)continuous dynamics created by these productions together. The notion of the palimpsest will serve to address the multi-layered and stratified complexity of these audio-visual productions, but also to draw connections between temporally and spatially distant creative outputs. This will also allow me to map out a shift in the way the nuclear state is perceived, which varies according to the contextual and geographical realities informing these texts. At the same time, by bringing these materials into communication, they will be read via a dynamic network of similarities and differences through which the discourses around nuclear technologies evolve and participate in the creation of a diversified landscape, thus signalling a changing era within which these audio-visual productions respond to the legacies of nuclear technologies. In this sense, the nuclear phenomenon will be viewed as both national and transnational. Each text, in fact, focuses and transcends local issues, insofar

[72] Ele Carpenter, 'Shifting the Nuclear Imaginary: Art and the Flight from Nuclear Modernity', in *Cold War Legacies: Systems, Theory, Aesthetics* ed. by John Beck and Ryan Bishop (Edinburgh: Edinburgh University Press, 2016), pp. 116-133 (p.129). Ebook Central ebook
[73] Ibid., p.129.

as it is informed by a specific historical and cultural identity and context. But these texts are also to transcend borders through the themes they engage in, particularly when encompassing nuclear issues.

Audio-visual productions and transnationalism

The question of transnationalism is relevant to my analysis, also in light of how Hogg contextualises his approach to Nuclear Culture in relation to British or English-speaking audio-visual productions. In fact, despite operating outside of a British context, the purpose of this thesis is to outline the transnational and transcultural role of audio-visual productions that considers a different perception of screening cultures in recent years. The positioning of my analysis, mostly in the period after 2010, renders it necessary to take into account a changing new media environment, informed by the widespread popularity of streaming services like Netflix. In *Netflix and the re-invention of television*, Mareike Jenner indicates Netflix as "a dominant challenger to linear television, viewing practices, nationalised media systems and established concepts of what television *is*."[74] Following this observation, a non-English language series like *Dark* is not just aimed at a national audience, but its purpose is to reach as many people as possible. As Silos Ribas points out, *Dark* employs a "grammar of transnationalism" in order to render the product more alluring for audiences all over the world:

> Such "grammar" implies in this case the adoption of the aforementioned audiovisual codes of complex/quality TV - mainly from the US/UK and Scandinavia - and the presence of "tropes, values and myths which can potentially resonate in any foreign market," together with a setting that could be almost anywhere (a hospital, a police station, a school), as well as atemporal spaces, like a church or a lodge. However, the show also establishes a dialogue with Germany's cultural and intellectual history, offering additional appeal to domestic viewers.[75]

According to Jenner transnationalism in Netflix does not only regard the employment of specific genres, tv tropes and "audiovisual codes" which can be easily exported, as Silos Ribas observes. Transnationalism is also channelled through multilingualism, "as a strategy to solicit attention or

[74] Mareike Jenner, *Netflix and the Re-Invention of Television* (Cham, Switzerland: Palgrave Macmillan, 2018), p.12. Ebook Central ebook.
[75] Silos Ribas, 'Looking into the Abyss', p.268.

invest series with features that signal 'quality'", but it "also serves to address a number of non-English speaking (or bilingual) audiences."[76]

Thematic Map

Aesthetic Theme: Nuclear Uncanny and the Nuclear Sublime

A central thematic strand in this thesis, which will allow me to explore the relationship between visibility and invisibility in relation to the nuclear-industrial-military complex, is the aesthetic and discursive relationship of the nuclear uncanny and the nuclear sublime in the films and tv series explored in this work.

In *The Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico*, Joseph Masco articulates the idea that both the nuclear sublime and the nuclear uncanny participate in the construction of the identity of invisibility characterising the aesthetic and verbal discourse at the heart of the nuclear military complex.[77] Masco explores these notions within the context of American nuclear history, also focusing on the series of experiments which took place in Los Alamos, New Mexico in 1945, namely the Manhattan project.[78] In the present thesis, the recent focus on the nuclear uncanny is expanded to include discussion of the nuclear sublime, prompted by Peter B. Hales' *The Atomic Sublime*, and his aesthetic argument focussing on the iconography of the mushroom cloud documented by photographic material published in the American media.[79] Here Hales defines the atomic mushroom as "a visual icon so unprecedented that, for a moment at least, it lay outside the webs of signification that comprised a watching culture."[80] Dwelling on the visual (re)presentation of the atomic explosion through pictures, Hales maintains that the atomic bomb is positioned outside of discursivity, becoming an element contributing to the

[76] Jenner, *Netflix and the Re-Invention of Television*, p.231.
[77] Joseph Masco, *The Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico*, 2nd edn (Princeton: Princeton University Press, 2020), p.28. Kindle edition ebook.
[78] For a discussion of the connection between the nuclear sublime and nuclear testing, and its evolution over time, see for example Masco's chapter: 'Above-Ground Testing (1945-1962): Tactility and the Nuclear Sublime', pp. 55-68, in Masco, *Nuclear Borderlands*.
[79] Peter B. Hales, 'The Atomic Sublime', *American Studies*, 32.1 (1991), 5–31 <https://www.jstor.org/stable/40642424> [accessed 26 February 2024].
[80] Ibid., p.5.

invisibility of the nuclear phenomenon. As will be discussed in this thesis, both the excess of visibility, through the overpowering "pure" sign of the atomic explosion as expression of the atomic sublime, and the material invisibility of radioactivity which affects both individuals' psyches and bodies, and to which the notion of the nuclear uncanny is attached, operate at a perceptual level, creating sensory "overstimulation" on the one hand,[81] and perceptual disorientation, on the other.[82] Masco explains the nuclear uncanny and its effects as follows:

> For radiation traverses space in ways that can make the air, earth, and water seem suspect, even dangerous, though no sensory evidence is at hand. Thus, for those living near nuclear facilities, radiation often becomes a means of explaining all manner of illness and misfortune – its very invisibility allowing its proliferation in the realm of the imagination. In this way radiation disrupts the ability of individuals to differentiate their bodies from their environment, producing paranoia. The nuclear uncanny is, therefore, a rupture in one of the basic cognitive frames of orientation of the world. The inability to disarticulate a traumatised self from the local environment is one experience of the nuclear uncanny.[83]

Masco associates the nuclear uncanny with a wide range of psychic conditions. He identifies paranoia as an inevitable reaction to the nuclear uncanny, whereby "one becomes possessed by a space that certainly disorients but may also actually maim or kill and may do so now or somewhere in a multigenerational future."[84] In addition to this, numbing and splitting contribute to this sense of disorientation and disembodiment. In this regard, Masco suggests that "individuals either numb themselves to the everyday threat, or are conditioned to separate themselves from their own senses, losing themselves in a space that is simultaneously real and imagined, both paranoid and technoscientific reality."[85] According to Masco, the combination of paranoia, splitting and numbing feeds into a space where the boundaries between imagination and reality fade into one another, until they disappear completely. In fact, following Freud, Masco articulates the uncanny as: "that which blurs the distinction between the living and the dead, the hallucinatory and the real, and which, in essence, makes sensory experience untrustworthy and strange."[86] In the chapters of this thesis, it will be argued that the confusion between "the hallucinatory and the real" and "the living and the dead" is central to the aesthetic argument enabled by the reading of the films, series, and documentary analysed. The nuclear space conceived by films like *La Jetée* and *Hiroshima Mon Amour*, or the series *Dark*, produces that sense of disorientation articulated

[81] Masco, *Nuclear Borderlands*, p.7.
[82] Ibid., p.30.
[83] Ibid., p.32.
[84] Ibid., p.32.
[85] Ibid., p.32.
[86] Ibid., p.28.

by Masco. In this context, the expression “nuclear space” does not address an environment detached from its context, and whose disembodied characteristics do not rely on the specificities of the texts explored. Rather, each nuclear space is imbued with a variety of unique qualities dependent on the cultural and political backdrop against which they are located and to which they respond.

In addition to the disorientation produced by the nuclear uncanny, it is worth observing that the (dis)connection between space and time is considered commonly a mechanism underlying horror films and related to the trope of the haunted house. But it also goes beyond the artificial boundaries of genre construction, since, as Barry Curtis[87] points out: “it is possible to make a ‘haunted house’ reading of many films that may not be identifiable as horror films nor indeed involve supernatural events.” Curtis links the theme of the haunted house with Anthony Vidler’s notion of the “architectural uncanny” thus:

> A structure within which familiarity and extreme anxiety come together, where ‘doubling’ is brought to a crisis through reflections, encounters and repetition, often a place where the passage of time is troubled.[88]

These observations about “doubling [...], encounters and repetition” which are embodied and rendered evident by a place in which “the passage of time is troubled” will be an integral part of the discussion related to the nuclear uncanny and will a relevant discussion in Chapter III, particularly in relation to how these elements emerge from the texts analysed both drawing on and beyond horror tropes.

The Nuclear Uncanny Index

As stated above in this introduction, Hales defines the atomic bomb as a “pure sign” and “a visual icon so unprecedented that, for a moment at least, it lay outside the webs of signification that comprised a watching culture.”[89] Hales, therefore, addresses the dissonance produced by the photographic reproduction of the atomic bomb. If the icon is such when it resembles the object it represents, the “unprecedented” nature of the atomic explosion affected the process of

[87] Barry Curtis, *Dark Places: The Haunted House in Film* (London: Reaktion, 2008), p.12. Ebook Central ebook.
[88] Ibid., p.12.
[89] Hales, ‘The Atomic Sublime’, p.5.

"signification" of the bomb itself, creating distance and dissociation between the deadly consequences of the bomb and its awe-inspiring, sublime aesthetic qualities. In this thesis, further to the discussion of the sublimity of the atomic icon, I will discuss the status of photography as an index emerging from *La Jetée* and *Hiroshima Mon Amour* and connect it to the nuclear uncanny.

Albert Atkin points out that, according to Charles Sanders Peirce, the index is a sign connected to an object by a relationship of "physical contiguity" and "attention directing."[90] This means that the indexical sign needs to have a direct physical connection with the object of which it is a sign. An example of this, Atkin observes, is "smoke as a sign of fire is indexical because the relation between the sign and its object rests upon some physical connection, i.e., the fire *causes* the smoke."[91] In relation to its second characteristic, namely the fact that the index directs attention to the object it indicates, this does not imply that by viewing the index one should also perceive the object; rather, the index renders us aware of the object even when the latter is out of sight – it signals that the object is there even if the object is not visible. Within a nuclear context, indexicality is relevant to radioactivity as a de facto index of a nuclear explosion, or to markers insofar as they indicate where the nuclear waste is buried, all elements which will be discussed in Chapter IV and the Conclusion. In Chapter II, however, the index will address the role that photography plays in *La Jetée* and *Hiroshima Mon Amour*. As Mary-Ann Doane suggests, the definition of the index created by Peirce is imbued with ambiguity and which, as such, an index presents clear connections with the symbol, on the one hand, and with the icon, on the other:

> Given the fact that Peirce applied the term "index" to such diverse signs as a footprint, a weathervane, thunder, the word "this," a pointing finger, and a photographic image, it is not difficult to see why the concept has occasioned confusion. On the one hand, the term seems to specify signs on the order of the trace –the footprint, the death mask, the photograph (where the object leaves its imprint on a light-sensitive surface). This type of index partakes of the iconic because the sign resembles the object. On the other hand, Peirce emphasises that the shifter in language – a category including pronouns such as "this," "now," "I," "here" – is an exemplary form of the index. In this case, the index partakes of the symbolic.[92]

Doane observes that what renders a sign an index is the closeness to the object it refers to, which also makes it "a trace of the real." In Chapter II, I will argue how both Resnais and Marker

[90] Albert Atkin, 'Peirce on the Index and Indexical Reference', *Transactions of the Charles S. Peirce Society*, 41.1 (2005), 161–88 (p.164) <https://www.jstor.org/stable/40358956> [accessed 6 July 2024].
[91] Atkin, 'Peirce on the Index and Indexical Reference', p.164.
[92] Mary Ann Doane, 'Indexicality: Trace and Sign: Introduction', Differences (Bloomington, Ind.), 18.1 (2007), 1–6 (p.2) <https://doi.org/10.1215/10407391-2006-020 >.

challenge this stance of photography and, in turn, cinema to be a reliable trace of the real, addressing the limitations of representation to be able to unveil the real and document history. Resnais, however, also uses photography to create uncanny connections between fiction and the real, mixing existing photographic documents attesting to the effects of radioactivity on the bodies of the victims of the nuclear explosion with fictionalised bodies and storylines emerging from the film. In this way, both authors blur the boundaries between what is real and what is not. But while Resnais uses indices to create relational links between filmic affects and historical events, I will argue that Marker addresses the dialectical tension at the heart of the filmic experience in its role as witness. As Laura Mulvey writes in relation to the indexical nature of photography and cinema:

> While written (symbolic) or graphic (iconic) representations can evoke a class of things, a photographic image is always of one specific and unique, although, of course, endlessly reproducible, thing. A return to the index and to the real of the photographic medium is not a return to realism's aspiration to certainty. Rather, the trace of the past in the present is a document, or a fact, that is preserved in but also bears witness to the elusive nature of reality and its representations.[93]

It is, therefore, the same ability of cinema to "bear[...] witness to the elusive nature of reality and its representations" which will be addressed in Chapter II, alongside the potential of photography to document the real, while also creating uncanny connections between reality and fiction.

Nuclear Uncanny, Splitting, Numbing and Indifference

The notion of the nuclear uncanny first put forward by Masco and then further developed by Schwab will be a central component of the analysis of the films' characters in Chapter II and will be applied to the relationship between the characters and space within a nuclear context in Chapter III. Insofar as, according to Masco, the nuclear uncanny affects the human sensorium as "a rupture in one of the basic cognitive frames of orientation of the world", therefore generating confusion and disorientation, in Chapter II I will complement this theory with Schwab's notions of "splitting" and "numbing", two psychological mechanisms which contribute to the formation of the "nuclear subjectivities." Through the notion of nuclear subjectivities, Schwab addresses the "affects and emotions, fears and desires, denials and messianic hopes, fantasies and phantasms, all of which aggregate to generate new types of embodiment, subjection."[94]

[93] Laura Mulvey, *Death 24x a Second: Stillness and the Moving Image* (London: Reaktion Books, 2006), p.10. Ebook Central ebook.
[94] Schwab, *Radioactive Ghosts*, p.3.

Returning to the notion of splitting, Schwab explains:

> On one hand, such psychic splitting is politically necessary to sustain nuclear – as well as other forms of – necropower. If successful, this splitting cuts subjects off – even - if only temporarily – from - fear, compassion, love, anger, or grief. On the other hand, splitting is also psychically necessary to live within an ecology of nuclear fear. We would no longer be able to function in our quotidian lives if our emotions were proportionate to the violence, cruelty, and danger of a nuclear world.[95]

I will argue that not only do numbing and splitting operate on the level of the psyche, but they also pierce through the affective milieu, corroding and compromising the individual from within, or, using Schwab's words, "generating a haunting from within."[96] In Chapter II, I will point out that Elle, the main character of *Hiroshima Mon Amour*, appears to be affected by the interference of the nuclear bombing on the emotional sphere and, therefore, expresses a sense of detachment (or numbing) and indifference vis-à-vis nuclear issues, thus contributing to the construction of her identity as a nuclear subjectivity.[97] I will combine this aspect of the nuclear invisibility producing a sort of affective disorder with the notion of indifference, which will be both articulated as an element emerging from *Hiroshima Mon Amour* in Chapter II and linked to the atomic bomb, but also as the expression of concern on behalf of a variety of French intellectuals within the context of post-war consumerist society. In this context, indifference and apathy towards war-related contemporaneous issues (such as the Algerian War), and the past (including the bombing of Hiroshima and Nagasaki) were viewed as affects spreading in the French population and denounced by a variety of intellectuals, as I will explain in more detail later in this introduction. Finally, I will theorise the notion of indifference on an embodied and psychological level, combining the affects of numbing and splitting with Catherine Malabou's notions of "coldness and indifference." According to Malabou, these are qualities she associates with "destructive plasticity" in the context of the formation of "post-traumatic subjectivities." As I will observe in Chapter II, Malabou believes that destructive plasticity is mostly detected in trauma survivors and can be described as "a farewell that occurs within life, just like the indifference to life by which survival sometimes manifests itself."[98] As Malabou explains:

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[95] Ibid., p.26.

[96] Gabriele Schwab, 'Transgenerational Nuclear Trauma', in *The Routledge Companion to Literature and Trauma* ed. by Hannah Meretoja, and Colin Davis, (London; New York: Routledge, 2020), pp. 438-451 (p.442). Ebook Central ebook.

[97] Schwab, *Radioactive Ghosts*, p.3.

[98] Catherine Malabou, *Ontology of the Accident: An Essay on Destructive Plasticity*, trans. by. Carolyn P. T. Shread. (Cambridge: Polity, 2012) pp.37-8.

> Acknowledgment of the role of destructive plasticity allows us to radicalise the deconstruction of subjectivity, to stamp it anew. This recognition reveals that a power of annihilation hides within the very constitution of identity, a virtual coldness that is not only the fate of the brain injured, schizophrenics, and serial killer, but is also the signature of a law of being that always appears to be on the point of abandoning itself, escaping. An ontology of modification must shelter this particular type of metamorphosis that is a farewell to being itself. A farewell that is not death, a farewell that occurs within life, just like indifference of life to life by which survival sometimes manifests itself.[99]

Destructive plasticity thus is observed in individuals who experience the formation of an identity which is separate and detached from one's previous self. According to this idea, a former identity is annihilated to leave space to a new subject through a rupture from the past self – which is also a break in temporal continuities.

I will bring together the two concepts of nuclear subjectivities and post-traumatic subjectivities and link them to a context informed by the nuclear uncanny. If the notion of destructive plasticity signals a break which takes place within the individual, the nuclear uncanny implicates a different kind of rupture. Returning to what Masco claims: "The nuclear uncanny is [...] a rupture in one of the basic cognitive frames of orientation of the world. The inability to disarticulate a traumatised self from the local environment is one experience of the nuclear uncanny.[100]

Nuclear Uncanny as Anticipation

According to Masco, the nuclear uncanny identifies the inability to discern what is clean and safe, and therefore, homely, from what is contaminated and, as a result of that, unhomely. The nuclear uncanny thus signals the destabilisation of trust which leads to a destabilisation of memory, as will be argued in Chapter II and III. However, this thesis also addresses a different kind of nuclear uncanny as developed by Paul K. Saint-Amour (2000). The formulation of the nuclear uncanny offered by Saint-Amour refers to the sense of anticipation for an imminent bombing of Hiroshima summarised by the Japanese word *bukimi*. The term *Bukimi* can be translated as the "weird, ghastly, or unearthly" and addresses the ambiguous feeling which characterised the moments before the explosion, perceived by the people of Hiroshima as an "eerie suspension" between

[99] Malabou, *Ontology of the Accident*, pp.37-38.
[100] Ibid., p.32.

salvation and total destruction, and which "spoke to the suspended question of whether Hiroshima and its inhabitants had been singled out for preservation or for annihilation."[101]

In Chapter I, I will read the series *Dark* through the lenses of the nuclear uncanny as anticipation. I will argue that in *Dark* the repetition of the apocalypse is perceived by its characters in its anticipatory mode, not as "a moment of ultimate futurity,"[102] but as a moment of "suspension" between life and death, between the ultimate end of the world and preservation, whose reversal relies on the individual choice and responsibility of the characters. The analysis of this notion emerging aesthetically from *Dark* contributes to the discourse around the visibility and invisibility of the nuclear-industrial-military-complex. In this sense, the notion of the nuclear uncanny as anticipation and the concept of the atomic sublime developed by Hales interlace constantly, insofar as the icon of the atomic bomb appears and disappears in the series, generating an eerie sense of anticipation in the characters and influencing their actions, affects and behaviours within the series. As I will argue in Chapter I, *Dark* deals with the individual trauma in its belatedness. This interpretation of trauma, formulated by Cathy Caruth who, in turns, draws upon Freud offers a first glimpse into how the series temporalities which never coincide, and that highlighting how the symptoms of trauma are, to a certain degree, always inscribed into the future. But *Dark* also pushes this thesis even further, adding to it the broader concept of anticipation as a sort of futurity informing the creation of the nuclear uncanny.

This constant overlapping between nuclear uncanny and atomic sublime will bring forth the following question: How can the nuclear sublime and the nuclear uncanny interact within the same nuclear milieu? Does this co-presence enable a shift from one form of representation to another, or, rather, inform a complementary relationship between the two realms? Are the two notions in competition with each other or do they complement one another?

Unlike Saint-Amour, who bases his notion of the nuclear uncanny on psychiatrist Robert Jay Lifton's 1967 work, *Death in life: Survivors of Hiroshima*, and particularly on the book's chapter

[101] Paul K. Saint-Amour, 'Bombing and the Symptom: Traumatic Earliness and the Nuclear Uncanny', *Diacritics*, 30.4 (2000), 59–82 (p.60) <https://www.proquest.com/scholarly-journals/bombing-symptom-traumatic-earliness-nuclear/docview/1297854021/se-2?accountid=13828> [accessed 26 February 2024].
[102] Eva Horn, *The Future as Catastrophe: Imagining Disaster in the Modern Age*, trans. by. Valentine A. Pakis (New York: Columbia University Press, 2018), p.21. Ebook Central ebook.

entitled, *Anticipation*,[103] Masco adapts his theorisation of the nuclear uncanny from Freud. In this context, it is necessary to draw a brief distinction between the two terms, which will also enable me to indicate how the nuclear uncanny and the literary uncanny both contribute to the construction of the film and series analysed in this thesis. Furthermore, the literary uncanny is functional to the theorisation of the nuclear uncanny within the chapters, since it is used to evidence and analyse some of the characteristics associated with the perception of the nuclear bomb by those surviving it, and featuring in some of the films, especially in Chapter III.

Masco describes the uncanny as defined by Freud as follows:

> Describing the uncanny as a slippage whereby "the distinction between reality and the imagination is effaced," Freud identifies the uncanny in a number of social forms: automatons, ghosts, dead bodies, and doppelgangers. For him, the uncanny is that which blurs the distinction between the living and the dead, the hallucinatory and the real, and which, in essence, makes sensory experience untrustworthy and strange. This psychic slippage is, for Freud, always a return to something repressed, a repetition that ultimately is tied to castration anxiety and the urge to return to that ultimate experience of "home" - the womb."[104]

Masco points out that Freud's idea of the uncanny is connected to castration anxiety, which he also associates with the fear of losing one's eyes.[105] However, Masco also observes that Freud detects in the emergence of new technologies, insofar as "what makes the uncanny weird is that is often informed by outmoded cultural forms, beliefs that are supposed to have fallen away in the age of industrial modernism.""[106] In this sense, Masco reformulates the "industrial modernism" addressed by Freud with the nuclear technological milieu, in which the invisibility and imperceptibility of radiation "disrupts the ability of individuals to differentiate their bodies from their environment", creating, therefore, sensory confusion and disorientation. In this way, Masco excludes "castration anxiety" and a desire to "to return to that ultimate experience of "home" – the womb" from his version of the uncanny in the nuclear age.

However, in Chapter I and Chapter III, I will return to Freud's notion of the uncanny to enable a reading of both *Dark* and highlight some aspects of the nuclear uncanny which I will apply to *Dark*, *La Jetée* and *Hiroshima Mon Amour*. In *Dark*, I will intersect the notion of the Freudian uncanny

[103] Robert Jay Lifton, *Death in Life: Survivors of Hiroshima* (Chapel Hill: University of North Carolina Press, 1991), p.15. Ebook Central ebook.
[104] Masco, *The Nuclear Borderland*, p.28.
[105] Freud, *The Uncanny*, p.86.
[106] Masco, *The Nuclear Borderlands*, p.28.

with Saint-Amour's idea of the nuclear uncanny as anticipation. This is because the series plays on the ambiguity between the familiar and the unfamiliar germane to the Freudian uncanny, as the complex web of secrets, personal trauma and desire are a fundamental part of its narrative. If in Chapter II, the nuclear uncanny will interlace with the centrality that sight assumes in the process of knowledge which the main character, Elle, embodies through her encounter with the city of Hiroshima, in Chapter III the discussion of the nuclear uncanny in its intersection with the Freudian uncanny will be based on another concept emerging from Freud's analysis: namely silence. As Nicholas Royle observes in his analysis of the uncanny, "silence, solitude and darkness" are all characteristics emerging from Freud's original conception of the uncanny, which he believes are central to its creation.[107] Royle further comments that, according to Freud, sight is strictly linked with the affect of solitude and the sensory experience of silence.[108] I will, therefore, analyse these ideas behind the uncanny with the description of the perception of the bomb by the inhabitants of Hiroshima and analysed by Georges Bataille in an article written in 1947 following John Hersey's book *Hiroshima*. Referring to Bataille's article, Didi-Huberman described the perception of the bomb as "a feeling of panic of the site itself",[109] addressing, therefore, the sensory experience produced by the bomb as the ultimate spatial embodiment of the nuclear uncanny, as I will argue in Chapter III.

The sensory experience of the bomb will emerge as a theme in Chapter II and III, particularly in reference to *Hiroshima Mon Amour* and *La Jetée*. As explained in this introduction, sight and sound are two characteristics associated to the literary uncanny, which will be employed to explore further the nuclear uncanny as a phenomenon affecting the human sensorium. These qualities of the nuclear uncanny are central to the formation of nuclear subjectivities and relevant to the representation of space in these films. These elements also contribute to the correlation between visibility and invisibility implicated in the aesthetic and narrative construction of the material analysed, as I will further argue in this thesis.

Further to visual and acoustic qualities linked to the atomic bomb, in Chapter III I will also discuss briefly the role that touch plays, particularly in relation to *Hiroshima Mon Amour*, as an aesthetic counterpoint employed by Resnais to stress the limitations of sight in expressing knowledge and

[107] Nicholas Royle, *The Uncanny* (Manchester: Manchester University Press, 2003), p.110.
[108] Royle, *The Uncanny*, p. 110.
[109] Georges Didi-Huberman, Génie Du Non-Lieu. Air, Poussière, Empreinte, Hantise (Paris: Les Éditions de Minuit, 2001), p.25.

the “other” within an intercultural milieu. In order to do so, I will apply Laura Marks’s theory of haptic visuality. According to Marks, haptic visuality signals “a visuality that functions like the sense of touch. A number of works of intercultural cinema use haptic images to engage the viewer tactilely and to define a kind of knowledge based in touch.”[110] It establishes a relationship between the viewer (“perceiver”) and “object” without being necessarily mediated by representation. In Marks’s words:

> In revaluing haptic visuality I am suggesting that a sensuous response may be elicited without abstraction, through the mimetic relationship between the perceiver and a sensuous object. This relationship does not require an initial separation between perceiver and object that is mediated by representation.[111]

Marks applies the theory of haptic visuality specifically to what she identifies as “intercultural cinema”, namely a cinema created as a result of the diasporic experience of individuals existing “as a minority in the still majority white, Euro-American West,” and who, therefore, ideate stylistic cinematic forms in the attempt to represent the experience of living between two or more cultural regimes of knowledge.”[112] I will return to the notion of haptic visuality in the conclusory remarks of this thesis, to explore other forms of engagement with this stylistic expression in other works analysed in this thesis.

Aesthetic Theme: Memory, Forgetting and Non-Memory and the Decolonial

Freud and Derrida: Memory, Forgetting and Non-Memory as Cinder

The fading boundaries between visibility and invisibility connoting and haunting the nuclear-military-industrial complex through the nuclear uncanny and discussed thus far in this introduction are linked to the way in which memory, forgetting and non-memory are articulated in the films and TV series analysed in this thesis. By establishing a dynamic relationship between one another, forgetting and non-memory become an integral part of the memory construction processes underpinning these audio-visual materials, rather than being put in opposition to them.

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[110] Laura U. Marks, *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses* (Durham, North Carolina: Duke University Press, 2000), p.22. Ebook Central ebook.
[111] Marks, *The Skin of the Film*, p.164.
[112] Ibid., p.1.

Before delving into Derrida's notion of non-memory, it would be useful in this context to open a bracket about the uses of forgetting and memory in Freud. In *On Flirtation* Adam Phillips explains that, according to Freud, the process of forgetting, rather than being a way of erasing memory, is a mechanism of the psyche to retain it. This buried memory, therefore, re-emerges from the unconscious under the shape of "symptoms."[113] As Phillips maintains:

> Involuntary and disguised memory, symptoms are mnemonics of desire; and desire, for Freud – what he referred to as 'instinctual life' – is unforgettable. Repression, indeed all the mechanisms of defence that he described - the tropes of distribution and self-protection - are ways of retaining things by getting rid of them. The unconscious, that is to say, is what we know about when defences (like forgetting) break down. In symptoms, in dreams, in slips of the tongue, in free-association and, of course, in memories themselves we are reminded of our disowned counterparts.[114]

In this sense, the process of forgetting is followed by the re-emergence of memories, which do not coincide with the original memory that, instead, is conserved and protected in the unconscious. These memories can be considered as false and untrustworthy, rather than an attestation, a document of something occurring in the past.[115] In order to describe how memories resurface as symptoms addressing not the original memory, but producing false forms of remembrance, Freud develops the notion of screen-memory. As Phillips further remarks:

> We use memories to forget with. Memory, in other words, was what Freud was to call 'screen-memory'; and these screen-memories were screens because memory, Freud had begun to believe, was *of* desire. Since desire was, by Oedipal definition, forbidden, 'the falsified memory,' Freud writes in his paper 'Screen-Memory', 'is the first *we* become aware of'. Memories become forms of forgetting.[116]

I will expand on the notion of screen-memory later in this introduction in relation to Max Silverman's theory of Palimpsestic Memory, which, in part, employs it. For now, it is worth remarking that, according to Freud, memory and forgetting entertain a sort of paradoxical relationship, insofar as forgetting can be viewed not as a place where memory is erased, but repressed. Through this repression, as Phillips maintains, "forgetting, like burial, is a preservative; a kind of storage."[117] Conversely, the process of retrieving this lost memory through the psychoanalytic process, is likened by both Freud and Phillips to the act of "excavation", an

[113] Adam Phillips, *On Flirtation* (London: Faber, 1994), p.48.
[114] Phillips, *On Flirtation*, p.48.
[115] Phillips, *On Flirtation*, p.50.
[116] Ibid., p.50.
[117] Ibid., p.53.

unearthing that, however, is conducive to the possibility of recovering and, at once, annihilating forgotten memories. As Phillips claims:

> By linking the fragments – whether it be of the patient's story, or the shards of the city – it makes possible imaginative reconstruction; and yet this very reconstruction contributes, or even causes, the final destruction and disappearance of the material.[118]

In the context of this thesis, the tension between forgetting and remembering is germane to all the primary material explored, and it will be considered through different lenses according to the chapters. For example, in Chapter I, individual trauma as experienced by the main character in *Dark* will be interpreted through Cathy Caruth's reinterpretation and application of Freud's notion of trauma in literary texts. This will be connected to the act of repetition which, as Phillips observes, "signifies loss; one only repeats the unrepeatable,"[119] and will be re-framed, in the interpretation of Caruth, as the repetition of the enigma of survival.[120] In this context, these dynamics of memory and forgetting underlying the Freudian conception of trauma will be further explored through the anticipatory nature of the nuclear uncanny, as explained above in this introduction, which is a way of linking the trauma of the past and present, with a potential trauma occurring in the future (or which has already happened elsewhere, as I will articulate later in this introduction.) In Chapter II, memory and forgetting will interlace with the architecture of the city of Hiroshima and its status of memorial. The reconstructed city, its memorial and museums will be explored through the main character. Finally, in Chapter IV, memory and forgetting play a central role in *Into Eternity* and *Burial*. Both films use visual and narrative strategies to argue for and against the need to create markers above ground to signal where nuclear waste has been buried.

In this thesis, memory and forgetting will be further explored through another notion proposed by Jacques Derrida. According to him, there exists another totalising form of forgetting which cannot be repressed or held in the repository of the unconscious and escapes the psychoanalytical process of retrieval and remembering. This is the notion of non-memory as *cinders*. Non-memory as *cinders* is broadly articulated in the book *Cinders*, but present, in a fragmentary, dislocated way in many of the author's writings. As Cary Wolfe observes in the introduction to *Cinders*, namely *Introduction: Cinders after Biopolitics*:

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[118] Ibid., p.53.
[119] Ibid., p.63.
[120] Cathy Caruth, *Unclaimed Experience: Trauma, Narrative, and History* (Baltimore, Md.; London: Johns Hopkins University Press, 1996), p.64. Ebook Central ebook.

> In many ways, Cinders (or *Feu la cendre*) is above all a book about spectrality, a theme that Derrida would develop on a much larger canvas roughly a decade later in *Specters of Marx* - a book that also begins with a haunting [...]. Indeed, *Cinders* is haunted by the strange and nearly untranslatable phrase *il y a là cendre* that Derrida circles back to time and again in this text, tracing its first appearance in the front matter of *La Dissémination* in 1972 and its manifestations earlier and later (and in different guises) in "Plato's Pharmacy" (1968), *Glas* (1974), *The Postcard* (1980), and other texts.[121]

In this thesis, Derrida's formulation of *cinders* is relevant to this thesis's argument for a variety of reasons. First of all, the image of cinders is employed visually and conceptually in the texts explored. Whether occurring as a remainder and reminder of the ashes covering Hiroshima and a trace of the atomic annihilation in *Hiroshima Mon Amour*; as dust accumulating on sculptures, or the principle of incineration burning the material frames of the film in *La Jetée*; or as the protagonists as well as the parallel realities dissolving into stardust in the last episode of *Dark*, cinders shape and connect the primary materials of this thesis, while also tracing the discursive and aesthetic contiguity which connect them. Conceptually, the idea of cinders is expressed as non-memory. In this sense, cinders as non-memory address the impossibility of witnessing, and the inevitable descent of memory into non-memory viewed as an ambiguous, elaborate entity, both as "benediction and catastrophe."[122] In the words of Derrida, cinder "testifies to the disappearance of the witness [...] It testifies to the disappearance of memory."[123] Drawing on this assumption, *Dark*, *Into Eternity* and *Burial*, *Hiroshima Mon Amour* and *La Jetée* deal, to a certain degree, with the issue at stake: "the disappearance of the witness," and "the disappearance of memory." These productions navigate the ambiguous relationship between memory and non-memory, either by discursively and visually challenging the same notion of non-memory, or by including the latter in their narrative, framing it as unavoidable and necessary, as a force able to change the course of the stories narrated, and break the loop of repetition and trauma in which characters and events are trapped. However, these texts also create spaces of resistance and reinterpretation of the nuclear trace (the debris, cinders, and dust left by nuclear destruction), rendering it visible, and putting it in dialogue visually with a multitude of realities outside of the immediate context of the nuclear-military-industrial-complex.

Furthermore, it is worth noting that Derrida relates the notion of cinders to the Holocaust, as he states: "Of course [...] there are great, spectacular experiences of incineration [...] I'm thinking of

[121] Derrida, *Cinders*, pp. vii-viii.
[122] Derrida, Jacques, *Points... : Interviews, 1974-1994*, ed. by. Elisabeth Weber, trans. by. Peggy Kamuf and others (Stanford, California: Stanford University Press, 1995), p.207.
[123] Derrida, *Points... : Interviews*, p.209.

the crematoria, of all the destructions by fire, but before even these great memorable experiences of incineration, there is incineration as experience, as the elementary form of experience."[124] Wolfe further comments on the extreme act of incineration evoked by the notion of cinders referred to the Holocaust of the Jewish people operated by the Nazi regime during the Second World War as expression of the idea of cinders, also discussing this alongside the homophonic play on words between *feu*, which can both identify fire, or a deceased person, and *fut*, a past tense of the verb to be (was).[125] Wolfe notes:

> The homonyms *feu* [fire] and *fut* [was] that Derrida crosses and superimposes in the text lead us to the (non)place of Derrida's assertion that the cinder is "what remains without remaining from the holocaust, from the all-burning, from the incineration."[126]

Wolfe talks about a "(non)place" haunted by cinders as the expression of the "incineration" underlying the horrific experience of the Holocaust, but she also hints at the linguistic correlations between the French words deceased, and fire (*feu*), and, indirectly, but without mentioning it, the Holocaust. In the article *A Name for Extermination*, Anna-Vera Sullam Calimani discusses the history and evolution of the terminology used to identify the mass murder of the European Jewish population during World War II in order to "interpret this event."[127] She observes that the term holocaust became popular in the 1950s, while also discussing its etymological origins. As she points out:

> In the 1950s, while the neologism "genocide" was being used more and more, and "catastrophe" and "disaster" were still commonly employed (often simultaneously) to translate *shoah*, a new term appeared that would eventually become much more firmly entrenched than its predecessors: "holocaust." The word is of Greek origin, comprising the adjective ὅλος, "complete", and the past participle καυστός, burnt. This normalised adjective denoted a victim who had been completely consumed by fire and was used to translate the Hebrew *'olah*, which in Leviticus was a type of sacrifice that priests were to offer to God in the future Temple of Jerusalem.[128]

Therefore, by bringing together the fire (*feu*) of the deceased (*feu*) with the fire burning the victims of the Holocaust, Wolfe identifies how Derrida creates a superimposition, a stratified composition of cinders, which for the philosopher, as he states in *Points... : Interviews*, "renders better what I

[124] Ibid., 209.
[125] Derrida, *Cinders*, p.17.
[126] Ibid., p.xv.
[127] Anna-Vera Sullam Calimani, 'A Name for Extermination', *The Modern Language Review*, 94.4 (1999), 978–99 (p.978) <https://doi.org/10.2307/3737232>.
[128] Sullam Calimani, 'A Name for Extermination', p.987.

meant to say with the name of trace, namely, something that remains without remaining, which is neither present nor absent, which destroys itself, which is totally consumed, which is a remainder without remainder. That is, something which is not."[129] If, as Malabou observes, "for Freud no experience is forgotten. The trace is indelible. The trace can be modified, deformed, reformed – but never erased. The primitive does not disappear,"[130] Derrida, instead, believes that there is a form of forgetting that is erasable, "totally consumed" and for which the only trace left is the trace itself.

This linguistic elucidation of the notion of cinder, namely, to reuse Derrida's expression, of "what remains without remaining from the holocaust,"[131] does not exclude the possibility of nuancing it in broader terms. As Derrida evidences in one of the conversations collected in *Points… Interviews*, and highlighted in the extract above, there is another form of incineration, which is deep-rooted in human existence, and is "the incineration as experience, as the elementary form of experience."[132] In this interview Derrida talks about experience as "a traversal, but a traversal with the body, it evokes a space that is not given in advance but that opens as one advances."[133] In this sense, the experience of cinders on which Derrida speculates is "the experience not only of forgetting, but of the forgetting of forgetting, of the forgetting of which nothing remains," which, being at the base of every experience of life, identifies "every experience of death, of catastrophe."[134] As summarised by Dooley and Kavanagh:

> In short, we are cut from our origins, blinded to our past, and incapable of writing an autobiography, because the present is haunted from within by traces and cinders. Death and loss are at the heart of all identity and experience. Which is why, for Derrida, an act of memory, the desire to identify with the past, is always a work of mourning.[135]

This "desire to identify with the past" and the ensuing encounter with "traces and cinders", through which memory and non-memory interact in a productive relationship, will be investigated in this thesis alongside the concept of the palimpsest. The aim of this section, in fact, not only is to clarify the meaning behind these terms, and the theories to which they are attached, but also to connect memory/forgetting/non-memory with the palimpsest. I will argue that the latter is a multi-layered,

[129] Derrida, *Points... : Interviews*, p.209.
[130] Malabou, *Ontology of the Accident*, p.43.
[131] Derrida, *Cinders*, p.25.
[132] Derrida, *Points*, p.209.
[133] Ibid., p.207.
[134] Ibid., p.207.
[135] Dooley and Kavanagh, *The Philosophy of Derrida*, p.8.

and stratified notion, whose identity relies on the tension between memory and non-memory, and their inexorable intertwining. Here the term will be employed as a tool to read the primary materials of this thesis, and articulate some of the ideas, relations, and aesthetics linked to the notion of (in)visibility of the nuclear-military-industrial complex emerging from the stories narrated. Furthermore, the function of the palimpsest is to discern the way in which a variety of "hidden traces" are unearthed from the texts and shape a dialogue with diverse contexts tackling nuclear issues on to which these traces (or *cinders*) are inscribed, alongside the visible/invisible nuclear material signifiers.

The Uses of the Notion of Witnessing and Indifference in this Thesis: A Clarification

Before the notion of the palimpsest is explored in detail, I will investigate the central role witnessing plays in the films and series analysed in this thesis as well as being a fundamental aspect of Cultural Memory Studies and Trauma Theory. In *Hiroshima Mon Amour*, for example, the process of gaining knowledge of Hiroshima by the main character, Elle, is separated from the direct testimonies of those surviving the bombing, who, nonetheless, are displayed in their silence through extracts edited by Resnais that belong to three Japanese films, as will be argued in Chapter II and III. In Chapter II, however, I apply the theory of the impossibility of witnessing to *La Jetée* as developed by Shoshana Felman and Dori Laub in *Testimony: Crises of Witnessing in Literature, Psychoanalysis and History*. Max Silverman the theories of Felman and Laub, alongside the contribution offered by Cathy Caruth to the field of Trauma Studies, as "pioneering works in literary and film criticism that employ trauma theory as the lens through which to perceive the belated effects of extreme violence.[136] Specifically, I will use the theory emerging from the chapter, *An Event Without a Witness: Truth, Testimony and Survival*, written by psychoanalyst, psychiatrist and child Holocaust survivor, Dori Laub.[137]

Here Laub addresses the centrality of witnessing and storytelling on behalf of Holocaust survivors as a fundamental step in the process of the reconstruction of a shattered and annihilated identity as the one operated by the Nazis in concentration camps. Laub claims, in fact, that the Holocaust

[136] Max, Silverman, 'Latency in Lebanon, or Bringing Things (back) to Life: A Perfect Day (Joana Hadjithomas and Khalil Joreige, 2005)', *Memory Studies*, 16.4 (2023), 694–708 <https://doi.org/10.1177/17506980211033333>. p.695.
[137] Shoshana Felman, and Dori Laub, *Testimony: Crises of Witnessing in Literature, Psychoanalysis and History* (New York ; London: Routledge, 1992) p.81.

as an "event produced no witnesses"[138] because of the extreme level of annihilation which took place in the concentration camps, not only at a physical level but also affecting the psychological realm. As Laub states:

> On the basis of the many Holocaust testimonies I have listened to, I would like to suggest a certain way of looking at the Holocaust that would reside in the following theoretical perspective: that what precisely made a Holocaust out of the event is the unique way in which, during its historical occurrence, the event produced no witnesses. Not only, in effect, did the Nazis try to exterminate the physical witnesses of the crime; but the inherently incomprehensible and deceptive psychological structure of the event precluded its own witnessing, even by its very victims.[139]

With this claim, Laub is signalling the utter dehumanisation occurring inside concentration camps, which can be viewed alongside the ability of the Nazi regime to erase any sense of the *Other* inside the camps, as part of a project of rendering witnessing impossible. As Laub further observes:

> There was no longer an other to which one could say "Thou" in the hope of being heard, of being recognised as a subject, of being answered. The historical reality of the Holocaust became, thus, a reality which extinguished philosophically the very possibility of address, the possibility of appealing, or of turning to, another. But when one cannot turn to a "you" one cannot say "thou" even to oneself. The Holocaust created in this way a world in which one could not bear witness to oneself. The Nazi system turned out therefore to be fool-proof, not only in the sense that there were in theory no outside witnesses from the inside, that what was affirmed about their "otherness" and their inhumanity was correct and that their experiences were no longer communicable even to themselves, and therefore perhaps never took place. This loss of the capacity to be a witness to oneself and thus to witness from the inside is perhaps the true meaning of annihilation, for when one's history is abolished, one's identity ceases to exist as well.[140]

In this sense, Laub spotlights a variety of interconnected elements at play inside the camps: the absence of another to whom to refer in order to gather one's testimony (namely, the impossibility of turning "to a 'you'"), which produces, as a consequence, the impossibility of finding that alterity in oneself ("one cannot say 'thou' even to oneself"), and therefore the missed recognition of the self in its ability of acting as a witness ("one could not bear witness to oneself.") This is what Laub addresses as "the true meaning of annihilation", whereby the erasure of "one's history" and the

[138] Felman, Laub, *Testimony*, p.80.
[139] Ibid., p.80.
[140] Felman, Laub, *Testimony*, p.82

impossibility of recognising and communicating it, causes for one's identity to stop "to exist as well."

However, Laub emphasises the centrality of sharing one's testimony as part of the process of claiming back the humanity of which the horrific experience of the Holocaust had deprived survivors. According to Laub, the act of storytelling is also a way for the teller, namely the Holocaust survivor, to find a witness to their story, to acknowledge and therefore enabling "a repossession of the act of witnessing." In Laub's words:

> To a certain extent, the interviewer-listener takes on the responsibility for bearing witness that previously the narrator felt he bore alone, and therefore could not carry out. It is the encounter and the coming together between the survivor and the listener, which makes possible something like a repossession of the act of witnessing. This joint responsibility is the source of the reemerging truth.[141]

Laub's observations are contextualised within the project of the "Yale Video Archive", created under his aegis "forty years after the event," namely the Holocaust.[142] In this context, he points out that the process of witnessing occurs only belatedly:

> The experience of encountering today the abundance of the retrospective testimonies about the Holocaust is thus doubly significant and doubly moving. It is not by chance that these testimonies – even if they were engendered during the event – become receivable only *today*; it is not by chance that it is only now, *belatedly*, that the event begins to be historically grasped and seen. I wish to emphasise this *historical gap* which the event created in the collective witnessing. This emphasis does not invalidate in any way the power or the value of the individual testimonies, but it underscores the fact that these testimonies were not transmittable, and integrable, at the time. It is all the more imperative to recognise and to enhance today the value and the momentous contributions of the testimonies and the witnesses who preserved evidence often by risking their lives. The ultimate historical transmission of the testimonies beyond and through the historical gap, indeed emphasises the human will to live and the human will to know even in the most radical circumstances designed for its obliteration and destruction.[143]

[141] Ibid., p.85.
[142] Ibid, p.75.
[143] Ibid., p.84.

Therefore, this belated experience of witnessing, as Laub observes, necessitates a dialogic relationship between a teller and a listener, which enables the creation of a witness who can attest to the testimony of the Holocaust witness, who, in short, can receive their story. This long-term process had to go beyond the silence surrounding direct testimony on behalf of Holocaust survivors particularly in the post-war period. By not sharing their story, Laub remarks, "they feel that the rest of the world will never come to know the *real* truth, the one that involved the destruction of their humanity."[144] Laub further observes that this annihilated humanity could be rebuilt through the disclosure and sharing of testimonies, through an "*historical gap* which the event created in the collective witnessing." Carolyn J. Dean observes that the first significant moment in which the stories and experiences of Holocaust survivors were publicly shared and spotlit was represented by the Eichmann trial, which took place in Jerusalem in 1961. As Dean maintains: "The trial illuminated the Jewish dimension of the Holocaust, about which there had been little discussion until then."[145]

Dean also observes that Felman and Laub's theories (as well as some of the ideas developed by Giorgio Agamben later) have been subject to criticism and deemed as "controversial." She writes:

> All of Felman, Laub and Agamben' s claims about the fundamental opacity of the Holocaust have been controversial, but not because critics contest trauma' s effects; they believe rather that such arguments overplay the extent to which survivors lose access to their past and risk transforming Holocaust trauma into a sublime experience or generalise it to encompass all modernity.[146]

Keeping these critiques in mind, these theories are nonetheless crucial within the context of this thesis. In *La Jetée*, for example, which is the only film in this thesis to which I apply Laub's theory, Marker speculates on a dystopian world in which witnessing is no longer possible due to the establishment of a despotic, dictatorial system in which subjects are isolated from one another as well as being stripped from any possible human right. This extremely pessimistic vision of society resulted from a post-war period in which the spectre of war, torture and dehumanisation was still haunting French society via the Algerian war (as I will discuss below and further in Chapter III.) Furthermore, as Silverman points out in relation to Feldman and Laub's input to trauma theory, but also to Cathy Caruth:

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[144] Ibid., p.82.
[145] Carolyn J. Dean, 'Witnessing', in *The Routledge Companion to Literature and Trauma* ed. by Hannah Meretoja, and Colin Davis, (London; New York: Routledge, 2020), pp. 111-120 (p.113). Ebook Central ebook.
[146] Dean, 'Witnessing', p.116.

> I suggest that we need to adapt, certainly not reject, the pioneering works in literary and film criticism that employ trauma theory as the lens through which to perceive the belated effects of extreme violence.[147]

Crucially, *La Jetée* came out in 1962, and, as such, it is possible to speculate that Marker (as much as Resnais before him) had been influenced by the centrality of witnessing and attesting to violent and horrific crimes and genocide such as the Holocaust. Even though the theory proposed by Laub was published some forty years after *La Jetée* was filmed, in Chapter II I will argue that Marker addresses the theme of the impossibility of witnessing in his work. The extreme fragmentation and alienation in which the characters are immersed in *La Jetée*, particularly embodied by the main character, signal the absence of a listener, of the *Other* to "which one could say "Thou" in the hope of being heard, of being recognised as a subject, of being answered."[148] Crucially, the protagonist is a nameless individual who is dispossessed of memories from his past. This absence of memory is engendered by the extreme isolation of the character in the camps, which also emphasises the impossibility of turning to oneself to witness one's own experience. Marker, therefore, identifies "a world in which one *could not bear witness to oneself*."[149]

Because of the loop-like structure of the film, Marker points out that there is not a moment in which to "to bear witness [...] retroactively." The story told in the film is, therefore, a story without a story, the story of the impossibility of storytelling if there is no one who can listen to, and make sense of it. In short, in the film Marker indicates the absence of a receiver, "an other to which one could say "Thou."" I suggest that through this Marker asks the questions: what if the recognition of testimony can never happen, because there is no future in which the event can be narrated in its belatedness? What if there is no *another* who is willing to listen to this story? Significantly, not only are these questions relevant to the Holocaust, on to which Marker clearly draws as will be argued in this thesis, but they were also elicited by the recent past and contemporaneous context in which the film was made, namely the nuclear bombing of Hiroshima and Nagasaki on the one hand, and the Algerian War and nuclear testing in the Algerian desert on the other.

Following the destruction of Hiroshima and Nagasaki, the status of the *hibakusha* remained ambiguous until after the end of the American occupation of Japan. As I will discuss later in this

[147] Max, Silverman, 'Latency in Lebanon, or Bringing Things (back) to Life, p.695.
[148] Felman, Laub, *Testimony*, p.82.
[149] Ibid., p.82.

introduction, the reconstruction of Hiroshima following the end of World War II relied on an amnesic relationship between the causes and responsibilities behind the bombing of the two cities, and the new status of New Hiroshima as a successful story of recovery after destruction. As Dean observes: “The US government [...] defined the bombings of Hiroshima and Nagasaki as necessary to save American lives.”[150] Considering this ambiguous condition, Shibata addresses the silencing of the *hibakusha* at the end of World War II and their progressive disappearance from public opinion until later on in Japanese history. She writes:

> The *hibakusha* faced difficulty in making their voices heard. By the mid-1950s, a significant psychological and economic gap had already developed between the *hibakusha* and others. During the U.S. occupation, the *hibakusha* were abandoned, with no government welfare and medical support, due to the self-imposed inhibitions of the national and local government welfare and medical support, due to the self-imposed inhibitions of the national and local governments in the presence of the U.S. occupation forces. The censorship policy also prohibited the circulation of information on the health condition of the *hibakusha*, even from a medical perspective. The suppression of accurate information about the atomic bomb disease in this period bred a hotbed of discrimination and prejudice against the *hibakusha* in later years. Only after the *Lucky Dragon* Incident gripped national attention did the retroactive awareness of the *hibakusha*’s predicament grow.[151]

In this sense, both Resnais in *Hiroshima Mon Amour* and *La Jetée* signal the silencing that the bomb produces after its explosion as maintained in Chapter III. As argued earlier in this introduction, this silence can be viewed as an effect of the nuclear uncanny, but also as a silencing of witnessing implicated in the process of reconstruction, which creates a separation between the past and the future.

Furthermore, the silencing and the absence of a “listener” to whom to share the stories of extreme violence and torture characterising the Algerian War were also a matter of debate in France and are germane to the notion of indifference I will tackle in Chapter II. Multiple intellectuals in France denounced the extreme indifference and apathy of the French population towards the Algerian War and the theme of torture in particular. As Judith Surkis, De Beavoir became particularly vocal through an article sent to *Le Monde* in 1960, through which she intervened in the case of torture

[150] Dean, ‘Witnessing’, p.113.
[151] Yūko Shibata, *Producing Hiroshima and Nagasaki: Literature, Film, and Transnational Politics* (Honolulu: University of Hawai'i Press, 2018), p.50. EBSCOhost Ebooks ebook.

of Djamila Boupacha.[152] In this article, Surkis addresses the wider context in which De Beauvoir's accusation of apathy and indifference of the public opinion towards the torture and murder of Algerian prisoners was taking place. As she recounts:

> The state of what contemporaries described as "public opinion" in early 1960 seemed even more dispiriting. Commentators increasingly remarked that detailed revelations of widespread torture and extra-judicial executions failed to arouse the least indignation. One document, again in Les Temps Modernes, tracked the dominant media's remarkable indifference to the Comité Audin's named accusations of army officers (including Aussares, Devis, and Charbonnier). The author denounced both the army's cover up of Audin's death and the scandalous state of media apathy in no uncertain terms: "It took much less, in other times, to set off the Dreyfus Affair. Today, shock [l'émotion] does not extend beyond the same restricted milieu: an anaesthetised opinion follows the development of the scandal with extraordinary indifference."[153]

Furthermore, in her autobiography *La Force de Choses* [*The Force of Circumstance*] De Beauvoir re-evokes this sense of indifference she was perceiving in the public consciousness and in which, to a certain extent, she was a part of.[154] She writes:

> I could stand no longer this hypocrisy, this indifference, this country, my own skin. These people on the streets, consenting or careless, were murderers of Arabs: all guilty. And so was I. "I am French." These words scratched my throat like the admission of a flaw. For millions of men and women, of elderly people and children. I was the sister of torturers, arsonists, sweepers, executioners, starvers; I deserved their hatred since I could sleep, write, enjoy a book.[155]

In his film, Marker signals the indifference of the French population as experienced by the protagonist. In this way, the potential message conveyed by the film is that public opinion, which should have played the role of "the listener and receiver" of these stories of torture and violence, were avoiding the opportunity to engage in and protest against the injustices taking place in Algeria. In Chapter III, I will argue that a further level of interpretation of Marker's film connects

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[152] Judith Surkis, 'Ethics and Violence: Simone de Beauvoir, Djamila Boupacha, and the Algerian War', *French Politics, Culture and Society*, 28.2 (2010), 38–55 (pp. 38-39) <doi:https://doi.org/10.3167/fpcs.2010.280204>.

[153] Surkis, 'Ethics and Violence', p.42.

[154] Beauvoir, Simone de, *La force des choses* (Paris: Gallimard, 1963). P.407.

[155] "Je ne supportais plus cette hypocrisie, cette indifférence, ce pays, ma propre peau. Ces gens dans les rues, consentants ou étourdis, c'était des bourreaux d'Arabes: tous coupables. Et moi aussi. "Je suis française." Ces mots m'écorchaient la gorge comme l'aveu d'une tare. Pour des millions d'hommes et de femmes, de vieillards et d'enfants, j'étais la soeur des tortionnaires, de incendiaires, des ratisseurs, des égorgeurs, des affameurs; je méritais leur haine puisque je pouvais dormir, écrire, profiter d'un livre." Beauvoir, *La Force des Choses*, p.407. My translation.

the Algerian War with the atomic experiments taking place in Algeria, which also determined the process of decolonisation of Algeria. However, it is worth noting, in this context, that, to date, no reparations have been conducted to repay the Algerian people from the damage caused by radiation following this testing, which lasted six years, from 1960 to 1966. As Samia Henni observes:

> Up to this day, the facts and deeds of France's nuclear weapons program in the Algerian Sahara remain a military secret. The majority of French institutional archives that document the production, detonation, and consequences of these weapons of mass destruction are classified and inaccessible to the public. This imposed amnesia not only encumbers the writing of France's atomic histories in the Algerian Sahara, but also prevents victims, veterans, and civil groups from claiming the socio-economic, psychological, spatial, and health compensations and recognitions that should be accorded to them according to protocols of international law.[156]

Once more, as in the cases highlighted above in this section, the stories of the victims risk remaining deprived of official acknowledgement, as the information at disposal by the French government related to the nuclear experiments in the Sahara desert is still classified.

Returning to a contemporary Nuclear Culture context, talking about her 2023 exhibition *Performing Colonial Toxicity*, Henni addresses the ongoing legacy of French colonialism in Algeria via the contaminated lands of the Sahara where the French nuclear weapons programme took place. According to Henni, nuclear radioactivity and toxic contamination still affect the desert's human and non-human life, which means that:

> Colonialism did not stop in 1962 when the French Army and the French colonial authorities left Algeria and Algeria gained its independence from France, but it continued through this radioactivity that is circulating in the Sahara and is contaminating the human and non-human life as well as the environments.[157]

This exhibition contains a variety of archival material, documents, but also filmmakers' and artists' responses to the area affected by radioactivity. The direct testimonies from the victims also feature in the exhibition. In relation to the witnesses, Henni explains:

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[156] Samia Henni, 'Jerboasite: Naming French Radioactive Matter in the Sahara', *e-flux Journal*,12.22 (2022), 1-8 (p.1) <https://www.e-flux.com/architecture/half-life/508392/jerboasite-naming-french-radioactive-matter-in-the-sahara/>.

[157] STIR, *Samia Henni on the Enduring Remnants of Nuclear Colonialism*, online video recording, YouTube, 5 January 2024, https://www.youtube.com/watch?v=ipkjkai1X24 [accessed: 26 February 2024] min. [00:00:57-00:01:22].

> We are also including witnesses and memories and testimonies by victims from the Sahara and from France. Part of those testimonies were written in French and Amazigh and we also translated them into English so that other audiences can read them and have access to them and are online.[158]

It is, therefore, significant, that this diverse mix of official and unofficial documents, direct testimonies and artistic outputs map out the silenced history of this nuclear weapons programme, while also filling the gap left empty by the refusal to declassify the governmental documents and assume responsibility for cleaning up the area from the toxic remnants of the experiments and pay reparations to local people.

Memory as Palimpsest in Max Silverman *Palimpsestic Memory*

At the beginning of this section, I considered the way in which forgetting and remembering, memory and non-memory emerge from the texts explored in this thesis. Here, I shall argue how memory, and especially cultural memory, plays a fundamental role in the theorisation of the palimpsest. But before this, it is crucial to offer a brief clarification of how the notion of cultural memory will be employed in this context. As Ann Rigney articulates:

> For scholars working in the field of cultural memory studies, the key to the articulation between the individual and the collective lies in culture. [...] For memory to be "collective" it must involve not only recollections that are held in common, but reflections that are also self-reflexively shared as part of common knowledge about the past. And memory can only become collective in this specific sense when different acts of communication and representation using whatever tools are available have come into play so as to create a common pool of stories and figures of memory to which reference can be made.[159]

In the definition of cultural memory offered by Regny, therefore, culture is an essential element enabling the movement from the "individual" to the "collective", and in which the process of memory is conceived "as part of common knowledge about the past". Regney further argues, "cultural artefacts, forms, and practices do not just provide a conduit for expressing already existing memories [...] they also play an active role in shaping what is remembered and how."[160] In the sense expressed by Rigney, the audio-visual productions explored in this thesis are "cultural artefacts" capable of both addressing events, aesthetics, and discourses belonging to the past, but also shaping cultural practices of memory, rendering the knowledge concerning

[158]STIR, *Samia Henni on the Enduring Remnants of Nuclear Colonialism*, min. [00:03:02-00:03:26].
[159] Rigney, 'Cultural Memory Studies', p.65.
[160] Ibid., p.65.

nuclear technologies relevant, and timely, proposing new ideas, and creating unexpected connections with diverse spheres, in order to identify the nuclear phenomenon in its plurality, and impact onto the present, and the future.

With this in mind, the theory of memory as palimpsest will be the missing piece of a puzzle in which memories, stories, and aesthetics resurface and interlace with one another in the shadow of the nuclear-military-industrial complex. Furthermore, memory as palimpsest represents another way to map out the structure of visibility/invisibility underpinning the nuclear phenomenon. As Max Silverman points out talking about *La Jetée* (one of the texts included in this thesis), in his work *Palimpsestic memory: The Holocaust and Colonialism in French and Francophone Fiction and Film*, and in relation to the "palimpsestic structure" underpinning the notion of "concentrationary memory,"[161] palimpsestic memory embraces: "a notion of memory as the haunting (and hence disturbance) of the present, a site of the in-between, of doublings and overlappings, of an uncanny superimposition of the visible and the invisible."[162] This "uncanny superimposition of the visible and the invisible" will be, to different degrees, at the centre of the four chapters of this work, and will enable the detection and analysis of a hidden (nuclear) trace, which escapes from the trap of invisibility in which it lies.

From Multidirectionality (Rothberg) to Memory as Palimpsest (Silverman)

Expanding on Michael Rothberg's *Multidirectional memory*, Max Silverman develops the idea of palimpsestic memory as a way to overcome "a politics of competition between different narratives of the past."[163] According to these theories, conceived as a means of bringing together post-holocaust and post-colonial cultural productions, cultural as well as historical memory are fashioned through a transcultural and transnational dialogic relationship creating a public space of interconnected solidarities.[164] The purpose of both theories and frameworks is not to play down

[161] Max Silverman, *Palimpsestic Memory*, p.4.
Furthermore, Silverman states that "Concentrationary memory is itself a blueprint for what I am terming palimpsestic memory." In Silverman, *Palimpsestic Memory*, p.49.
[162] Silverman, *Palimpsestic Memory*, p.41.
[163] Ibid., p.169.
[164] Michael Rothberg, *Multidirectional Memory Remembering the Holocaust in the Age of Decolonization* (Palo Alto: Stanford University Press, 2009), p.5. ACLS Humanities eBook ebook.
Furthermore, Silverman observes in *Palimpsestic memory*: "This book is therefore an intervention in the debate around cultural memory in a transnational age [...] to propose a different way of viewing past violence and its relation to the present and future." In Silverman, *Palimpsestic Memory*, p.4.

the specificities underlying diverse forms of injustice and violence, but to "create new forms of solidarity and new visions of justice."[165] Silverman further claims that his method "neither universalises nor particularises histories but views memory between sameness and difference."[166] As Ann Rigney suggests in relation to the theory of multidirectional memory, "the concept of "multidirectionality" has marked an important development in this concern with trauma and unspeakability."[167] Both unspeakability and trauma, as a way to deal also, but not uniquely, with the events of the Holocaust, are fundamental notions in cultural memory studies and trauma studies, since they both indicate "sites of suffering and violence which seem to fall outside our usual categories of understanding and which, being shocking and intolerable, do not lend themselves to existing templates without a betrayal of their essence."[168]

Both multidirectional memory and palimpsestic memory, therefore, attempt to pierce through the construct of unspeakability separating different experiences of historical trauma and violence, challenging a pre-constructed hierarchy that privileges one narrative over another in order to understand how accounts of atrocities are produced and circulated via an aesthetic, fictionalised discourse, engaging in the dynamics of cultural memory. In this context, the theory developed by Silverman will be privileged to the discussion initiated by Rothberg. Both Rothberg and Silverman linger on the "cultural history of post-war Europe'' to develop their theories,[169] but also on the role played by "the arts", as well as "fictional narratives", as Rigney emphasises, "in shaping ideas about the past and the extent of their often transnational mass appeal."[170]

However, Silverman's "politico-aesthetic model of cultural memory", through which he perceives history and the relationships across diverse cultural memories is built on the idea of the palimpsest, which is a useful instrument through which to explore the texts in this thesis. In the words of Silverman:

> The notion of memory as palimpsest provides us with a politico-aesthetic model of cultural memory in that it gives us a way of perceiving history in a non-linear way and memory as a hybrid and dynamic process across individuals and communities.[171]

[165] Rothberg, *Multidirectional Memory*, p.5.
[166] Silverman, *Palimpsestic Memory*, p.5.
[167] Rigney, 'Cultural Memory Studies', p.72.
[168] Rigney, 'Cultural Memory Studies', p.72.
[169] Ibid., p.72.
[170] Ibid., p.73.
[171] Silverman, *Palimpsestic Memory*, p.5.

According to palimpsestic memory therefore, a layer of history hides behind another, as in Freud's idea of screen memory, which I will explore below, within a sort of enigmatic stratified memory structure, which accumulates inside the repository of the unconscious. In synthesis, instead of flattening out and rendering superficial critical discursive practices, palimpsestic memory dwells on the tension between "sameness and difference", in order to allow multiple spheres to generate an "ambivalent space of 'relationality'."[172] According to Silverman, in the conception of memory as palimpsest:

> The present is shown to be shadowed or haunted by a past which is not immediately visible but is progressively brought into view. The relationship between present and past therefore takes the form of a superimposition and interaction of different temporal traces to constitute a sort of composite structure, like a palimpsest, so that one layer of traces can be seen through, and is transformed by, another.[173]

Within the conception of the palimpsest, Silverman addresses the "memory trace" as expression of the way in which the palimpsest influences and informs the production and process of memory, namely:

> The memory trace is a hybrid network of echoes and reverberations across space and time (a 'noeud de mémoires' as opposed to Pierre Nora's famous 'lieux de mémoire').[174]

This idea of setting up a "relationship between past and present" which is shaped as a "superimposition and interaction of different temporal traces" underlying the idea of a palimpsest is further explained by Silverman through the Freudian notion of the mystic writing pad. Silverman explains that the way memory and perception interact and are preserved according to Freud, as well as the fact that memory, via the perceptual engagement with the world, is never completely erased, can be associated with the functionings of the magic pad:

> Just as, Freud suggests, the inscriptions of the child' s drawing on the magic pad are not completely erased when the celluloid sheet is lifted from the pad below, as the traces are still visible there, so our perceptions have left their mark in the unconscious and are latent (though not visible) in our present lives. The surface sheet may have covered over the initial impulse but that impulse

[172] Ibid., p.176.
[173] Silverman, *Palimpsestic Memory*, p.3.
[174] Ibid., p.7.

> is nevertheless present through the unconscious associations it has instigated.[175]

According to Freud, like in the mystic writing pad "the permanent trace of what was written is retained upon the wax slab itself and is legible in suitable lights,"[176] perceptions generate strata of accumulated traces within the unconscious that, albeit invisible and hidden, are indivisible from our present selves – and, as such, can re-emerge. Silverman complements the Freudian theory of the mystic writing pad with Derrida's critical perspective aimed at challenging Freud's idea of "pure perception."[177] In *Writing and Difference* Derrida observes:

> If there were only perception, pure permeability to breaching, there would be no breaches. We would be written, but nothing would be recorded; no writing would be produced, retained, repeated as legibility. But pure perception does not exist: we are written only as we write, by the agency within us which always already keeps watch over perception, be it internal or external. The "subject" of writing does not exist if we mean by that some sovereign solitude of the author. The subject of writing is a system of relations between strata: the Mystic Pad, the psyche, society, the world.[178]

Silverman further analyses Derrida's view on the inexistence of pure perception by claiming that, unlike what was stated by Freud, there is not an original or "primary source" and that the process of substitution is constantly influenced by the dialogue and exchange between "the psyche, society, the world." As Silverman writes: "The so-called "origin" is itself a substitute for something else in an endless chain of deferral and displacement."[179]

Crucially, I believe that Silverman's observation is also true in light of the Derridean notion of non-memory: inasmuch as "pure perception" does not exist, since "the subject of writing is a system of relations between strata," not everything is kept by the unconscious and not all traces can be retrieved. As Silverman further suggests: "Derrida's approach also questions Freud's faith in the ability of the analyst to extract from the trace "everything that has been forgotten,"[180] also because in the process of constantly being "written on," some memories remain erased. In this sense, I

[175] Max Silverman, 'Screen Memory', in The Routledge Companion to Literature and Trauma ed. by Hannah Meretoja, and Colin Davis, (London; New York: Routledge, 2020), pp.121-130 (p.125). Ebook Central ebook.
[176] Sigmund Freud et al., *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, trans. by James Strachey, (London: Hogarth Press and the Institute of Psycho-Analysis, 1953), p. 230.
[177] Silverman, 'Screen Memory', p. 125.
[178] Jacques Derrida, Jacques, *Writing and Difference*, trans. by Alan Bass, (London: Routledge Classics, 2001). p.285. Ebook Central ebook.
[179] Silverman, "Screen Memory", p.125.
[180] Ibid., p.126.

will consider the conception of the trace addressed by Silverman in light of the Derridean idea of *cinders*, as they, apparently, stand in contrast to one another. If the first is a productive force, the essence of which is to travel "across space and time," the second stands for the disappearance of memory, insomuch as it is a trace which attests to the absence of memory. In the chapters of this thesis, it will be possible to explore how these two opposite realities occupy the same texts. In addition to the employment of the idea of the palimpsest, Silverman navigates a variety of texts across literature, and film studies, embracing the risk of applying the same approach to a variety of media, "the notion of the palimpsest can bring into focus the dynamic activity of interconnecting traces common to both media without necessarily obliterating the differences between them."[181]

It is worth including a further elucidation in this section as regards the way I will use palimpsestic memory in this thesis. In *Palimpsestic Memory*, Silverman bases his argument on a theoretical framework informed by trauma theory, cultural memory, theories of racial oppression (with reference, for example, to Frantz Fanon),[182] as well as the intersection between imperialism and genocide as developed by Hannah Arendt, with a particular focus on T*he Origins of Totalitarianism*.[183] The latter theory, according to Silverman, is in strict proximity with the theories by political deportee David Rousset, developed in his book *L'Univers Concentrationnaire*.[184] Silverman claims that in Rousset the extermination of a people by the Nazi regime had its grounds "in the familiar soil of capitalism and imperialism."[185] Silverman continues:

> Rousset's contention that one must see, at one and the same time, the interconnections between the concentrationary universe and the outside world and understand the absolute novelty of an experiment which means that now (as never before) 'everything is possible' might seem paradoxical, even contradictory. One of the fascinating features of Rousset's work is, precisely, the perception of a new monster produced from old ingredients, and the search for (pre-existing) words and images to define an unknown world.[186]

Based on these theories, Silverman traces aspects of continuity between events from the pre-war to the post-war period as emerging from the texts he analyses – while also laying the groundwork for his subsequent theory on "concentrationary memory."[187] As Silverman further clarifies:

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[181] Ibid., p.4.
[182] Silverman, *Palimpsestic Memory*, p.72.
[183] Ibid, see for example p.12.
[184] Ibid, p.11.
[185] Ibid, p.12.
[186] Ibid, p.12.
[187] See, for example: Griselda Pollock and Maxim Silverman, *Concentrationary Memories: Totalitarian Terror and Cultural Resistance,* First edition. (London, England: I.B. Tauris, 2019). Ebook Central ebook.

> Concentrationary memory presents a model of cultural memory as a mongrel process: it politicises the aesthetic strategies of modernism to capture the strangeness, ambivalences and historical interconnections of a post-concentrationary reality. It belongs to that post-war moment of refusal of the objectification of human relations and the normalisation of reality that inspired Rousset, Arendt, Césaire and Fanon, all of whom naturally saw the overlaps between different sites of racialized violence and dehumanisation, especially between Western capitalism and extermination and between fascism and imperialism, within Europe and outside its frontiers.[188]

Silverman, therefore, returning to the thinkers characterising the post-war period, re-conceptualises a memory discourse which involves a productive effort in drawing a context within which a variety of aspect (e.g. Western capitalism, imperialism and systemic dehumanisation of oppressed peoples), generated the context in which extreme violence, oppression and genocide could come to be.

While I acknowledge that this is a partial representation of the theory of the palimpsest within the context of cultural memory as conceived by Silverman, I will not be adopting an approach based on Rousset, Arendt, Césaire and Fanon's perspective. Rather, as I will further point out in the methodology section, the idea of the palimpsest will serve to identify structures of memory as they emerge from my primary material. I will, therefore, base my analysis on the structural role that the palimpsest plays in the workings of memory, with particular reference to the idea of the Freudian notion of screen memory as explained below in this introduction. I will combine these theories and concepts with other contextual historical details, resituating my primary material within a nuclear, Euro-Western context, on the one hand, and various ideas of memory, forgetting and memorialisation of past traumatic events prompted by the texts analysed, and resurfacing on an aesthetic level. As I will further state through the discussion of my analysis methods, this approach will allow me to navigate the complex relationship between visibility and invisibility characterising the nuclear-military-industrial complex.

The Palimpsest, Screen Memory and Colonialism

In his discussion of palimpsestic memory, Silverman puts an emphasis on the interconnections between the politico-aesthetic legacies of the Holocaust and colonial atrocities, which, as I will

[188] Silverman, *Palimpsestic Memory*, p.49.

explore in this thesis, are themes embraced, in different ways and through different lenses, by *La Jetée* and *Hiroshima Mon Amour*. However, in this context, it is also worth addressing the fact that, as will be further discussed in Chapter II, *Hiroshima Mon Amour* has been the subject of a variety of critiques in terms of the themes confronted, the racialised representation of the other and the silencing of the colonial histories evoked in the film. Especially according to authors like Sandrine Sonos, and, above all, Yūko Shibata, whose perspective will appear in this thesis, the film misses out on the opportunity to address some of the colonial tensions stemming from the encounter of the French woman with the Japanese man. Rather, as Shibata observes, *Hiroshima Mon Amour* upholds, and complies with the racialised rhetoric of the "colonial other", also through the Euro-centric academic readings, and interpretations of the couple's relationship (as, for example, by Lane and Caruth, and their observations on the language of the characters).[189] Furthermore, it plays on the ambiguous colonial heritage of the Japanese character, who, as Shibata contends, is a "chimaera of colonialism, both the ex-coloniser before the defeat and the "colonised" in the postwar world order initiated by U.S. preeminence", and where the "masculinised U.S. nation [...] comes to the fore as a nuclear superpower after the dual collapse of Japanese and European imperialisms."[190]

Despite this aspect, which, nonetheless, will be further examined in Chapter II, in *Hiroshima Mon Amour* and *La Jetée*, namely two films within a francophone context, the presence of multiple narratives linked with past and contemporaneous events emerges cogently. This connection is shaped through a subtle dialogue between World War II, the Holocaust, the Algerian War, and the atomic bombing of Hiroshima. These films also explore the jarring visual divide between the representation of the early stages of an object-based consumerist society alongside depictions of nuclear touristic practices, as the one documented in the 1950's and 1960's by Resnais and Marker, and the material void identified through the depiction of post-nuclear landscapes (as in *La Jetée*), or a simil-futuristic Hiroshima (as in *Hiroshima Mon Amour*). In *Hiroshima Mon Amour* and *La Jetée* the dialogue between history and fiction converges into universalising reflections on war (which have also been the object of criticism by, for example, Sanos), and issues of responsibility, guilt and mourning in defining victims and perpetrators.

To a different degree, *Burial* nuances the legacies of exploitation and colonial violence enacted by the former Soviet Union on its former satellite, annexed countries. It does so by, for example,

[189] Shibata, *Producing Hiroshima and Nagasaki*, p.29.
[190] Ibid., p.30.

showing the uranium mines in Kowary, Poland, where the Soviet policy of secrecy underpinning the extraction of radioactive resources caused the demise of many miners, as Škarnulytė points out in the documentary, and as will be further explored in Chapter IV.[191] To a certain degree, the texts in this thesis are haunted by the ghosts of the Cold War, and, *mutatis mutandis*, of the Soviet Union, via the still materially detectable, albeit fragmented, spectral ruins of nuclear artefacts visually punctuating them, alongside, in a different form, of World War II, and other related and contemporaneous conflicts. The series *Dark*, for example, in spite of dodging, as Silos Ribas observes, "those episodes in history that would be more familiar to international audiences, namely the Third Reich and the GDR,"[192] is imbued with evocations belonging to the Cold War and World War II period, as will be discussed in Chapter III of this thesis. The same inception of the show as explained by its showrunners, Baran bo Odar and Jantje Friese, is linked to the Chernobyl Power Plant accident that occurred in 1986, and the "fear of contamination" inundating Europe following the plant's explosion. This event, in addition to being the trigger for a diffused and shared state of anxiety, contributed to the disintegration of the USSR.[193]

By the same token, by using the Ignalina Nuclear Power Plant in Lithuania as a narrative and visual thread for her art film *Burial*, director Emilija Škarnulytė points out that her final purpose was to "unveil this large Cold War monument". Along the same lines, Cold War tensions are embedded into a film like *La Jetée*, for which, as Lee Hilliker remarks, "the speculative nature of the film is [...] subtended by an implicit referential grid that calls on recent and contemporary conflicts from WWII and Cold War to Indochina and Algeria."[194] Finally, as Beck and Bishop notice, *Hiroshima Mon Amour* can be considered as "An early, prescient media object of the Cold War", thereby prophetically anticipating the structure of invisible nuclear threat hovering globally and characterising the Cold War period.[195] As will be clear throughout this thesis, the Cold War, and the legacy of the Soviet Union, constitute a significant measuring tape through which to gauge

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[191] The uranium mines in Kowary, Poland, appear in *Burial* at min. [min. 00:06:57], in Emilija Škarnulytė, *Burial*.

[192] Silos Ribas, 'Looking into the Abyss', p.275.

[193] As, for example, Olga Bertelsen maintains: "Although for most Western intelligence analysts the collapse of the USSR was unexpected, they nevertheless accurately predicted that the Soviet disinformation campaign and lies surrounding Chernobyl in 1986 and 1987 would further exacerbate the political crisis in the USSR." In: Olga Bertelsen, 'Secrecy and the Disinformation Campaign Surrounding Chernobyl', *International Journal of Intelligence and Counterintelligence*, 35.2 (2022), 292–317 (p.311) <https://doi-org.sheffield.idm.oclc.org/10.1080/08850607.2021.2018262>.

[194] Lee Hilliker, 'The History of the Future in Paris: Chris Marker and Jean-Luc Godard in the 1960s', *Film Criticism*, 24.3 (2000), 1–22 (p.7) <https://www.proquest.com/scholarly-journals/history-future-paris-chris-marker-jean-luc-godard/docview/200949966/se-2?accountid=13828> [accessed 26 February 2024].

[195] John Beck and Ryan Bishop, 'Introduction: The Long Cold War', in *Cold War Legacies: Systems, Theory, Aesthetics* ed. by John Beck and Ryan Bishop (Edinburgh: Edinburgh University Press, 2016), pp. 1-32 (p.25). Ebook Central ebook.

each chapter. However, its presence will emerge discursively through the interpretation of the fragmentary appearance of its visual signifiers (e.g. the bunkers, the nuclear power plants, the atomic mushroom cloud, to name a few), rather than through a historical lens.

Returning specifically to the series *Dark*, the application of the theory of palimpsestic memory, therefore, appears more complex, and this is why the notion of screen memory might be useful, both to clarify the workings of memory in Freud, but also to understand how the theory of memory as palimpsest is developed. In his essay, *Screen Memory* Silverman uses this notion to address traumatic events and histories of violence beyond the Holocaust, applying it to the Lebanese film *A Perfect Day* (2005) by Joana Hadjithomas and Khalil Joreige.[196] Silverman observes that Freud uses the notion of screen memory to navigate and understand the complexities underlying the relationship between the conscious mind and the unconscious in the production of memory, and how these two aspects intersect within the mnemonic process, which can also be applied to political and historical processes and their fictional representation. Silverman explains this aspect thus:

> Freud's interest in screen memory is, however, part of his broader interest in the relationship between the conscious mind and the unconscious, the symptom and the affect, the visible and the invisible, that is, the complex ways in which the mind processes raw experience, especially traumatic moments at which, according to Cathy Caruth, the subject was never fully present in the first place. Seen in this light, the material and mundane substitute (be it a fetish object, a landscape, a bodily movement, a smell, a "false memory" and so on) is not simply a cover for something else but is, as Freud observes, part of a process of displacement from one thing to another.[197]

In his exploration of screen memory, Silverman does not exclusively interpret screen memory as "a process of displacement from one thing to another," but he also lingers on the notion of the ambivalent screen. According to this, not only does the screen cover other memories from resurfacing and, therefore, through which "something is "screened out" and rendered invisible", but it is also the site where the wound and the repressed can emerge and rendered visible.[198] As Silverman states:

> This idea of the ambivalent screen – combining visibility and invisibility, absence and presence – allows a more complex model to emerge in which the screen is always a composite assemblage and superimposition of conscious and

[196] Silverman, 'Screen Memory', p.127.
[197] Ibid, p.123.
[198] Ibid., p. 126-127.

> unconscious elements and different times and spaces. It also aligns with the mechanics of trauma – in which banal actions, objects and landscapes in the present can be visible sites for the acting out of invisible wounds from the past – and with art forms that attempt to figure the paradox of showing the invisible.[199]

This notion of memory, therefore, will emerge in particular in Chapter III in relation to the comparative reading of *Hiroshima Mon Amour*, *La Jetée* and *Dark*. Here, the banality of some objects, like the toys present in the series *Dark*, will be conducive for the emergence of "invisible wounds from the past." *Dark* does not address directly the Holocaust or colonialism, but circles back to German history and violent events linked to the past, also alluding to the Nazi experiments occurring during World War II, as argued by Batori and discussed in Chapter III.[200] The intersection of these memories, therefore, will be viewed as both "part of a process of displacement from one thing to another"[201] and in their relational connection with the Chernobyl nuclear accident, as they both intersect with the uncanny disappearance of children. These themes will be linked back, via an indirect and intricate route, to German nuclear history.

Moreover, in *Dark* the palimpsestic nuclear traces which haunts its aesthetic are conveyed through a fading transgenerational representation of nuclear- induced trauma, whose contours have become less clear, and should be found in the relationship between the urban space and nature, the overground town and the underground spaces, and in the objects which accumulate within these environments, visually explored in the series. Within the subject of time, and its relation with memory, *Dark* rejects models for which memory and perception are structures following linear pathways. Memory is tackled and framed as a dynamic, metamorphic instrument, as in a palimpsest, and utilised to seek out truth and knowledge.

As mentioned above in this introduction and as will be further discussed in Chapter I, *Dark* plays with the idea of a repeated apocalypse, which occurs and is reversed several times over the course of the series, as well as being a central element to its aesthetic and narrative. Despite the fact that the show does not confront directly other realities and contexts, due to the extreme isolation characterising the local community and the specific focus on the lives of the population

[199] Ibid., p.127.
[200] Anna Batori, '"Everything is Connected". Narratives of Temporal and Spatial Transgression in Dark', VIEW. Journal of European Television History and Culture, 19 (2021), 1-13 (pp.4-5) <http://dx.doi.org/10.25969/mediarep/16251>.
[201] Silverman, 'Screen Memory', p.123.

of Winden, it is essential in this introduction to clarify the meaning of the apocalypse in relation to nuclear experiments and colonialism.

There exists a close tie between colonialism, nuclear experiments and the long-term, devastating psycho-physical consequences of radioactive contamination and toxicity both affecting human and non-human life. As observed above in this introduction, talking about her exhibition *Colonial Toxicity*, Samia Henni points out that the legacy of colonialism endures through radioactivity and its effects on humanity, native species, the built environment and nature – which have not been acknowledged or addressed by the French government. Insofar as, in the words of Henni, colonialism perdures through radioactivity in the contaminated lands of the Sahara, Elizabeth invites us to recontextualise the environmental and social damage caused by "violent processes of empire" and the colonial legacy of nuclear experiments.[202] As argued above in this introduction, in *Dark* the apocalypse will be explored through the idea of anticipation aesthetically and narratively evoked by the repeated explosions and their reversal. Saint-Amour interprets the sense of a nuclear uncanny as anticipation, or *bukimi*, experienced by the inhabitants of Hiroshima before its destruction and connects it with the bombing of other metropolitan cities during World War II. He addresses these past bombings as generating a sense of anticipation in populations awaiting destruction to occur as a "symptom" of a repressed memory signalling an event that had already happened elsewhere. As Saint-Amour argues:

> Such a feeling of weird anticipation or uncanniness may have been allied to the symptom as return-of-the-repressed insofar as it arose from an experience not of singularity but of repetition – the repetition, say, that inheres in awaiting an expected catastrophe others have experienced (for example, conventional aerial bombardment) while also repeating what must once have been their hopes to be exempted through some special dispensation.[203]

In this sense, the apocalypse is not framed as a future event, but as a symptom of the past repeating itself, albeit in a different way. This element, therefore, addresses the idea that the statement according to which the apocalypse is a future prospect which should be avoided is not valid for everyone. This is even more relevant if one considers, as DeLoughrey does, the catastrophic legacies of colonialism, when she writes:

> Some may rightly question whether the claim of Anthropocene discourse that we have an entirely new ecological crisis is, in fact, belated. Turning to

[202] Elizabeth M. DeLoughrey, *Allegories of the Anthropocene* (Durham: Duke University Press, 2019), p.7. <http://library.oapen.org/handle/20.500.12657/24899>.
[203] Saint-Amour, 'Bombing and the Symptom', p.61.

> Indigenous and postcolonial island writers and artists, we can see that catastrophic ruptures to social and ecological systems have already been experienced through the violent processes of empire. In other words, the apocalypse has already happened; it continues because empire is a process. For writers and artists engaging the history of plantation slavery and nuclearisation, the apocalyptic or declensionist narrative of the Anthropocene is not only a future anticipation of the "end of nature" but also a remembrance of a violent historical past with ongoing repercussions for the present.[204]

In short, DeLoughrey points out that the theories underlying the Anthropocene are also a reminder of "a violent historical past with ongoing repercussions for the present" denounced by Indigenous literature and art not as something belonging to the future, but to be found in a past whose reverberations continue into the present. *Dark*'s implication is related to the possibility that the apocalypse has taken place elsewhere: in Chernobyl and, before that, in Hiroshima, but, arguably, as also experienced by those populations in the Indigenous Pacific discussed by DeLoughrey, affected by settler colonialism or "or twentieth-century nuclear colonialism in the Marshall Islands and French Polynesia."[205] *Dark* might thus pose the question: What can we learn looking at other apocalyptic events that occurred in the past? What can we do to avoid something that has already happened, and we know can happen again?

Aesthetic Theme: Slow Violence, Deep Time and the Anthropocene

Slow Violence

In this thesis the relation between sight and the consequences of nuclear technologies in terms of visibility and invisibility of the nuclear-military-industrial complex will be particularly relevant to *Hiroshima Mon Amour* and *La Jetée* in Chapter II and Chapter III. As mentioned previously, I will explore this relationship notions of memory and non-memory, remembering and forgetting, and the (im)possibility of witnessing, as they are conveyed by heterogeneous and transnational representations of nuclear technologies, alongside their, at once, spectacular and slow lethality.

In this context, it is worth pointing out that the notion of slow violence plays a central role in the way that these films, series, and the documentary have been selected, as well as intersecting

[204] DeLoughrey, *Allegories of the Anthropocene*, p.7.
[205] DeLoughrey, *Allegories of the Anthropocene*, p.83.

with the conceptualisation of the "background" in *Hiroshima Mon Amour* and *La Jetée*, deep time in *Dark*, *Into Eternity* and *Burial,* and the concept of the Anthropocene and anthropogenic modification of the planet discussed in Chapter IV.

As mentioned above in this introduction, in both *La Jetée* and *Hiroshima Mon Amour* the nuclear explosion is positioned "in the background, behind the characters, as a sort of landscape," while the personal stories of the characters assume a more foregrounded position within the story.[206] Resnais eludes the iconography of the atomic bomb, despite the fact that initially the idea was to open the film with an atomic deflagration. In its place, the extreme close-up of two interlacing bodies covered by nuclear debris, ashes and sweat dominates the first scenes of the film. Resnais is thus substituting the more spectacular and visible violence of the atomic deflagration with a reflection on what happens after the bomb, as he lingers on the sustained, yet invisible, psychological and representational issues of depicting the horror after destruction has taken place, which is close to what Rob Nixon name slow violence.

In *Slow Violence and the Environmentalism of the Poor*, Rob Nixon draws the contours of a kind of lethality that differentiates itself from other more spectacular forms of violence, and that "is deficient in the recognizable special effects that fill movie theatres and boost ratings on TV."[207] Because of the invisibility at the heart of this violence, among which, but not exclusively, he lists "chemical and radiological violence," Nixon proposes a type of narrative that defeats the fast and spectacular rhythms of warfare and destruction in order to, instead, focus on a phenomenon which "remain[s] largely unobserved, undiagnosed, and untreated."[208] As Nixon articulates:

> By slow violence I mean a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all.[209]

In doing so, he speculates on the possibility of broadening limitative conceptions of violence, which only show the most visually dramatic and eye-catching side of a contemporary aesthetical discourse, allowing us to "rethink[...] our accepted assumptions of violence to include slow

[206] Guzmán, *Alain Resnais Interview 2,* min. [00:08:44-00:08:54].
[207] Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge: Harvard University Press, 2011), p. 6. Ebook Central ebook.
[208] Ibid., p.6.
[209] Nixon, *Slow Violence and the Environmentalism of the Poor*, p.2.

violence."[210] Addressing the representation of this phenomenon as a demanding, complex task, Nixon poses the question of "how to devise arresting stories, images, and symbols adequate to the pervasive but elusive violence of delayed effects."[211] Therefore, unlike the violence that the representation of the atomic explosion might directly or indirectly evoke, which ideally fulfils the description of Nixon "as an event or action that is immediate in time, explosive and spectacular in space, and as erupting into instant sensational visibility," this thesis will focus on another kind of violence which affects the individual in the long-term and which, by the same token, is more complex to detect in its less "instant sensational visibility."[212] Schwab further expands on the notion of slow violence to introduce a more specific definition of the term which fits into a nuclear context, and which she addresses as "slow nuclear violence."[213] This notion is concretised through material health and environmental consequences, such as "-contamination of air, water, and soil, with its health risks for generations to come – that - profoundly affect major aspects of people's lives."[214]

In Schwab's argument, the effects of a "slow nuclear violence" are, in part, determined by practices of deceit and denial, but they also assume the characteristics of "psychic splitting," discussed earlier in this introduction.[215] According to Schwab, these are complementary mechanisms enabling the illusion whereby the "threat of nuclear annihilation" progressively disappears from the individual's consciousness.[216] Furthermore, the notion of slow nuclear violence will be relevant to the other films and tv series in this thesis and, as suggested at the beginning of this section, will interlace with questions of deep time and harmful anthropogenic intervention through the employment of nuclear technologies, on the one hand, and the long-term persistence of nuclear archaeologies on the other, as will be explored in Chapter IV.

[210] Ibid., p.3.
[211] Ibid., p.3.
[212] Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge: Harvard University Press, 2011), p. 2. Ebook Central ebook.
[213] Ibid., p.17.
[214] Ibid., p.17.
[215] Ibid., p.17.
[216] Ibid., p.17.

In Chapter I, deep time will be connected to the discussion on the nuclear sublime and nuclear uncanny in relation to *Dark*. David Farrier argues that in the age of the Anthropocene that, initially, this notion served to indicate geological timescales defined through processes of "sedimentation and erosion" lasting billions of years, which would determine the geological make-up of the planet.[217] Farrier juxtaposes this conception of deep time with the notion of the sublime, since these significant time-scales prompted affects of "terror and wonder", and for which the sublimity of these enormous, unmeasurable dimensions "transcended and yet somehow affirmed humanity."[218] However, in the age of the Anthropocene, Farrier claims that humanity's relationship with deep time is no longer one of terror and awe. On the contrary, he suggests that humanity's positioning in relation to the changing composition of the earth as a consequence of anthropogenic intervention and the long-term effects on the planet is "visceral", rather than observational.[219] He observes that geological deep time, once determined by the long work of nature and its reconfiguration, is now influenced by human pervasive activity. Examples of this are radioactive isotopes found in the human body of "everyone born after 1963" , the half-life of depleted uranium, which "is around 4.5 billion years, roughly the same as the age of the Earth, while that of the plutonium in Chernobyl's nuclear reactor is 240,000 years."[220] Farrier points out that, rather than being outside of the control of humanity as natural processes of transformation, "Such timescales resist the imagination, but exist as a haunting presence in our daily lives", and therefore are closer to the notion of the uncanny.[221] Farrier brings about other examples of human inventions expressing these timescales (such as plastic), but for the purposes of this thesis, what he considers in relation to nuclear technologies and its long-term immaterial (radiation) and material (plutonium and depleted uranium) are significant, insofar as they identify the idea of a deep time uncanny.[222]

It is worth opening a bracket on the notion of the Anthropocene, since this is relevant to the definition and use of deep time in this thesis, it will emerge in the analysis of *Burial* in Chapter IV,

[217] David Farrier and Aeon, 'How the Concept of Deep Time Is Changing', The Atlantic, 31 October 2016 <https://www.theatlantic.com/science/archive/2016/10/aeon-deep-time/505922/> [Accessed 26 February 2024].
[218] Farrier, 'How the Concept of Deep Time Is Changing'.
[219] Ibid.
[220] Ibid.
[221] Ibid.
[222] Ibid.

while also be connected to the notion of the apocalypse in *Dark* in Chapter I. This idea of human action as a force able to modify the chemical composition of the planet, its climate and ecosystems at the expense of other nonhuman planetary life is at the base of the theorisation of the new geological era of the Anthropocene. As explained by Elizabeth Povinelli:

> Since Eugene Stoermer first coined the term "Anthropocene" and Paul Crutzen popularised it, the Anthropocene has meant to mark a geologically defined moment when the forces of human - existence began to overwhelm all other biological, geological, and meteorological forms and forces and displace the Holocene. That is, the Anthropocene marks the moment when human existence became the determinate form of planetary existence – and - a malignant form at that – rather - than merely the fact that humans affect their environment.[223]

Both Povinelli and DeLoughrey argue that the beginning of the Anthropocene is still a matter of debate. In her discussion of the causes underlying the advent of the Anthropocene as a new geological era, DeLoughrey argues that "the violence of transatlantic empire is one recognized marker or constellation of the Anthropocene."[224] In addition to the actions of the empire and colonialism, she points out that another marker of the Anthropocene that has been recognised by scientists, albeit significantly slowly, is linked to the nuclear military complex and the crucial connection with nuclear experiments and tests, which, in turn, signal the complex legacy of the Cold War period.[225] DeLoughery maintains that:

> Zalasiewicz and his colleagues in the Anthropocene Working Group propose the day and time of the world's first atomic test – Trinity, at Alamogordo, New Mexico, on July 16, 1945 – to mark the Anthropocene. While more than two thousand nuclear tests have been conducted on Earth since that date, this team focuses on the legacy of their global distribution of cesium-137, strontium-90, plutonium-239, carbon-14, and other artificial isotopes. Since dating the Anthropocene entails both a stratigraphic marker for the present and one that will be detectable into the fat future, carbon-14 is particularly well suited due to its 5,700 year half-life, which will demonstrate a chemostratigraphic "spike" for another fifty thousand years. Building on this work, Lewis and Maslin have added to the "Orbis spike" of 1610 the "bomb spike peak" of 1964.[226]

Considering, therefore, the significant impact of nuclear experiments in the Cold War period, producing a spike which can be detected into the future, in Chapter IV, deep time will be discussed in relation to the anthropogenic changes engendered by nuclear technologies. The remnants of

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[223] Povinelli, Elizabeth A., *Geontologies: A Requiem to Late Liberalism* (Durham: Duke University Press, 2016), p. 9. Ebook Central ebook.
[224] DeLoughrey, *Allegories of the Anthropocene*, p.25.
[225] Ibid., p.26.
[226] Ibid., p.26.

nuclear technologies, both framed as nuclear archaeologies (as bunkers and uranium mines) or deep geological repositories, as both tackled by *Into Eternity* and *Burial*, will be considered as traces mapping out a human-made slow nuclear violence affecting and interfering with planetary processes and human and nonhuman life into the future – but they will offer opportunities to warn future human beings of the threat represented by nuclear technologies. The discourse connected to deep time is linked to the issue related to deep geological repositories aimed at "placing" the nuclear spent fuel "out of sight", therefore further nuancing the notion of invisibility at the heart of the nuclear-military-industrial complex as an issue which creates correspondences between the material and the conceptual dominions, as well as being positioned discursively and aesthetically between deep time, the Anthropocene and slow nuclear violence. As will be discussed in Chapter IV, invisibility is both a material and abstract quality at the core of the nuclear production system, which involves the potential, and actual damaging consequences that the nuclear cycle exudes in the human and natural environment in the form of radioactivity. As Sven Lütticken indicates:

> The literal invisibility of harmful ionising radiation is coated in political invisibility that is broken only intermittently, at moments of spectacular disaster. The problem, as aesthetic as it is social, remains, and would remain even after an improbable global abandonment of nuclear technology in the form of vast quantities of radioactive waste.[227]

According to Lütticken, invisibility assumes a variety of forms and shapes within the nuclear discourse, spreading across "aesthetic", "social" and "political" realms, as well as constituting a long-term issue projected into the future, as "vast quantities of radioactive waste" will outlive a potential termination of production of nuclear material. Lütticken mirrors Carpenter's viewpoint, as she states:

> In terms of the deep time of the radioactive half-life of things, nothing can be adequately removed from the closed world that contains all the toxic stuff of the planet; neither can anything be made to 'disappear' (though it can be placed out of sight). Today, nuclear technologies are most visible when they wear out or fail.[228]

In Chapter IV, I will argue that both *Burial* and *Into Eternity* are concerned with the invisibility of nuclear waste in deep geological repositories, by challenging assumptions according to which nuclear waste and "toxic stuff [...] can [...] be made 'disappear," but also raising questions related to the "deep time of the radioactive half-life of things", while also reflecting on and discussing

[227] Sven Lütticken, 'Shattered Matter, Transformed Forms: Notes on Nuclear Aesthetics, Part 1', *e-flux Journal*, 94 (2018), 1-9 (pp.1,3) <https://www.e-flux.com/journal/94/221035/shattered-matter-transformed-forms-notes-on-nuclear-aesthetics-part-1/>.
[228] Carpenter, 'Shifting the Nuclear Imaginary', p. 129.

solutions on how to warn the future of the danger and deadly consequences that hidden radioactive waste and toxicity might have on human and nonhuman life.

Aesthetic Theme: Cyclicality and Betrayal in the Figures of the Ouroboros and the Serpent

As argued so far in this introduction, the *raison d'être* of the works in this thesis results from reflections and discussions on memory, and they use the structure of the palimpsest to develop non-linear narratives, creating politically charged aesthetic conversations, which bring together apparently distant discourses, not the least by connecting the nuclear military complex with nuclear energy as two aspects of the same phenomenon. Therefore, the films, the series and the documentary explored in this thesis all conceive of time either as a non-linear entity, whose manipulation allows them to connect temporally and spatially distant realities. *Dark*, *Hiroshima Mon Amour* and *Burial* engage, albeit differently and shedding light on diverse elements at play, in nonlinear narratives. Furthermore, *Into Eternity* deals with the long-term time frames and, indeed, "in terms of the deep time of the radioactive half-life of things,"[229] addressing the issue of deep geological repositories for nuclear waste and the legacy that the current humanity leaves for generations to come.

In a way, this thesis creates, *per se*, a structure by playing with the narratives these nonlinear stories enable, and the use they make of time and space. Earlier in this section, I pointed out that time is conceived as a disorienting, nonlinear, and at once, repetitive instrument, which traps the characters in loops and labyrinths, hiding and revealing past memories, as well as rendering the nuclear referent present in its invisibility. However, these texts also create a tension between the disorienting time of the narrative, also influenced by the effect of the nuclear uncanny, and the cyclical time of technology, production, and disposal underlying the nuclear production cycle, as well as the eternal cycle of destruction embedded in nuclear military technology. In Chapter IV the argument between cyclical narrative time (via the loop), the fragmented time of the present, the slower time evidenced by nuclear waste and radioactivity, and notions of time in physics will be considered alongside physicist Carlo Rovelli's explanation of the concept of time as presented

[229] Carpenter, 'Shifting the Nuclear Imaginary', p. 129.

in *The order of time*. Here, Rovelli's framing of time as constant becoming, change and movement ideally opposes the circular repetition informed by nuclear production.[230]

This thesis will start with an analysis of the series *Dark*, and end with an exploration of the art film *Burial*. Both *Dark* and *Burial* concretise the abstraction of time, rendering it visible, through the figure of the serpent. In the former, time is expressed in its cyclicality, alongside an attempt to break free from the repetition of the apocalypse. In *Burial*, the idea of cyclicality is challenged from the beginning, by visually juxtaposing diverse historical times and discussing the role of nuclear archaeologies vis-à-vis the present condition of past sites. These binary conceptions of time are linked to the figure of the ouroboros in *Dark* and the serpent in *Burial*, as diverse but intersecting and complementary symbols of time and change, which constitute an aesthetic and narrative thread positioned at the beginning (the ouroboros in *Dark*) and at the end (the serpent in *Burial*) of this thesis, creating a mirroring and evolving discussion of time, memory, and forgetting in the shadow of the nuclear-military-industrial complex.

The ouroboros identifies a notion of time that follows the contours of a circle, of a ring-shaped snake eating its own tail, and symbolising the infinite repetition of events leading to the apocalypse in *Dark*. Here the apocalypse does not signal a fracture with the past, but it constitutes a conduit leading to the repetition of another parallel reality ending up in another apocalypse. Conversely, the serpent in *Burial* moves according to the laws of becoming and change, ideally breaking the cycle of production and consumption of the nuclear complex and offering an alternative perspective of what the nuclear universe constructs on a conceptual and material level. *Burial*'s python is an ouroboros freed from the cyclical iteration of the same. As such, it is a symbol of potential change, opposing the axiom of invisibility germane to the nuclear universe and enabling the articulation of a discourse informed by responsibility. The snake also renders the invisible nuclear processes and sites visible and open to discussion, challenge and transformation. By the same token, the symbolic, visual notion of time through the ouroboros undergoes a process of reversal in the final episode of *Dark*. In this sense, the visual trap of repetition encircling the characters is broken ultimately via the sacrifice of the two main characters, who, by changing the past, avoid the invention of a time-travel machine, and therefore the creation of the parallel worlds trapped in the infinite loop of self-destruction and rebirth.

[230] Carlo Rovelli, *The Order of Time*, trans. by. Erica Segre and Simon Carnell (UK: Allen Lane, 2018). p.86.

As will be argued in Chapter IV, reptiles in *Burial* assume multiple meanings, as their presence is also connected to the Anti-nuclear resistance movement. In the film, Škarnulytė indirectly evokes the women's movement Greenham Common Peace Camp via the anti-war anthem *You Can't Kill the Spirit* written by North American Indian musician Naomi Littlebear Morena,[231] and appearing in the film.[232] This song, therefore, links the nuclear sites covered in the film to a series of non-violent protests against nuclear weapons being located at the Greenham Common military base in Berkshire, England started in 1981. In Chapter IV, I will discuss that the serpent was one of the symbols appearing at the camps. In this introduction, it is worth noting that one of the artists involved in the camps' anti-nuclear resistance movement was Monica Sjöö. As Christina Welch observes:

> A notable feminism that combined the political and the spiritual was Goddess Spirituality. Deeply involved in this form of feminism were the European artist and writer Monica Sjöö (now sadly departed), and Miriam Samos, otherwise known as Starhawk, a prominent North American neo-pagan Witch. Both women are mentioned in archived camp correspondence as feminist movers and shakers of the time who were actively involved in supporting the camp.[233]

In the book *The Great Cosmic Mother: Rediscovering the Religion of the Earth*, Sjöö and Barbara Mor focus on ancient religious traditions linked to the cult of the Goddess and the Great Cosmic Mother, in which the representation of the serpent assumed a central position, and whose representation was not attached to the Judeo-Christian qualities of betrayal. Rather, as Sjöö and Mor point out, in some ancient religions:

> The snake was first of all a symbol of eternal life (like the moon), since each time it shed its skin it seemed reborn. It represented cosmic continuity within natural change – spiritual continuity within the changes of material life. Gliding as it does in and out of holes and caverns in the earth, the serpent also symbolised the underground, abode of the dead who wait for rebirth. Its undulations symbolised the serpentine earth currents of the underground waters. The serpent path on earth was the terrestrial energy-flow; the serpent path in the sky was the winding spray of stars in the galactic spiral-arm, or Milky Way.[234]

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[231] Christina Welch, 'The Spirituality of, and at, Greenham Common Peace Camp', Feminist Theology, 18.2 (2010), 230–48 p.234.
[232] Škarnulytė, *Burial*, min. [00:38:15-00:40:30].
[233] Welch, 'The Spirituality of, and at, Greenham Common Peace Camp', p.237.
[234] Monica Sjöö and Barbara Mor, *The Great Cosmic Mother: Rediscovering the Religion of the Earth*, (HarperCollins Publishers, 1987). p. 58.

In *Burial*, therefore, the serpent elicits, at once, the idea of "the underground, abode of the dead who wait for rebirth" in its reference to the underground deep geological repositories housing nuclear waste, but also the nuclear resistance of which Sjöö was one of most high-profile supporters. Furthermore, the depiction of the serpent within a landscape where human life is almost completely absent, reveals the contaminated status of the sites.[235]

Therefore, the serpent is not linked exclusively to the figure of the ouroboros, but its symbolic significance is recurrent throughout the whole thesis. In relation to *Hiroshima Mon Amour*, the serpent, albeit materially absent, is linked metaphorically to the theme of betrayal developed in the film. As I will argue in Chapter II, Elle, the protagonist of *Hiroshima Mon Amour*, engages in a double betrayal of her country and spouse. Elle's past is characterised, in Sandrine Sanos's words, by her "'sexual collaboration' with the Nazi occupier,"[236] while her present in Hiroshima is informed by her adulterous relationship with a Japanese man, Lui, whom she encounters while shooting a film about peace in Hiroshima. This affair reminds Elle of her former lover, a German soldier in Vichy France, whose repressed memory is reawakened through a complex aesthetic and narrative structure in which past and present interlace and are superimposed with one another. Sanos further points out that the subtle implication that the Japanese man "had escaped the bomb because he was a soldier fighting", also, arguably, a betrayal of the population of Hiroshima who he left behind to fight another war, is never formally confronted in the film.[237] This aspect suggests a tacit parallel between Elle's former and current lovers who were both implicated in the "Axis imperialist and violent regimes that were defeated."[238] According to Sanos, in place of a reflection on this overlapping violent legacies embodied by the two men and the woman in the film, Resnais and Duras focus on "anti-war humanism."[239]

[235] This is also reminiscent of Pierre Huyghe's art film, *(Untitled) Human Mask* (2014). Here, the French artist explores the level of post-apocalyptic devastation following the tsunami and nuclear power plant disaster that occurred in Fukushima in 2011. Here, a monkey wearing a white human mask, traditional of Noh theatre, walks around the empty tables of a restaurant, waiting for guests who will never arrive. As with the serpent in *Burial*, the monkey is the only non-human form of life detected in the surroundings, which also indicates the uninhabitability of the site.
In: Pinault Collection, *Untitled (Human Mask) 2014*, Pinault Collection, <https://lesoeuvres.pinaultcollection.com/en/artwork/untitled-human-mask> [accessed 6 July 2024].
[236] Sanos, ''My Body was Aflame with His Memory'', p.731.
[237] Ibid, p.736.
[238] Ibid, p.736.
[239] Ibid, p.736.

The status of betrayal characterising Elle as well as the discourse around peace addressed and challenged in the film evokes the figure of the diplomat elaborated by Isabelle Stengers in *Cosmopolitics II*. Stengers claims that:

> The practice of diplomats is that it frequently exposes them to the accusation of betrayal. [...] On the one hand, diplomats are supposed to belong to the people, to the group, to the country they represent; they are supposed to share their hopes and doubts, their fears and dreams. But a diplomat also interacts with other diplomats and must be a reliable partner for them, accepting as they do the rules of the diplomatic game. Therefore, the diplomat cannot be one with those she represents.[240]

As I will argue in Chapter II, Elle's illicit love story with a German soldier "exposes [her] to the accusation of betrayal."[241] Being a French national who, during the Nazi Occupation of her country, had been accused of fraternising and sleeping with the enemy and, as a consequence, she was brutally punished for that, situates her at the threshold between victimhood and perpetration. Since her positioning within the group she is supposed to represent is ambiguous, insofar as it is tainted by her past "betrayal", this also influences the way she perceives the tragedy of Hiroshima. As Iwona Janicka observes in relation to Stengers' diplomat: "There is always the possibility that the diplomat perpetrates a double betrayal, owing to her dual or divided loyalty: the loyalty owed to her fellow practitioners and the loyalty owed to the subjects she studies."[242] Like the diplomat, Elle's loyalty is also "dual or divided," since she both belongs to a group she is supposed to represent (the French people) but, at the same time, she creates a relationship of trust and belonging with other individuals and countries outside of her immediate group.[243] As Stengers points out: "What is at stake in the practice of the diplomat are the effective conditions of an "encounter," not the recognition of submission. That practice is always situated "between" two groups."[244] In the specific case of *Hiroshima Mon Amour*, the other group is represented by the Japanese man and, to a certain degree, the German "enemy." Elle occupies a liminal position, an ambivalent space, an in-between, which is actualised through the specificity of her "encounter" with her Japanese lover in Hiroshima.

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[240] Isabelle Stengers, *Cosmopolitics II*, trans. by Robert Bononno, (Minneapolis, Minn.; London: University of Minnesota Press, 2011), p.376.
[241] Stengers, *Cosmopolitics II*, p.376.
[242] Iwona Janicka, 'Reinventing the Diplomat: Isabelle Stengers, Bruno Latour and Baptiste Morizot', *Theory, Culture & Society*, 40.3 (2023), 23–40 (p.27) <https://doi-org.sheffield.idm.oclc.org/10.1177/02632764221146717>.
[243] Stengers, *Cosmopolitics II*, p.376.
[244] Ibid, p.382.

It is also this "encounter" that allows Elle to engage in the process of cognition and understanding of Hiroshima, which disrupts and challenges her pre-packaged ideas related to universal peace and "anti-war humanism." By reproducing the diplomatic effort of "possible peace, always local, precarious, and matter for invention,"[245] the relationship between Elle and Lui allows the woman to move from the universal (the values of "nuclear universalism" and "anti-war humanism" expressed insistently by Elle at the beginning of the film) to the specific condition of her past and of the victims of Hiroshima. Elle's role, therefore, coincides with that of the diplomat. The latter, as Janicka observes, has to:

> Bridge multiple obligations [...] in order to make them coexist. She intervenes between groups with divergent attachments, values, procedures and goals in order to invent some sort of temporary and situation-specific agreement between them.[246]

As I will argue in Chapter II, *Hiroshima Mon* Amour is the product of an "encounter" between multiple histories of violence and, as such, it indicates a different form of betrayal. In the making of his film, Resnais uses footage of other fiction and nonfiction films created by Japanese directors after the bombing of Hiroshima and Nagasaki, the documentary *The Effects of the Atomic Bomb on Hiroshima and Nagasaki* (1946),[247] the fiction film *Hiroshima* (1953)[248] and the documentary *Still it's good to live* (1956).[249] However, as Yuko Shibata observes, "neither Resnais nor Duras ever mentioned this attribute, noting only that the footage of the *hibakusha* came from Japanese "newsreel" but not revealing the background or the titles."[250] In this sense, Resnais' betrayal towards the original films occurs through a work of deconstruction and insertion of disembodied footage into his own work, as well as a betrayal of the original authorial voices by avoiding their acknowledgment in interviews or credits of the film itself.

Further to *Hiroshima Mon Amour*, the theme of betrayal is also germane to the concept of the uncanny - both in its Freudian and nuclear iteration. The uncanny, in fact, implies a betrayal of the senses, with particular reference to sight, as explored in Chapter II and Chapter III, and

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[245] Ibid, p.387.
[246] Janicka, 'Reinventing the Diplomat', p.27.
[247] Sueo Itô, *The Effects of the Atomic Bomb on Hiroshima and Nagasaki*, (Nichiei, 1946) <https://www.youtube.com/watch?v=QUvM2uQR1cA>.
[248] Sekigawa, Hideo, *Hiroshima*, (Japan Teachers Union Production, 1953) <https://www.amazon.co.uk/Hiroshima-Eiji-Okada/dp/B08CPGF6XK>.
[249] Kamei, Fumio, *Still It's Good to Live*, (Gensuikyo; Japan Document Film, 1956) <https://www.youtube.com/watch?v=jynv8HIaj7Y>.
[250] Shibata, *Producing Hiroshima and Nagasaki*, p.6.

hearing, as argued in Chapter III. In order to develop his notion of the nuclear uncanny, Joseph Masco revisits the Freudian uncanny, synthesising it as "a psychic process whereby sensory experience becomes haunted and untrustworthy," and which is expressed through "a sudden loss (or distrust) of one's senses."[251] This same experience of untrustworthiness generated by the uncanny is translated into the material and physical effects resulting from the "fear of radioactive contamination" and "nuclear weapons." Masco observes that "the nuclear uncanny exists in the material effects, psychic tension, and sensory confusion produced by nuclear weapons and radioactive materials."[252]

As I argue in Chapter II and Chapter III, this conception of the nuclear uncanny is strictly linked to the work of memory and forgetting germane to *La Jetée.* In this film, Marker reflects on the betrayal of memory as this connects individual and historical memory. On the one hand, he explores the betrayal of individual memory reflected in the main storyline via the figure of a man incapable of remembering his own past, compellingly channelled through the mystery surrounding his own mother and his encounter with her, of whom he has no recollection. This can be seen as a betrayal of the self, but also as the unavoidable disappearance of memory as cinder (as will be explored further in this introduction.) On the other hand, the failure of memory of the main character is translated into a betrayal of historical memory.

As mentioned above in this introduction, *La Jetée* superimposes on an aesthetic and conceptual level different histories of violence, from the Holocaust to the Algerian War against a backdrop evocative of the atomic bombing of Hiroshima and Nagasaki and reformulated through the imaginary of a dystopian Paris annihilated by World War III. In this instance, the visual reminder endangered by the evocation of both concentration camps and the end of World War II culminated with the atomic destruction of the two Japanese cities serve to emphasise the failure of historical memory to stop other wars and violence from repeating, which, in the specific case of the film, is signalled by Algeria. In Chapter III, I will further argue that the film engages in a critique of the French atomic tests in the Algerian desert. A question emerges from these prior considerations: if the atomic bombing of Hiroshima and Nagasaki was viewed as the promise to end all wars, are the nuclear experiments occurring during the Algerian War the proof of the breaking of that promise? Is there a continuity between the destruction of two Japanese cities at the end of World War II and the pursuit of nuclear testing as part of the colonial legacy of the bomb?

[251] Masco, *The Nuclear Borderlands,* p.28.
[252] Ibid, p.28.

Methodology and Chapter Breakdown

Chapter Breakdown

In this thesis, the tension between seeing and not seeing as fundamental components of witnessing and knowledge will be further explored through concepts of visibility and invisibility within a nuclear context. The purpose of this study is to articulate the stratified notion of (in)visibility dominating diverse narratives dealing with nuclear themes, and how this concept has been addressed and nuanced by filmmakers since post-war responses to the atomic bombing of Hiroshima and Nagasaki. As much as with critical depictions of war, and the threat of global annihilation from the end of the 1950s through the 1960s, I contend that, in the period following 2010, a variety of films, tv series, and documentaries engage in reflections on the nuclear-military-industrial complex, and how it affects human and non-human life. This discussion will follow a structure whereby recurrent concerns linked to nuclear warfare will intersect and interact with nuclear energy accidents, as well as with the long-term consequences of radioactivity and nuclear waste in relation to the future of the planet. This passage from old to new nuclear depictions does not signal a dramatic rupture with past conceptions of nuclear technology, but it enables some political and aesthetic principles from the post-war "emerging nuclear imaginary,"[253] which informed the work of a heterogeneous generation of filmmakers who were grappling with the potential of the trauma of the Second War World, the Holocaust and Hiroshima, to be transferred into the present. This association is aimed at fostering an ideal and dynamic dialogue between films, web-based TV series, and documentaries related to different historical times and contexts.

The new generation of media industry practitioners actively take on the responsibility of keeping the conversation around nuclear technologies ongoing, while through their work they document, challenge, and narrate the processes underlying the nuclear cycle in and out of physical and conceptual invisibility. Despite acknowledging the importance and centrality of these practitioners in relation to their work, and employing their interviews to strengthen this thesis's argument, the texts will occupy a predominant position within the analysis, insofar as the nuclear suggestions emerging from their analysis are renegotiated at an aesthetic level, expressing characteristics

[253] The "emerging nuclear imaginary" is an expression used by Carpenter, and appearing in Carpenter, 'Shifting the Nuclear Imaginary', p.116.

and discourses underpinning the nuclear-military-industrial complex. With this in mind, rather than starting from an existing theory and applying it to texts, I will read them closely in order to discern from them a nuclear aesthetic, therefore prioritising an inductive process over a deductive method.

In order to establish this conversation between past and present audio-visual productions, each chapter will be devoted to the comparative reading of significant texts which present the nuclear theme at the core of their narrative. Chapter I will focus on the German web-series *Dark*, and the way in which the show challenges notions of visibility and invisibility in relation to the nuclear icon par excellence, the mushroom cloud, on an aesthetic level. In *Dark*, this movement from the visibility of the atomic explosion to its reversal, which allows the narrative to return to a status quo preceding the atomic annihilation cyclically throughout the series, will be examined via a theoretical framework informed by the atomic sublime and the nuclear uncanny, as will be further discuss in this introduction and throughout this thesis. These two concepts are bound together as a theoretical threat, which will weave throughout the thesis, while offering a coherent reading of the different texts at stake. The aesthetic backdrop against which *Dark* constructs its aesthetics and universe are characterised by the presence of a nuclear power plant, and the threat of the apocalypse which has its epicentre on the same site where the nuclear complex is built, and which seems to affect the lives and vicissitudes of the fictional town of Winden. This element resonates with the real-life concerns developed around the nuclear accident of Chernobyl, creating a tension between the invisible shadow of history, which re-emerges in the series on an aesthetic level, and the fictional narrative of the show. Through the themes of time, memory, and forgetting, *Dark* reckons with the spectre of nuclear technologies, while also engaging in wider philosophical reflections on the ethics of responsibility[254] vis-à-vis deadly inventions, transgenerational (nuclear) trauma, truth and knowledge. These reflections concerning nuclear energy in the shadow of Chernobyl will be further explored within another nuclear context which relates to the post-Hiroshima period.

[254] Carmen Leccardi observes that responsibility is intrinsically connected with memory, as she states: "Responsibility, as an ethical dimension structured around the idea of a continuous time that extends from the past to the future via the present, shares with memory the interactive nature, as well as an emphasis on choice and a tension towards the future." In Carmen Leccardi, 'Memory, time and responsibility', in *Routledge International Handbook of Memory Studies* ed. By Ann Rigney, Anna Lisa Tota, and Trever Hagen (London:Routledge, 2016), pp. 109-120 (p.109). Ebook Central ebook

In this vein, in Chapter II a comparative analysis of the French films *La Jetée* and *Hiroshima Mon Amour* will delve into the pull between seeing and not seeing and its connection to witnessing, and memory as well as developing the thesis of the nuclear uncanny initiated in *Dark*. Chapter III, meanwhile, will move onto the aesthetics of the underground, through which *Dark*, *La Jetée*, and *Hiroshima Mon Amour* will be brought together. In this sense, the concept of invisibility will be explored in terms of what is concealed and out of sight, and how these three texts appropriate, re-imagine, and re-conceptualise the aesthetics of the bunker, the cellar, and the underground city. Within this context, the ghosts of World War II and the Cold War emerge from these locations, creating a stratified and non-linear dialogue between recent and past representations of nuclear spaces.

If nuclear waste is a visual component of *Dark*, as well as influencing its plot, in the last chapter of this thesis, the disposal of nuclear spent fuel will be confronted through the analysis of two works, which display, de- and re-construct its journey in different ways. The aesthetic and discursive movement of hiding, and the material locus of the underground, following a conceptual thread that was initiated in the previous chapters, will be further pursued in Chapter IV. The two films at the centre of this exploration will be *Into Eternity* and *Burial*. The Danish film *Into Eternity* directed by Michael Madsen documents and questions the construction of Onkalo, a deep geological repository for nuclear waste in Finland, and the ethical long-term issues brought about from hiding the nuclear spent fuel deep inside the earth. By contrast Emilija Skarnulyte's *Burial* is a political, poetic and aesthetic reflection on the hidden complexities underlying the nuclear-military-industrial complex. Using as *fil rouge* the decommissioning of the Ignalina Power Plant in Lithuania, the art film contours a conceptual journey parallel to the nuclear cycle, which brings together the diverse souls of the nuclear universe - from armament to energy production, as well as from bunkers to nuclear power plants, to, finally, deep geological repositories. Both artefacts are concerned with questions of time, memory, and forgetting, and how these concepts are tackled in relation to the construction of deep geological repositories into a future in which the complex ecosystem of non-human nature might still inhabit the planet.

Palimpsest as Methodology

Having explored how palimpsestic memory plays a key role in the aesthetic theme of memory and forgetting, I will conclude this introduction by exploring how this notion will be deployed as a methodology throughout all four chapters. It is, therefore, essential to draw the contours of the palimpsest in its multiple expressions, since this will enable me to detail the way in which the term will be used in this thesis and position this aspect within a larger theoretical framework employing the palimpsest.

As Sarah Dillon states, palimpsests were originally tangible, physical objects.[255] The term was used to indicate a manuscript whose inscription and writing was deleted in order to be reused, and, in a way, "recycled". Dillon explains that:

> Palimpsests were created by a process of layering whereby the existing text was erased, using various chemical methods, and the new text was written over the old one. […] Palimpsests are of such interest to subsequent generations because although the first writing on the vellum seemed to have been eradicated after treatment, it was often imperfectly erased. Its ghostly trace then reappeared in the following centuries as the iron in the remaining ink reacted with oxygen in the air, producing a reddish-brown oxide.[256]

Significantly, this "ghostly trace" re-emerging from an apparently erased manuscript highlights the tension between what was supposed to be lost (the original text), and what has been superimposed on to it (the new text), and how these different layers, for which the spectre of one interlaces, forming a space/time continuum with the other, generate a new composite structure, made of various strata of past. In line with this idea, Dillon frames the palimpsest in its nuances, noticing how these various texts, "otherwise unrelated", "are involved and entangled, intricately interwoven, interrupting and inhabiting each other", while also explaining this "involuted phenomenon" through the neologistic adjective "palimpsestuous."[257]

[255] Sarah Dillon, 'Reinscribing De Quincey's Palimpsest: The Significance of the Palimpsest in Contemporary Literary and Cultural Studies', *Textual Practice*, 19.3 (2005), 243–63 (p.244) <https://doi-org.sheffield.idm.oclc.org/10.1080/09502360500196227>.
[256] Dillon, 'Reinscribing De Quincey's Palimpsest', p.244.
[257] Ibid., p.245.

As Dillon explains, “palimpsestuous [...] describes the complex (textual) relationality embodied in the palimpsest.”[258] In this sense, the term differs from another accepted, but disused adjective derived from palimpsest, which is “palimpsestic”, since: “Where ‘palimpsestic’ refers to the process of layering that produces a palimpsest, “palimpsestuous” describes the structure with which one is presented as a result of that process, and the subsequent reappearance of the underlying script.”[259] Therefore, while the notion of palimpsestic lingers on the image of the creation of the various layers bringing about the structure of the palimpsest, palimpsestuous is more focused on the final product, and how these diverse strata influence and generate a final text arising from the interaction, and mixing of one text on the other. Through this process, as for the definition of the palimpsestuous and following what Dillon calls “palimpsestuous reading” of a text, “the underlying text” reemerges without “destroy[ing] the palimpsest, which exists only and precisely as the involution of texts.”[260]

When talking about palimpsestuous reading, Dillon, drawing on Foucault's genealogy, and the consequent interpretation of history, also dwells on the element of (un)relatedness between the various texts involved in the construction of a palimpsest, which brings forth an “inventive process of creating relations where there may, or should, be none.”[261] In this case, the relationality of the palimpsestuous reading is an outcome of a creative interpretation of a text, by discovering links, which are not directly visible nor clearly suggested by the text itself, and therefore rendering the invisible visible.

Palimpsest is a deeply interdisciplinary concept, used in a variety of fields of studies, and applied to a diversity of contexts, from the sciences to humanities subjects.[262] As such it is an ideal tool to analyse composite texts which bring together a variety of themes, while tackling the human, cultural, and planetary cost of technological inventions. In the case of this thesis, for example, reflections underlying nuclear technologies are interlaced with other narrative and aesthetic aspects of the stories occurring in the texts chosen, since diverse suggestions trigger an intricate

[258] Dillon, ‘Reinscribing De Quincey's Palimpsest’, p.245.
[259] Ibid., p.245.
[260] Ibid., p.254.
[261] Ibid., p.254.
[262] Dillon (2005:244) specifies that: “Since 1845, the concept of the palimpsest has been employed in areas as diverse as architecture, geography, geology, palaeontology, glaciology, astrophysics, biochemistry, genetics, neuroscience, neurobiology, neurocomputing and information technology. It also occurs frequently in creative, critical and theoretical texts across the expansive fields of literature, philosophy and cultural studies.” Dillon, ‘Reinscribing De Quincey's Palimpsest’, p.244.

web of relations among apparently different themes, and elements. In this sense, the concept of palimpsest can be both articulated as a conceptual and visual phenomenon, applied to text, spaces, and objects (not only the vellum of which Dillon talks about), and more abstract ideas, since it relates to material as well as theoretical, and aesthetics. In fact, the palimpsest can be detected from the materiality of space, or, to borrow from architectural jargon, the "built environment",[263] addressing how diverse constructs of spatiality, either they be philosophical, anthropological, social, historical, or architectural, aesthetic or cultural, are haunted by an "imperfectly erased" (nuclear) trace, and in which the stratified passage of different generations resurfaces progressively from the same space in which this trace is concealed. As John R. Stilgoe points out in *Outside lies magic: regaining history and awareness in everyday places*:

> The built environment is a sort of palimpsest, a document in which one layer of writing has been scraped off, and another one applied. An acute, mindful explorer who holds up the palimpsest to the light sees something of the earlier message, and a careful, confident explorer of the built environment soon sees all sorts of traces of past generations.[264]

According to Stilgoe, the built environment is a sort of jigsaw puzzle replete with clues and signs for the "mindful explorer" to decode, and in which the "traces of past generations" can be unravelled in order to discover an "earlier message", in other respects forgotten. Therefore, the palimpsest is a multi-layered structure where fragments of past, and present entwine in the same space, even when, to bring back what Dillon claims in relation to the palimpsest, and palimpsestuous reading, the parts constituting it are "otherwise unrelated" - or would be such without the intervention of a "mindful explorer." Stilgoes' observations relative to the built environment as the expression of the experience of "past generations", which accumulate and interlace as time goes by, are particularly relevant when it comes to the texts positioned at the beginning (Chapter I) and at the end (Chapter IV) of this thesis, namely *Dark*, and *Burial*. Both the Netflix series and Škarnulytė's visionary film, in very unique and diverse ways, construct a jigsaw of stories, images, and evocations apparently temporally distant, connecting them through

[263] Build environment is a complex, nuanced term which Lawrence and Low define as follows: "The built environment is an abstract concept employed [...] to describe the products of human building activity. It refers in the broadest sense to any physical alteration of the natural environment, from hearths to cities, through construction by humans. Generally speaking, it includes built forms, which are defined as building types (such as dwellings, temples, or meeting houses) created by humans to shelter, define, and protect activity. Built forms also include, however, spaces that are defined and bounded, but not necessarily enclosed, such as the uncovered areas in a compound, a plaza, or a street. Further, they may include landmarks or sites, such as shrines, which do not necessarily shelter or enclose activity." Denise L Lawrence and Setha M Low, 'The Built Environment and Spatial Form', *Annual Review of Anthropology*, 19.1 (1990), 453–505 (p.454) <https://www.jstor.org/stable/2155973> [accessed 26 February 2024].
[264] John R. Stilgoe, *Outside Lies Magic: Regaining History and Awareness in Everyday Places* (New York: Walker and Company, 1998), p.5.

a sophisticated critique of nuclear technologies, and putting them side by side with broader reflections about time, space, and memory/non-memory. Both audio-visual productions play along the lines of the visibility/invisibility divide engendered by the nuclear-military-industrial complex, involving the spectator as a "mindful explorer", stimulating their attention in following the visual and philosophical intricate questions, and speculations posed through their narratives. If Lorena Silos Ribas positions *Dark* within the contemporary tradition of "puzzle films," which, nonetheless, engage the spectator "not necessarily in solving the mystery, like some sort of puzzle, but rather in appreciating the strategies used to manipulate the narrative."[265] In an interview at the New York Baltic Film Festival Škarnulytė talks about her film as an attempt "to see the invisible", "reflect on different strata", and "layers".[266]

[265] Silos Ribas, 'Looking into the Abyss', p.263.

[266] As Škarnulytė articulates: There's maybe a notion of always trying to see the invisible, or somehow to take almost a core sample or a cross-section from the world, and using the camera and moving image more like this tool to reflect on different strata. So, you know, galaxies, astronomy, historical/cultural layers, deep time, and underwater. NY Baltic Film Festival, *Burial Film Talk* | *NY Baltic FF 2022*, online video recording, YouTube, 6 November 2022, <https://www.youtube.com/watch?v=CxkPVWHHXIk> [accessed 26 February 2024].

Chapter I: “Unendliche Dunkelheit”

Exploring the Apocalyptic (Nuclear) Aesthetic in *Dark* Through the Lens of the Atomic Sublime and the Nuclear Uncanny

Dark is the “first original German-language series” produced and distributed by the online streaming platform Netflix.[267] Created, directed, and written by German-Swiss director and screenwriter Baran bo Odar, and German writer and producer Jantje Friese, the show is divided into three series, running from 2017 to 2020, for a total of 26 episodes. In an interview for *The New York Times*, Odar and Friese reveal that a major influence of the show was the Chernobyl nuclear power plant disaster, which occurred in Ukraine in 1986. The accident took place when the authors were growing up in “small German towns.”[268] In this sense, *Dark* is a cultural product developed in response to those “fears of contamination” prompted by the diffusion of the radioactive cloud which, after originating in Chernobyl, spread across Europe.[269] Crucially, Odar defines these fears as “a very German, or European, feeling.”[270]

In this chapter, I will argue that *Dark*’s aesthetic is informed by the legacy of nuclear technologies, and the symbolic significance they play as both national and transnational phenomena. This nuclear aesthetic plays a significant role within the show’s “convoluted narrative arc and [...] multilayered structure, with numerous subtexts built upon a solid symbolic foundation.”[271] In this sense, the nuclear power plant that dominates Winden, *Dark*’s fictional *Atomstadt* (atomic town), offers more than just a background against which the story develops. This is true in spite of the fact that, on a narrative level, its centrality is obfuscated by the numerous topics explored in the series. The show, in fact, deals with ethical, moral and social issues, from the shortcomings and dangers of technology to the ethical pitfalls stemming from the manipulation of time, as well as personal and transgenerational trauma broadly linked to the disappearance of family members. Furthermore, *Dark* builds its aesthetic and narrative language mixing “pop cultural references” with erudite concepts derived from philosophy and literature.[272] Silos Ribas observes that “many

[267] Thomas Rogers, ‘With ‘Dark,’ a German Netflix Series, Streaming Crosses a New Border’, *The New York Times*, 23 November 2017 <https://www.nytimes.com/2017/11/23/arts/television/dark-a-german-netflix-series.html> [Accessed 26 February 2024].
[268] Ibid.
[269] Ibid.
[270] Ibid.
[271] Silos Ribas, ‘Looking into the Abyss’, p.262.
[272] Silos Ribas, ‘Looking into the Abyss’, p.272.

ideas found in Goethe, Nietzsche, and Schopenhauer [...] are presented in *Dark* in a diluted form."[273] These influences are integrated with "biblical and mythological references such as the recurrent reference to the classic Greek myth of Ariadne and the labyrinth,"[274] which serve to shape the characters and their stories, while functioning as both a metatextual and intertextual[275] device reflecting the stratified structure of the series, as will be further elaborated in this chapter. As a complex, multi-layered production, *Dark* will be further deciphered through the notion of the palimpsest in Chapter III. In particular, the theory of "palimpsestic memory" elaborated by Max Silverman will allow me to read the series in relation to a variety of historical contexts which will be detected as influencing its complex design, and in which past histories re-emerge and conflate within the series' aesthetic.

Furthermore, this labyrinthine, multilayered combination of diverse references and evocations reflects a contemporary mediated discourse, for which the space dedicated to the discussion of the dangers of nuclear technologies is placed within an overcrowded media terrain. This phenomenon is observed by Jouni Teittinen, who weighs in on the notion of "threat" as a structural clog in today's media discourse.[276] According to him, the immanent nuclear menace is part of a landscape of threats, whose coexistence further fragments "today's media environment, chock-full with speculative narratives relating to massive future disasters and their aftermath."[277] Within this context, Teittinen points out:

> What is different, then, in today's structures of threat? [...] The sense of threat has not diminished but only further dispersed into ecological, technological, epidemiological, religious and ethnic fears and even the iconic "Doomsday Clock" (adorning the cover of the *Bulletin of the Atomic Scientists*) has since 2007 begun to register also non-nuclear threats. The

[273] Ibid., p.273.
[274] Ibid., 269.
[275] Intertextuality in *Dark* stems from the fact that the series relates to another text which enables its interpretation, namely the myth of Ariadne, whose help allows the hero Theseus to escape the labyrinth and survive the minotaur. In this sense the series establishes a relationship of intertextuality with the myth. At the same time Martha, the female protagonist of the show, interprets the mythological tale in a school play, thus creating an allegory of the story which will play out in *Dark*, and creating the effect of the mirror within the mirror underpinning the notion of metatextuality. The latter will be further explored in Chapter II in relation to *Hiroshima Mon Amour*, while intertextuality is relevant to the concept of the palimpsest explored in depth in this thesis. The myth of Ariadne interpreted by Martha is at min. [00:28:55-00:29:52] of Odar and Friese, 'Truths', *Dark 1* (Netflix, 2017) <https://www.netflix.com/title/80100172> [accessed 26 February 2024]. Original title of the episode: "Wahrheiten".
[276] Jouni Teittinen, 'Post-Apocalyptic Fiction and the Future Anterior', in *The Routledge Companion to Literature and Trauma* ed. by Hannah Meretoja, and Colin Davis, (London; New York: Routledge, 2020), 349-359 (p.351). Ebook Central ebook.
[277] Teittinen, 'Post-Apocalyptic Fiction and the Future Anterior', p.349.

> threat of nuclear strike, also, remains present in a new guise [...] since global and potentially nuclear terrorism is not checked by a balance of forces or calculation. And the figure of catastrophic climate change, along with other ecodisasters reverberating into the future, looms large and increasingly near.[278]

According to Tettinen, even the "Doomsday Clock", initially aimed at expressing concerns about nuclear threats exclusively, has become a fragmented medium used by scientists to warn of the dangers jeopardising the future of humanity. The Doomsday clock is a media initiative created in 1945 by scientists working on the Manhattan project in response to the invention of the atomic bomb, and as a way to create awareness about its destructive potential.[279] With time, its scope has widened to include three main areas: "nuclear risk, climate change, and disruptive technologies."[280] Using the image of a clock approaching midnight, which identifies a potential apocalypse, these experts gauge the "world's vulnerability to global catastrophe caused by man-made technologies."[281] As will be discussed later in this chapter, the Doomsday Clock is referenced implicitly in *Dark* via the recurrent, yet fragmentary, figure of H.G. Tannhaus, a clockmaker-cum-scientist bereaved by the death of his son and daughter-in-law in a car accident, who builds a time-machine to reverse time and avoid the demise of his family. Tettinen's observations in relation to the contemporary media landscape resonate with the structure employed by *Dark*, in which multiple themes, evocations, centuries, and cultural references converge within the universe depicted by the series.

Despite these many suggestions, it is undeniable that in the series the environment characterised by the imposing structure of the nuclear power plant is an additional protagonist of the story. In this chapter, I maintain that *Dark*'s politics of representation are built on a tension between visibility and invisibility which utilises the nuclear material referent, often overshadowed by the intricate development of the show's plot, as a constitutive part of its visual landscape. This semi-hidden nuclear trace feeds into aesthetic values of the story, exerting influence on the actions of the characters, and in their formation. This argument will be supported by the employment of the notions of the nuclear sublime and the nuclear uncanny, as two apparently opposite, and yet complementary sides of the grammar of (in)visibility through which the show affirms its identity. In *Dark* the nuclear sublime offers a recognisable visual and discursive framework in which the

[278] Teittinen, 'Post-Apocalyptic Fiction and the Future Anterior', p.351.
[279] Science and Security Board, 'A Moment of Historic Danger: It Is Still 90 Seconds to Midnight: 2024 Doomsday Clock Statement', *Bulletin of the Atomic Scientists*, ed. by. John Mecklin, 2024 <https://thebulletin.org/doomsday-clock/current-time/#footer_menu_itm>.
[280] Science and Security Board, 'A Moment of Historic Danger.'
[281] Ibid.

nuclear themes are confronted. For example, the simil-atomic explosion leading to a series of apocalypses punctuating the show conveys a rhetoric of dread and awe germane to the way in which the atomic sublime is framed in visual culture, as theorised by Peter B. Hales.[282] By the same token, the nuclear power plant depicted in its grandiosity, at once ominous and enticing, dominates the town from afar, while becoming one with the surrounding forest. In this way, the sublimity linked with technology and that evoked by nature conflate within the same environment. However, I will contend that *Dark* challenges the nuclear sublime aesthetic by keeping it at a representational embryonic stage, repeating and reversing it, while it also returns regularly to a narrative based on domesticity and everyday life. Anthony Vidler defines the uncanny as "aesthetically an outgrowth of the Burkean sublime, a domesticated version of absolute terror."[283] But if according to Vidler the uncanny is "the quintessential bourgeois kind of fear" best experienced when "kept under control",[284] in *Dark* the overwhelming presence of the nuclear power plant, and the intersection between the sublime and the uncanny, renders this "absolute terror" out of control, insofar as it implicitly mirrors the invasive, and yet invisible threat of radioactivity. In this sense, this threat appears as a sort of anticipation of the apocalypse to come, affecting space and time, causing the past to establish a relationship of both discontinuity and continuity with the present and future, and creating an endless loop for which events repeat constantly. This effect is created from the beginning of the series with the disappearance of a child on a site devoted to the production of energy, which is intrinsically connected with the subsistence of the town, both within and outside the ordinary lives of Winden's inhabitants. If the disappearance of an individual is an uncanny event per se, since, as Ewa Domanska suggests, the disappeared body occupies a space between life and death,[285] this is rendered even more terrifying by the proximity of the nuclear power plant, and the relationship it establishes with the nuclear sublime and the nuclear uncanny.

In this sense, in *Dark*, the shift from the sublime to the uncanny does not occur once and for all, but the two aspects are constantly enabled by the conjunction of the nuclear-industrial complex with family dynamics. Here, the heteronormative family nucleus is the repository of secrets, lies and, ultimately, transgenerational trauma, and the intimacy of home is threatened constantly by internal and external agents. This trauma and anxiety unfold within the context of the local nuclear

[282] Hales, 'The Atomic Sublime'.
[283] Anthony Vidler, *The Architectural Uncanny: Essays in the Modern Unhomely* (Cambridge, Mass; London: M.I.T. Press, 1992), p.3.
[284] Vidler, *The Architectural Uncanny*, p.4.
[285] Ewa Domanska, 'Toward the Archaeontology of the Dead Body', *Rethinking History*, 9.4 (2005), 389–413 (p.402) <https://doi-org.sheffield.idm.oclc.org/10.1080/13642520500307602>.

power plant, namely a fundamental source of wealth for the local community which is, however, soon to be shut down.

By directly referring to real events occurring in Germany, *Dark* creates a link between the fictional universe of the series and a contemporary context utilised as a source for its narrative. *Dark*'s authors state that Chernobyl's nuclear accident was the inspiration for the show. Additionally, debates around and in opposition to nuclear technologies leading up to the political decision to close nuclear power plants in Germany by 2023[286] inform its aesthetic and narrative. By touching upon the safety risks implicated in the production of nuclear energy, and how strategies of secrecy bring about disasters, *Dark* mediates these debates and encourages "widespread suspicion of nuclear power in other countries."[287] In this sense, the historical context which informs the series is fundamental to understand its raison d'être and relevance as a cultural product today and goes beyond the expedient of the Chernobyl catastrophe.

Germany's decision to shut down all the nuclear power plants on its territory by 2022 was announced by Chancellor Angela Merkel on 6 June 2011,[288] in the wake of the accident involving the Fukushima Daiichi Nuclear Power Plant, in Japan, on 11 March 2011.[289] However, this choice stems from a long history of opposition to nuclear technology. Starting as a movement led by a few political activists, anti-nuclear campaigns developed in both West and East Germany from the Second World War.[290] As historian Dolores L. Augustine notes:

> In the wake of World War II and the Holocaust, East and West German leaders charted a course that involved a break with the Nazi past and an embrace of technological progress. Nuclear energy was central to this vision. East and West Germans shared futuristic, utopian visions of the Atomic Age as an era of peace and progress for all humankind. With the help of science and technology, they hoped, East and West Germany could leave the Nazi past behind and become modern, forward-looking nations.[291]

[286] The closure of three nuclear power plants was postponed to 2023 following the war in Ukraine, and the decrease of Russia's gas exportation to Germany. See for example: Alex Lawson, 'Germany's last three nuclear power stations to shut this weekend', in *The Guardian*, 15 April 2023 <https://www.theguardian.com/environment/2023/apr/15/germany-last-three-nuclear-power-stations-to-shut-this-weekend> [Accessed 26 February 2024].
[287] Silos Ribas, 'Looking into the Abyss', p.272.
[288] Dolores L.Augustine, *Taking on Technocracy: Nuclear Power in Germany, 1945 to the Present* (New York ; Oxford: Berghahn Books, 2018), p.1. Ebook Central ebook
[289] Augustine, *Taking on Technocracy*, p.212.
[290] Ibid., p.1-2.
[291] Ibid., p.1.

According to Augustine, this utopian conception of nuclear technologies ignored the formation of a vocal group which, despite or because of its diversity, managed to sway and influence public consciousness, ultimately "creating a fundamental distrust of atomic power".[292] By extension, activists looked at science as a whole with suspicion, postulating that "the supposedly "scientific" consensus behind the atomic power program was in fact highly ideological, politicised, and corrupted by ties to industry."[293] At the same time, Augustine notes that one of the elements that led Germany to become "a pioneer in attempts to completely phase out nuclear power"[294] was the fact that Germans established an indissoluble connection between nuclear technology as a source of energy and the legacy of destruction and violence of nuclear bombs.[295] By the same token, the three milestone accidents relative to nuclear power plants, namely "Three Mile Island in 1979, in Chernobyl in 1986, and in Fukushima in 2011", facilitated the shift from a distrust of nuclear technology into a solid dissent.[296]

Uncanny Disappearances and Atomic Sublime Iconographies in *Dark*

In the first episode of *Dark* at minute [00:09:55] a radio broadcast reports a news story about the nuclear power plant in Winden. This communication offers some details about the site's past history, as well as informing the viewer about the future, in which the power plant will be closed down in 2020 as part of a wider national plan aimed at "phasing out nuclear energy":

> The Winden nuclear power plant has a long history. Plans to erect the nuclear power plant go back as far as 1953. Construction was first authorised in 1960 after the Atomic Energy Act was passed. As part of the government's staggered plan to phase out nuclear energy, the Winden power plant will be taken off the grid in 2020, making it one of Germany's power plants with the longest failure-free operation.[297]

As pointed out above, the show addresses the country's recent history, putting the events of the show related to a fictional nuclear power plant in parallel with those happening in contemporary Germany as it is transitioning away from nuclear energy. The images that accompany the radio

[292] Ibid., p.8.
[293] Augustine, *Taking on Technocracy*, p.4.
[294] Ibid., p.3.
[295] Ibid., pp.3-13.
[296] Ibid., p.3.
[297] Odar and Friese, 'Secrets', *Dark 1* (Netflix, 2017) <https://www.netflix.com/title/80100172> [accessed 26 February 2024]. The original title of the episode is "Geheimnisse". The section quoted occurs from min. min. [00:09:55-00:10:22].

programme serve to set up the relationship between the character's story with the town, as well as from the interior of the house, where the scene takes place, to the exterior, where the power plant is situated. Here a late middle-aged woman turns on the radio in order to hear the communication. She moves around the room, reaching the window. The camera, following her point of view, shifts from a medium shot of the woman to a wide shot which frames the upper extremity of the nuclear power plant's cooling twin towers immersed in a rich wintery forest. The water vapour released by the towers forms a dense pall of white smoke, slowly moving upwards and mixing with the clouds. On the left side of the shot, a house half hidden by leafless trees pokes out. Here the camera displays the proximity of the nuclear power plant and the town, since the top of the cooling towers can be observed from inside the house, but it also establishes the two main inanimate interlocutors of the show: the house and the nuclear power plant structure, domesticity and technology, and how they are aesthetically inseparable aspects of the same narrative.

This idea is encompassed by the intricate plot of the series. The story takes place in the small fictional town of Winden and entails multiple storylines spanning from 2019 to a (fictional) past, which goes as far back as the year 1921, as well as to a post-apocalyptic future, set in 2052 and 2053. *Dark* narrates the vicissitudes of four local families whose transgenerational secrets, past betrayals and abuse are unearthed and confronted through the device of time-travel, rendered possible by the existence of a wormhole in the cave system underneath the local nuclear power plant. A variety of stories play out around a seemingly unavoidable explosion occurring in the site of the nuclear power plant, which is the trigger for an apocalypse. These stories are led by the main characters of the show, Jonas Kahnwald and Martha Nielsen, two teenagers whose stories interlace and run in parallel over the course of the three series, as both lovers and leaders of two opposite parallel worlds accidentally created through time-travel. Jonas is an introverted teenager who seeks to unveil the mysteries surrounding his existence and individual trauma as they connect to the town of Winden. As much as Jonas is framed as a fragile character, dealing with mental health issues, Martha is an agent and empowered individual,[298] engaged in social and political issues (she claims to be on hunger strike to protest against children starving "to death every ten seconds"[299]), as well as expressing concerns about the site, claiming that once "a dead squirrel with four legs" was found near the plant, and that "the nuclear power mafia keeps secrets

[298] As Silos Ribas observes: In *Dark*, there is a well-defined effort to portray female empowerment - with women appearing in meaningful, leading roles, and advancing the storyline - and to include traditionally underrepresented groups such as homosexual and transgender characters, as well as individuals with disabilities." In Silos Ribas, 'Looking into the Abyss', p. 271.
[299] Odar and Friese, 'Secrets', *Dark 1*. The sentence uttered by Martha is at min. [00:40:13].

from the public."[300] Their journeys into the past and future, as well as into parallel dimensions, are central to the story, as they try to understand the origin of their personal traumas and break the time cycles in which the characters appear to be stuck.

The narrative structure of the show is made of forward and backward temporal movements. Rather than being the result of conventional narrative devices such as flashbacks or flashforwards, these movements enable the present of the story to branch out into various potential pasts, presents and futures. The show's structure is, therefore, based on three parallel realities, which are explored in their entirety in the third series of the show. Some characters experience these realities by travelling through time, into alternative past, present and future times. In the show, time-travel creates a temporal and spatial loop, through which different time frames are placed in constant dialogue. As a result of this, each temporal frame intersects with the other within a realm of time-relativism, in which each dimension is separated from the other by a period of 33 years. The loop is a fundamental structural component of the show. As Toni Pape observes in relation to "the figure of the loop as a narrative or aesthetic motif":

> In films like *Edge of Tomorrow* and *Palm Springs*, series like *Russian Doll* and *Dark*, and video games like *Deathloop* and *Hades*, the loop figures prominently to convey the protagonist's entrapment against their will.[301]

By travelling through time within the inescapable boundaries of Winden, the characters are trapped in a cycle of eternal repetition, and oppressed by a sense of entrapment which does not offer them a way out, but haunts them. The idea of the loop is evoked explicitly in the show by the symbol of the ouroboros, which, as Jan Assmann states, in ancient mythologies and cultures, such as the Egyptian and Greek, "refers to the mystery of cyclical time, which flows back into itself."[302]

From this brief description of the plot, it emerges that the stories and tragic events connected with the main characters and their families in the show, following a cycle of eternal repetition, overlap with the history of Winden, characterised by the nuclear power plant, which is framed as uncanny

[300] Ibid., min: [00:27:14].
[301] Toni Pape, '#Cycles: On circularity and recursivity in media culture', *NECSUS European Journal of Media Studies*, 12.2 (2023), 3-15 (p.3) <http://dx.doi.org/10.25969/mediarep/21707>.
[302] Jan Assmann, 'Ouroboros: The Ancient Egyptian Myth of the Journey of the Sun', *Aegyptiaca. Journal of the History of Reception of Ancient Egypt*, 4 (2019), 19-32 (p.27) <https://doi.org/10.11588/aegyp.2019.4.66091>.

and dangerous. *Dark*'s first episode concludes with the disappearance of a child, Mikkel Nielsen, 23 years after another child, his uncle Mads Nielsen, had vanished in 1986. The year 1986, further to being a reference to the Chernobyl accident, is also linked to another event more directly involving Germany's decision making as regards the closure of nuclear power plants. As Anna Batori notices:

> The year not only alludes to the nuclear disaster of Chernobyl, but the Bavarian State Ministry's approval on 12 June to demolish the Niederichback nuclear power plant (KKN) - Europe's first administrative act of this kind.[303]

In this sense, Mads' vanishing is doubly linked to the history of nuclear energy both within a national and international prospect. Before and after Mikkel disappears, Erik Obendorf and Yasin Friese, respectively a teenager and a child, go missing. These disappearances are linked back to the nuclear power plant in an ambiguous way. Mikkel Nielsen is last seen near the cave system underneath the power plant, whereas Erik Obendorf and Yasin Friese are found near the power plant in the year 1953[304]. A different and less explicit way the show creates bridges of meaning between the tragic events taking place in Winden and the nuclear signifier is found around minute [00:07:30].[305] In this instance, the camera follows Jonas who, wearing a yellow raincoat, cycles the streets of Winden surrounded by the forest. At a crossroad, Jonas stops as the traffic light changes to red. The camera frames this instant with an extreme wide and static shot, with Jonas approaching the traffic light and, before him, the cooling towers of the nuclear power plant dominating the landscape and rendered more imposing by the surrounding vegetation. As Jonas waits for the red light to turn into green, he looks up to the power plant, while the shot moves from a close-up of his face to a medium close-up of the cooling towers, zooming in ever so slightly on the second shot. Shortly after his attention is captured by Erik Obendorf's missing person poster hanging from the traffic pole on his right. This segment is followed by a scene in which Jonas leaves the site and an extreme wide shot shows his silhouette, the yellow raincoat moving away, dominated by the monumental nuclear power plant. This sequence is accompanied uniquely by an eerie and repetitive musical soundtrack, composed by musician Ben Frost and titled *A Man - A Butterfly*.[306]

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[303] Anna Batori, '"Everything is Connected" p.9.
[304] 'As you sow, so you shall reap', *Dark 1*, <https://www.netflix.com/title/80100172> [accessed 26 February 2024]. The original title of the episode is: "Was man sät, das wird man ernten."
[305] 'Secrets', *Dark 1* (Netflix, 2017).
[306] Ben Frost, *Dark: Cycle 1* (Original Music from The Netflix Series) [Apple Music] (Los Angeles, CA: Lakeshore Records, 2019) <https://music.apple.com/us/album/dark-cycle-1-original-music-from-the-netflix-series/1468966806> [accessed 26 February 2024]. The original title of the track is "Ein Mensch - Ein Schmetterling".

The notion of the atomic sublime developed by art historian Peter Bacon Hales resonates with how the nuclear power plant is framed in this context. Significantly in *Dark* the spectre of the Cold War and the atomic bomb imbues the aesthetics of the show, connecting the menace of the atomic bomb and the memory of the nuclear power plant disaster. As Silos Ribas observes, World War II and the after-war tensions between Soviet Russia and the United States is evident in

> The apocalyptic atmosphere in the future, which relates both to the threat of nuclear power, but also to the fear of a nuclear conflict between the USSR and the United States, which loomed large during the Cold War period.[307]

The notion of the *Atomic Sublime* serves the purpose of reading a text in which the fear of a nuclear war and that of nuclear energy disasters converge into the same aesthetic. This also resonates with the point made by Dolores L. Augustine, who claims that one of the reasons which led Germany to becoming "a pioneer in attempts to completely phase out nuclear power" was "the association in Germans' minds of nuclear war and nuclear power; changes in the media landscape that helped to expand civil society in West Germany."[308]

Returning to Hales's framing of the atomic sublime, in his study of the American media he constructs a critical iconography relevant to this reading of *Dark*. Drawing on Barthes, Hales identifies the mushroom cloud as a "pure sign", namely "a visual icon so unprecedented that, for a moment at least, it lay outside the webs of signification that comprised a watching culture."[309] According to Hales, the still image of the atomic bomb, captured in its destructive potency, becomes a visual signifier able to cause a cognitive dissonance between its representation as an innocuous and awe-inspiring apparition, and its ultimate purpose as an instrument of mass destruction. The atomic phenomenon and its depiction as a "pure sign" was part of "a process that pressed the atom bomb away from human responsibility, even as it imbedded it in a comprehensible historical heritage of destructiveness mixed with awe and beauty."[310] In Hales' analysis, the atomic explosion assumes the contours of a sublime vision, whose reproduction in newspaper articles, pictures and speeches post-Hiroshima conjures up sentiments of awe and horror. The "odd" choice to identify the explosion with a "mushroom", to paraphrase Hales, was, arguably, part of a process that wove the atomic icon into the grammar of nature.[311] This does not mean that all nature is sublime. In fact, one of the distinctive characteristics of the sublime is that

[307] Silos Ribas, 'Looking into the Abyss', p.275.
[308] Augustine, *Taking on Technocracy*, p.3.
[309] Hales, *Atomic Sublime*, p.5.
[310] Hales, *Atomic Sublime*, p.10.
[311] Ibid., 11.

it is immeasurable.[312] By the same token, the semantic association of the atom bomb with what Hales defines as “something too humble, too small in scale, too much an organism of dark, closed spaces, "such as the mushroom, enabled a dissociation of the nuclear weapon as a threat.[313] Accordingly, the atomic icon was conveyed as a “natural, a fundamental, even a necessary aspect of everyday life,”[314] both ordinary, like a fungus spreading across a bare surface; and exceptional, the “awesome... doomsday” described by General Thomas Farrell, who supervised the atomic bombing over Hiroshima and Nagasaki, and quoted by Hales.[315]

This argument, which Hales relates to the icon of the mushroom cloud, and which will be further explored with reference to the nuclear explosion in *Dark* in this chapter, can also be applied to the way the nuclear power plant is framed in the series. Returning to the sequences described above, the cooling towers, in fact, constitute a continuum with the natural environment, appearing as an organic and indistinguishable part of it. These two spheres, technology, and nature, create a homogenous entity, at once dominating and dominated by the other. Through this representation, the nuclear signifier in *Dark*, represented by the top edges of the nuclear power plant, signalling the entire structure through a sort of metonymic process, becomes a “natural, a fundamental, even a necessary aspect of everyday life.”[316] Indeed, the nuclear power plant is an ordinary and “necessary aspect of everyday life” in the show insofar as it is the source of energy and wealth for the local population. This fact comes across through the plant’s representation, its intersection with the natural environment, and its proximity to the town. As an integral part of Winden’s history, its reputation is not tarnished by the spectre of a nuclear catastrophe, since, as the radio broadcast points out, it is “one of Germany’s power plants with the longest failure-free operation.”[317] Despite this claim of safety underlying nuclear processes, which ideally distantiates it from other nuclear tragedies occurred in the past, such as, but not exclusively, Chernobyl, the plant is perceived as a menace by *Dark*’s characters, namely an eternal and ubiquitous visible and hidden menace, repeated through time, from past(s) to future(s). As such, this site is a witness of, if not implicated in the dramatic events leading to the disappearance of children.

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[312] See, for example, Emily Brady in relation to the Kantian notion of the sublime, who addresses the “immeasurable magnitude of the universe.” In Emily Brady, *The Sublime in Modern Philosophy: Aesthetics, Ethics, and Nature* (Cambridge: Cambridge University Press, 2013), (p.52) Ebook Central ebook.

[313] Peter B. Hales, *Outside the Gates of Eden: The Dream of America from Hiroshima to Now* (Chicago; London: University of Chicago Press, 2014), p.11. Ebook Central ebook.

[314] Hales, *Atomic Sublime*, p.5.

[315] Peter B. Hales, *Atomic Spaces: Living on the Manhattan Project* (Urbana: University of Illinois Press, 1999) p. 351.

[316] Ibid., p.5.

[317] Odar and Friese, ‘Secrets’, *Dark 1* (Netflix, 2017).

Not only do these examples posit the nuclear power plant as a source of anxiety and fear at the heart of everyday life and of the ordinary, but they also create a tense continuity between the sublime spectacle offered by its monumental structure placed within the surrounding forest, and the uncanniness underlying the disappearance of children. This juxtaposition of nuclear and human, the hidden yet visible power plant within the forest, and the missing, and therefore invisible, children seems to recall the suddenness associated with the atomic explosion. In fact, the impact of the bomb in Hiroshima led to the abrupt and immediate disappearance of human life, particularly those who were near the detonation's epicentre. This detail is evoked by one of the exhibits displayed in the Hiroshima Peace Memorial, which presents the disembodied silhouette of an individual impressed on a stone.[318] As Morris Low points out, this item identifies:

> the only traces remaining of a person who was sitting on the steps leading to the entrance of the Hiroshima branch of the Sumitomo Bank. The person was waiting patiently for the bank to open but was sadly exposed to the heat rays from the explosion of the atomic bomb that was dropped only 260 metres away. We see a dark, ghostly shadow superimposed on the whitish, bleached stone steps.[319]

Furthermore, the name Winden, is an ambiguous play on words bearing the main themes of the show. "Verschwinden" in German means disappearance and addresses the multiple missing children stories occurring in Winden in 2019 and in 1986. The name Winden also presents an affinity with the German verb *winden*, which means "to twist."[320] As Silos Ribas observes, Winden is "a name that already foreshadows the twists and loops the viewer is about to encounter." [321]

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[318] This specific item is present in the first section of *Hiroshima Mon Amour* and recalls the images at the beginning of the film, as the silhouettes of the two lovers covered by ashes duplicates one of the many shadows in Hiroshima.

[319] Morris Law, 'Art, Photography and Remembering Hiroshima', in *East Asia Beyond the History Wars: Confronting the Ghosts of Violence* ed. by Tessa Morris-Suzuki and others, (Milton Park, Abingdon, Oxon; New York: Routledge, 2013), 153-163 (p.158). Ebook Central ebook.

[320] In addition to these two potential explanations, Winden seems to recall Windscale, the nuclear power plant site in Cumbria, England, whose name was changed into Sellafield following a fire affecting the site in 1957. The name Winden, however, is also reminiscent of the town of Wyhl, in West Germany, where the local population and anti-nuclear activists opposed the construction of an atomic power plant, bringing about a series of protests in 1975. In Augustine,*Taking on Technocracy*, pp.93-94. Augustine also points out that these protests contributed to the shaping of the environmentalist movement as a political entity, since: "Wyhl activists also mobilised science in a way that provided the movement with fundamental, universal arguments and gave nuclear power a leading role in the breakthrough of environmentalism as a major political cause." In Augustine, *Taking on Technocracy*, p.95. See also plans to build a nuclear reprocessing plant in Wackersdorf, which were, once more, opposed by the public. Augustine, *Taking on Technocracy*, p.61.

[321] Silos Ribas, 'Looking into the Abyss', p.262.

The enigmatic status of *Dark*'s disappeared children resonates with the Freudian concept of the uncanny. According to Freud, the uncanny is a feeling of "fear and dread," which, as a consequence of repression, reverses what should be familiar (*heimlich*) into something unfamiliar (*unheimlich*).[322] Freud pinpoints the uncanny along the lines of what, occupying a liminal space of duplicity, is ambiguous. Ghosts, for example, by being neither dead or alive, are uncanny, as is the idea of the double (Doppelgänger)[323] and "dolls and automata."[324]

But the concept of the uncanny is also connoted by the imprecision through which Freud defines it. As Hélène Cixous articulates:

> The fact of the matter is that the 'domain' remains indefinite; the concept is without any nucleus: the Unheimliche presents itself, first of all, only on the fringe of something else. Freud relates it to other concepts which resemble it (fright, fear, anguish): it is the one in the 'family' that is not really a member of the family. Freud declares that it is certain that the use of the Unheimliche is uncertain. The indefiniteness is part and parcel of the 'concept'.[325]

This "indefiniteness" of the concept will be used in this context to complement the Freudian uncanny with the notion of the nuclear uncanny developed by Paul K. Saint-Amour.[326] It will also enable a link to be drawn between the uncanniness of the disappeared, and the ambiguous status of nuclear technologies in *Dark*, conceived as both familiar and unfamiliar, a source of energy and wealth, but also perceived as dangerous and untrustworthy. The nuclear uncanny will be explored further in chapters II and III employing a theorisation of the notion developed by Joseph Masco and Gabrielle Schwab. However, the uncanny is also a useful concept to read the "category of the disappeared."[327] Linking the two aspects together, Ewa Domanska observes:

> A person (not to mention a body) who has been disappeared without a trace takes on a ghostly character [...] Therefore, I believe, the Freudian category of 'the uncanny' may be useful in its analysis. The liminality and 'monstrosity' of

[322] Sigmund Freud, *The Uncanny*, trans. by. David McLintock (London: Penguin, 2003), p.78. VLebooks ebook.
[323] Freud, *The Uncanny*, p.86.
[324] Ibid., p.84.
[325] Hélène Cixous, 'Fiction and Its Phantoms: A Reading of Freud's Das Unheimliche' in *Volleys of Humanity: Essays 1972- 2009* ed. by. Eric. Prenowitz, (Edinburgh: Edinburgh University Press, 2011), 15-40 (p.16). Ebook Central ebook.
[326] Paul K. Saint-Amour, 'Bombing and the Symptom: Traumatic Earliness and the Nuclear Uncanny', *Diacritics*, 30.4 (2000), 59–82 <https://www.proquest.com/scholarly-journals/bombing-symptom-traumatic-earliness-nuclear/docview/1297854021/se-2?accountid=13828> [accessed 26 February 2024].
[327] Domanska, 'Toward the Archaeontology of the Dead Body', p.399.

> the disappeared of whom we do not know whether he/she is dead or alive prevents the trauma of loss from being healed by means of rituals.[328]

Dark considers the liminality of the disappeared, since their status echoes the family relations of the local community, in which the repressed constituted by secrecy, lies, and deceit return constantly in the show, articulating an idea of time connected with these disappearances. Moreover, these families are bereft of their right to mourn their children. As observed above in this chapter, two of the four missing children, who disappeared in 2019, will be found near the nuclear power plant in 1958, while the remains of Mads Nielsen, vanished in 1986, will be recovered in the year 2019. *Dark*, therefore, plays with the ambiguous status of these bodies, imbuing them with the same characteristics which usually designate ghosts, but still maintaining their material, rather than abstract, outward form. By behaving like ghostly figures, these lifeless bodies perturb the ordinary, chronological configuration of time. They establish, in fact, a relationship with the past and the present, which is enigmatic and fragmentary, insofar as it is characterised by both continuity and discontinuity between the two temporalities. This is partly true because these individuals keep their status of missing children in the periods of their disappearance. Additionally, the discovery of their corporeal remains happens in decades to which they do not belong temporally, and where they are either unrecognisable, since they were not yet born, as in 1958, or, even when there is a temporal continuity, as the one between 1986 and 2019, their finding is deemed impossible to believe. This confusion and overlapping of temporalities, leading to a conception of uncanniness of the disappeared is explained by Domanska thus:

> The ambivalent, 'uncanny' status of the disappeared person (dead or alive) resists the dichotomous classification of present versus absent. In this context, the disappeared body is, as it were, a paradigm of the past itself, which is both continuous with the present and discontinuous from it; which simultaneously is and is not.[329]

In this order of simultaneousness, in which past and present engage in a game of visibility and invisibility via the condition of the disappeared, the re-emergence of these dead bodies does not interrupt their status, rather it encourages and reinforces it. If it is true that "the dead body is a witness ('a witness from beyond the grave') and evidence at the same time,"[330] *Dark* inverts this statement, strengthening the mystery behind the children's disappearance via the uncanny reappearance of bodies which do not present any or a bare relationship with the time in which they are recovered.

[328] Ibid., p.402.
[329] Ibid., p.404.
[330] Domanska, 'Toward the Archaeontology of the Dead Body', p.394.

The recurrent disappearance "without a trace" of characters across time, and the pattern that they create, fits into the series' structure of repetition, which, in turn, is germane to the notion of the uncanny. For Freud, in fact, the uncanny is underpinned by a "constant recurrence of the same thing, the repetition of the same facial features, the same characters, the same destinies, the same misdeeds, even the same names, through successive generations."[331] In *Dark* repetitions punctuate constantly the narrative of the show, both conceptually and visually. For example, the simil-nuclear explosion leading to the apocalypse is a recurrent visual trope in the series, as its materialisation and reversal occurs several times via the device of time travel. Time travel, thus, allows the characters to move from one time dimension to another in the attempt to overturn the prospect of total destruction of their realities. By the same token, this repeated apocalypse, and its recurrence in two different parallel worlds, is anticipated by a constant state of anxiety and expectation, which signals a moment of "eerie suspension before the explosion."[332] This apocalypse, whose origin in the show is connected with the time-portals and their opening, is evocative of a nuclear apocalypse. Even the idea of time travel is germane to what Joseph Masco describes as a "technoaesthetic" related to nuclear destruction involving "a complicated dual deployment of time and the human body."[333] By the term technoaesthetics Masco means "aesthetics delivered through machines, constituting a specific fusion of appearance and utility."[334] In this instance, Masco illustrates the perspective of a "senior weapons scientist", according to whom the link between the apocalypse and the employment of nuclear weapons is an image and belief belonging to "nonweapons scientists."[335] As such, the expert interviewed by Masco "noted that a full-scale nuclear war would not be the end of everything. Instead, he offered an image of nuclear war as a kind of time travel, stating that a full-scale nuclear exchange would return the United States to 'roughly the year 1860.'"[336] Crucially, *Dark*'s timeline goes as far back as the year 1888, a period reached through the employment of time travel, therefore covering an era where technological discoveries *per se* were still at the outset. However, Masco also points out that the expert proposes an outlook of time and human ingenuity informed by "a specific notion of temporal-technological progress."[337] As Masco notes:

[331] Freud, *The Uncanny*, p.86.
[332] Saint-Amour, 'Bombing and the Symptom', p.60.
[333] Masco, *The Nuclear Borderlands*, p.44.
[334] Ibid., p.345.
[335] Ibid., p.44.
[336] Ibid., p.44.
[337] Masco, *The Nuclear Borderlands*, p.44.

> After a nuclear war, techno-time would simply start over again at the 1869 level and the United States would build itself out of the ashes by producing new machines. In fact, within this concept, time might actually be speeded up after a nuclear war because this be the second time around for the industrial revolution. In this case, destruction is not ignored - indeed, it is precisely measured - but it is defined in terms of the presence or absence of technology. The effect of radioactive fallout on people, animals, or the environment is understated, which allows the primary evaluative meaning of nuclear war to be fixed in the realm of a specific notion of temporal technological progress.[338]

Dark seems to reproduce this idea of time travel, insofar as the characters travel to a future where humanity has reversed to a primordial stage of societal organisation, and to a past manifesting basic levels of technology and collective structures. Despite implying the death of a great part of Winden's inhabitants following the apocalypse, in the series the future is still populated, and the environment appears polluted by a sort of radioactive dust descending from the sky, which recalls the idea of the nuclear winter.[339] Masco's observations about the "temporal technological progress" implied by the weapons scientist he interviewed will be discussed further below in this chapter, since these insights bring to light a techno-scientific discourse which reads society exclusively through a technological lens. This perspective avoids considering the irreversibility which a destruction of that size might lead to. Beyond the eradication of "humanity, the human habitat", Derrida individuates this loss in "the possibility of an irreversible destruction, leaving no traces, of the juridico-literary archive - that is, total destruction of the basis of literature and criticism."[340] According to Derrida this action of total annihilation might occur through the physical incineration of the library, "even that of Alexandria, which occasioned so may writer accounts and

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[338] Masco, *The Nuclear Borderlands*, pp.44-45.

[339] Solomon and Marston point out that in 1981 Paul Crutzen and John Birks introduced a scientific model to gauge "the effects on the Earth's atmosphere of large-scale fires that would result from a major nuclear exchange." From this initial research, "A subsequent series of analyses expanded on the concept of a midday twilight or "nuclear winter" that might follow in the weeks and months after a nuclear war" (p.xiii). Solomon and Marston further specify that, in order to appreciate the global impact of a potential nuclear war "These studies look beyond the immediate and direct effects of nuclear explosions (blast, thermal radiation, and local radioactive fallout) to investigate the more widespread effects of dispersed radioactivity and severe climatic disturbances — the nuclear winter." In Fredric Solomon and Robert Q. Marston, Institute of Medicine, and Symposium on the Medical Implications of Nuclear War, *The Medical Implications of Nuclear War*. (Washington, D.C.: National Academy Press, 1986). (p.96) Ebook Central ebook.

[340] Jacques Derrida, 'No Apocalypse, Not Now (Full Speed Ahead, Seven Missiles, Seven Missives)', Diacritics, trans. by. Catherine Porter, and Philip Lewis, 14.2 (1984), 20–31 (p.26) <https://doi.org/10.2307/464756>.
As Saint-Amour points out: "this is not just loss but the loss of loss, the termination of the capacity to symbolise, circumscribe, and thus recover from loss, the loss of the very aftermath of loss." While this idea seems to recall the Derridean notion of cinders, it also appears to participate in a stage following the cinders, in which the latter will not be even a remainder of this loss. In Saint-Amour, 'Bombing and the Symptom', p.67.

nourished so many literatures."[341] As I will argue later in this chapter, in the first episode of *Dark*'s third season, *Déjà-vu*,[342] this very idea of burning and incineration of the library is staged. Here a character called the Unknown, a name evocative of the unknown as *Unheimliche*, son of Jonas and Martha, in his triple incarnation as past, present and future self, enters the operational headquarters of a secret society of time travellers in Winden, and burns it down. This section lingers on scenes where the entire library of this underground facility is reduced to ashes, including a painting by Rubens, *The Fall of the Damned*, and the pictures of the members of the four families at the centre of the narrative, prefiguring another kind of incineration which will take place in the last episode of the series.[343] Leaving this suggestion for later consideration, it is worth emphasising that time travel in *Dark* enables the creation of a structure based on repetition, as well as periodically prompting an aesthetic of anticipation denoting the events before the apocalypse.

This uncanny and traumatic expectation in *Dark* is a fundamental aspect of the show manifested through the characters, its aesthetic and narrative structure, and the intersection with an environment characterised by the nuclear power plant. By the same token, the nuclear sublime is positioned in continuation rather than as an interruption of the nuclear uncanny on an aesthetic level. However, the former is constantly challenged, and reversed to the dominion of the uncanny, as much as the atomic explosion develops, interrupts, and decreases until being reabsorbed by the same site in which it was generated. In fact, on closer examination, the (nuclear) mushroom cloud employed in the show (as for example in the episode 'Endings and Beginnings' at min. [00:52:30])[344] presents different characteristics from the one described by Hales. Eva Horn confronts and expands on the multiple phases and variations of the apocalyptic model throughout a selection of historical moments in *The future as Catastrophe*.[345] Horn navigates three emblematic conceptions of doomsday in order to shape changing discourses and perceptions of the apocalypse, and the historical and cultural phenomena which engender them. In this transition from an epochal viewpoint to another, from the apocalypse depicted in the Bible, to the Romantic period and, finally, the nuclear age, Horn notices that:

[341] Derrida, ''No Apocalypse, Not Now', p.27.
[342] 'Déjà-vu', *Dark 3* (Netflix, 2020) <https://www.netflix.com/watch/81183530?trackId=14170286> [accessed 26 February 2024].
[343] Odar and Friese, 'Déjà-vu', *Dark 3*. The burning painting appears approximately at min. [00:02:30].
[344] Odar and Friese, 'Endings and Beginnings', Dark 2 (Netflix, 2020) <https://www.netflix.com/watch/81183530?trackId=14170286> [accessed 26 February 2024]. The original title of the episode is "Enden und Anfänge".
[345] Eva Horn, *The Future as Catastrophe: Imagining Disaster in the Modern Age*, trans. by. Valentine A. Pakis (New York: Columbia University Press, 2018), Ebook Central ebook.

> The second half of the twentieth century was under the spell of an apocalyptic vision that was claimed to be both absolutely real and imminent. Like Romantic darkness, this vision found its expression in a sublime image of destruction, this time not darkness but light: a radiant flash, "brighter than a thousand suns," as Robert J. Oppenheimer put it.[346]

In the case of the atomic bomb, light is, arguably, the ultimate symbol of atomic imagery. As noted by Gabriele Schwab who, in turn, looks back at Gertrude Stein: "from the very beginning, atomic light has generated a veritable iconography of death."[347] Likewise, Joseph Masco interprets what he calls the technoaesthetics of the nuclear phenomenon, as a rhetorical instrument based on the sublime principle, whereby light is recurrently evoked by those Los Alamos scientists who witnessed the first atomic experiments in 1945.[348] Light is, seemingly, the lynchpin between the natural sublime ("brighter than a thousand suns," as Oppenheimer points out,[349] whereby the sun identifies the natural sublime) and a human-made product, the bomb. This association enables a useful shift from a natural to a human realm. This observation can be corroborated further via Hales's perspective. Despite it being imbued with qualities drawn upon the symbolism of nature, Hales too observes that this "new sublime" belonged to the order of humanity, rather than nature. As Hales points out:

> Here, then, was the new sublime, brought into being by a new relationship between man and nature, in which man was the instigator, the audacious, even "blasphemous" usurper of the power of the Almighty, alternately "puny" and omnipotent.[350]

Within this restructuring and repositioning of the hierarchy between nature, humanity and divinity, Hales argues that there existed the belief that the human-kind had substituted the "Almighty" in the control of the natural world for then, finally, taking the place of nature tout court. According to the critical account which Emily Brady creates as regards the sublime in philosophy,

> Nature, with its vast spaces and dizzying heights and depths (deserts, galaxies, oceans, canyons, mountains), as well as its mighty forces (thunder and lightning, hurricanes, waterfalls, waves, landslides and avalanches, volcanic eruptions), was considered the 'original' sublime by many eighteenth and nineteenth-century writers.[351]

The cultural innovation brought about by the atomic technology allowed a shift in the supremacy of humanity over nature, "whose signal importance lies in the very fact that it is manmade, and

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[346] Horn, *The Future as Catastrophe*, p.42.
[347] Schwab, *Radioactive Ghosts*, p.110.
[348] Masco, *Nuclear Borderlands*, p.57.
[349] Horn, The *Future as Catastrophe*, p.42.
[350] Hales, *Atomic Spaces*, pp. 351-352.
[351] Brady, *The Sublime in Modern Philosophy* p.118.

whose beauty is partly a product of its source in that American triad of science, capital, and military government."[352] Whilst in the traditional conceptualisation of the sublime "nature was held up as the paradigm,"[353] the paradigm shift put forward by the introduction of nuclear technology enabled for a human-made product to be perceived as "greater than any waterspout or typhoon but somehow of that ilk."[354] Following this argument, the mushroom cloud is sublime in its resemblance to nature. At the same time, unlike nature, it is a human-generated reproduction of a spontaneous natural event, further mediated by pictures and descriptions.

Yet, *Dark* seems to reinstate a lost order of things, re-organising, through its narrative, a former hierarchy. First of all, in the show this seeming nuclear mushroom cloud, arguably drawn on the specific semantic construction of the atomic icon, is emptied of its original meaning, both conceptually and visually. As such, *Dark*'s (nuclear)blast is not represented through light, as Horn observes, but darkness. In support of the conceptual shift implemented by the show, it is worth noticing that the mushroom cloud in *Dark* originates from the conflation of a variety of oblique spatio-temporal dimensions, and therein lies the justification for the employment of a darker palette. Furthermore, *Dark*'s explosion never reaches its acme, its complete formation in the shape of the mushroom cloud. In T*he Nuclear Borderlands* Masco chronicles the evolution of the Trinity nuclear explosion, an experiment carried out in Los Alamos in 1945, in three photographs.[355] The first picture captures the detonation of an atomic bomb framed at 0.016 seconds.[356] The atomic explosion, not yet acquiring its full shape as a mushroom cloud, resembles instead a semi-circle, tickling the edge of the earth with its mortal cap. This is the same iconography through which *Dark* creates its universe. The explosion triggering the apocalypse in the show is, in fact, a black semi-circle, a symbolism which, as suggested earlier in this chapter, recalls the geometric form of the loop. In *Dark*, the potential entailed in the atomic explosion, which is to become a finite mushroom cloud, is constantly hindered by its representation, rather, as a semi-circle, offsetting the iconographic symbolism of the nuclear sublime, and keeping it at an embryonic stage.

[352] Hales, *Atomic Spaces*, p.351.
[353] Brady, *The Sublime in Modern Philosophy*, p.119.
[354] Hales, *Outside the Gates of Eden*, p.11.
[355] Masco, *The Nuclear Borderlands*, p.58.
[356] Ibid., p.58.

Furthermore, Hales observes that the atomic icon, "once universal, powerful, and affecting,"[357] has lost its capacity to inspire "anxiety, fear, doubt, and sorrow, as well as grandiosity, heroicism, sober realpolitik" and has mutated into a fading memory, despite its apparent revitalisation in the era of the Internet.[358] Applying Hales's critical account of the symbolic power of the atomic bomb and applying it to *Dark*, the show's imperfect nuclear icon can be seen as an erstwhile simulacrum which lost its crucial symbolic power, as well as, ideally, those defining qualities (the light, the mushroom cloud) which made it an intelligible emblem for some "watching cultures."[359]

However, *Dark* seems also to express a criticism of the nuclear sublime, since the symbol of the atomic bomb is constantly deconstructed. By being proposed as an empty symbol of dread, the source of anxiety and danger is moved into familiar loci, shifting from a visual representation of the sublime to the atmosphere and the spaces of the uncanny—as will be further explored in Chapter III of this thesis. In an article appeared for *The Atlantic*, David Farrier explains that the notion of "deep time" has changed from its original inception to its characterisation in the age of the Anthropocene.[360] Farrier claims that the term was coined by Scottish geologist James Hutton, who discovered that "geological features were shaped by cycles of sedimentation and erosion, a process of lifting up then grinding down rocks that required timescales much grander than those of prevailing Biblical narratives."[361] Farrier notices that Hutton's description of deep time was imbued with romantic connotations, which made it a concept akin to the sublime, and through which both humanity and divinity appeared "displaced" in relation to nature. As Ferrier points out: "The affective register of deep time was one of terror and wonder, fashioned to fit a vision of the sublime that transcended and yet somehow affirmed humanity."[362] Yet Farrier further argues that – in the Anthropocene the sublime cannot be considered any longer outside of human reach – Humanity cannot be perceived as a privileged observer of nature's wonders, but as a sublime force in its own right.[363] Because of this, Farrier maintains:

> Surely the 'sublime' is not the right way to characterise our visceral response to these phenomena. The 'uncanny' might serve us better. One of the most chilling traces of the Anthropocene is the global dispersal of radioactive isotopes since

[357] Hales, *Outside the Gates of Eden*, p.11.
[358] Ibid., p.12.
[359] Hales, *Atomic Sublime*, p.5.
[360] David Farrier and Aeon, 'How the Concept of Deep Time Is Changing', The Atlantic, 31 October 2016 <https://www.theatlantic.com/science/archive/2016/10/aeon-deep-time/505922/> [Accessed 26 February 2024].
[361] Farrier, 'How the Concept of Deep Time Is Changing'.
[362] Ibid.
[363] Ibid.

> mass thermonuclear weapons testing began in the middle of the 20th century, which means that everyone born after 1963 has radioactive matter in their teeth. The half-life of depleted uranium (U-238) is around 4.5 billion years, roughly the same as the age of the Earth, while that of the plutonium in Chernobyl's nuclear reactor is 240,000 years. Such timescales resist the imagination, but exist as a haunting presence in our daily lives.[364]

Dark renegotiates this shift between the sublime and the uncanny, both framing the uncanny as a frightful expectation before destruction, but also reversing that same destruction through the lenses of the uncanny. In this way, the anxieties and fears of the community in Winden are always relocated at the level of the familiar, as well as addressing the nuclear danger as "a haunting presence in our daily lives. Even if *Dark* does not deal directly with the concept of deep time, unlike the film *Burial* which will be analysed in Chapter IV of this thesis, it deals with the tension between the uncanny and the sublime, both challenging the two aspects at the core of nuclear technology, as both a visible and invisible part and parcel of its aesthetic grammar.

Nuclear Uncanny Hauntings in the Shadow of the Apocalypse

In order to define the nuclear uncanny, Paul K. Saint-Amour utilises the notion of *bukimi*, namely a sense of anxious and ambiguous anticipation experienced by the inhabitants of Hiroshima preceding the dropping of the atomic bomb.[365] Saint-Amour bases his interpretation of *bukimi* on his reading of psychiatrist Robert Jay Lifton's 1967 work, *Death in life: Survivors of Hiroshima*. In this book, Lifton gathers and analyses the testimonies of the inhabitants of Hiroshima who survived the brutality of the atomic bomb. Saint-Amour focuses on a specific section of Lifton's book called "Anticipation", where Lifton explains that *bukimi* was a term employed by Japanese people to identify what is "weird, ghastly, or unearthly, to describe Hiroshima's uneasy combination of continued good fortune and expectation of catastrophe."[366] In this instance, Lifton talks about a series of "rumours" and warnings which were later denied about a potential bombing of the city, and which put people in Hiroshima in a constant condition of tension, causing them to feel at once spared by the bombing, and yet still contemplating a potential aerial attack of some kind.[367] According to Saint-Amour:

[364] Ibid.
[365] Saint-Amour, 'Bombing and the Symptom', p.60.
[366] Lifton, *Death in Life*, p.17.
[367] Ibid., p.16.

> All these rumours responded to citizens' impression that their city had been in some way singled out, and the term *bukimi* - also meaning "ominous" or "uncanny" - spoke to the suspended question of whether Hiroshima and its inhabitants had been singled out for preservation or for annihilation.[368]

Saint-Amour argues that this feeling, and the premonitory "signs" which accompanied it, to a certain extent, is the result of a prophetic connection between the moment before the bombing and a future potentially bifurcating into two different paths and postulating opposite options, according to which the city would have been either destroyed or saved.[369] Saint-Amour states that the notion of "eerie suspension before the explosion" explained by Hiroshima's survivors was the same which many cities were going to experience during the Cold War:

> Those who registered the nuclear uncanny in Hiroshima were also the first to experience a condition that, in a far more explicit incarnation, would become familiar to everyone living in a targeted city during the Cold War.[370]

Dark is built on this "eerie suspension", which is framed as a constant expectation of something terrible about to happen conveyed through nightmares, dreams and symptoms of traumatic stress disorder haunting the characters, but also through a variety of visual stratagems and storytelling techniques. The story is punctuated with many prophetic "signs" conjuring up a potential nuclear destruction, such as the flickering of the lights, or the sudden death of animals, for example birds,[371] anticipating rather than following the event which causes them (usually the opening of a time portal.) The death of birds associated with the Chernobyl nuclear disaster has featured in two recent portrayals of the event, as for example, the British-American HBO series *Chernobyl* and the Russian Netflix film, *Chernobyl 1986*, in order to address the deadly effects of nuclear accidents. In the mini-series *Chernobyl*, the last scene of the first episode, from min. [00:53:24] displays an apparently cheerful and ordinary morning following the power plant accident, in which life goes on as usual, and people gather in squares while children go to school.[372] As the camera focuses on the latter image, it moves along a path showing the bottom half of children's legs while they walk towards the school's entrance. After the last child exits the frame, the camera stops to capture a bird hitting the ground and flickering its wings for a moment before dying. In the film *Chernobyl 1986*, while a character is driving his car unaware of the explosion, the vehicle is hit by

[368] Saint-Amour, 'Bombing and the Symptom', p.60.
[369] Ibid., p.60.
[370] Saint-Amour, 'Bombing and the Symptom', p.60.
[371] For example, in Odar and Friese, 'Lies', *Dark 1*; 'Past and Present', *Dark 1*; 'Endings and Beginnings', *Dark 2.*
[372] Renck, '1.23.45', *Chernobyl* (HBO, Sky Atlantic 2019) <https://www.nowtv.com/watch/chernobyl/iYEQZ2rcf32XNZDFHaYhzo> [Accessed 26 February 2024].

several birds descending lifeless from the sky,[373] which forces him to stop the car, and observe the radioactive cloud emerging from the power plant. Whether or not it is true that birds died immediately after the explosion, and as a consequence of it, this has become a trope employed by fiction in order to identify the effects of radioactivity. However, as will be explored in Chapter IV of this thesis, non-human species have indeed been affected by the release of radioactivity in the surrounding environment.

These repeated events add up to the extreme state of anxiety affecting some of the characters. As mentioned above in this chapter, this effect of frightful anticipation is strengthened by the constant reiteration of scenes and events, reproposed with slight differences from one another, which are positioned in dialogue with other sections of the series, creating a mirror effect for which one scene is re-interpreted as a prophetic anticipation of the other. This is also true in relation to the disappearance of Mikkel Nielsen in the first episode of season I. The morning before his vanishing, Mikkel is donning a skeleton suit, and he is trying to convince his family to witness one of his magic tricks before going to school. His father agrees to observe his child's magic skills, and he calls him "Houdini," putting a magician's cylinder on his head.[374] Mikkel performs the trick of the ball disappearing under two cups, deceiving his father who indicates the wrong location of the ball, and remarking: "Dad, the question isn't how, the question is when."[375] This scene is a prophetic anticipation to Mikkel's disappearance and reappearance in another decade, which will occur later on in the episode.

In this sense, repetition serves to restructure the story in terms of a metamorphic reconfiguration brought about by time travel. Furthermore, this repetitive structure reflects the trauma experienced by the characters in the film. Drawing on Trauma Studies, Saint-Amour evidences the proximity between trauma and repetition thus:

> In part because of its literal and insistent return, the traumatic past remains transgressively present as revenant, haunting, possession, dominating the present rather than receding, as it should, into the past. The survivor who experiences this return often acts out the trauma, repeating in the present scenes or behaviour whose origins are in past instances of unassimilated, and unassimilable violence. According to this model, the proper work of mourning

[373] Kozlovsky, *Chernobyl 1986* (Netflix 2021). The vehicle is hit by birds at minute [00:01:41]
[374] Odar and Friese, 'Secrets', *Dark 1*. The scene starts at min. [00:11:50].
[375] Odar and Friese, 'Secrets', *Dark 1*. Mikkel utters this sentence at min. [00:12:32].

> should at least partially restore the pastness of the past and enable the survivor of trauma to reinvest in the present.[376]

To a certain degree, the characters in *Dark* are haunted by a traumatic past which prompts them to initiate a journey in search of the origin of their malaise, and bring to the surface what was, otherwise, repressed. In this sense, as Saint-Amour observes, the work of mourning should be aimed at rebalancing the relationship between past and present, through which the "pastness of the past" is partly re-established, allowing "the survivor of trauma to reinvest in the present." The convoluted design of *Dark,* however, renders it impossible for the characters to renegotiate the relationship between past and present through the work of mourning, since their trauma does not belong uniquely to a temporality, but stretches into the past and the future, as well as being a projection of someone else's pain. In relation to the intromission of the future in the emergence of trauma, Saint-Amour further posits:

> What becomes of the ethical stakes of working through traumatic symptoms if we imagine that at least some of those symptoms might precede trauma, travelling back through time as it were from the future, or even the merely possible future, to the present? To be sure, such a *hysteron proteron* occurs with a marked frequency in fictional treatments of historical trauma.[377]

Dark re-imagines the symptoms of trauma affecting its characters as something originating both in the past, and re-inscribed into the future, creating a circular movement which both echoes the historical trauma of the Cold War and Chernobyl, but it also frames this trauma in terms of an anticipatory condition. This aspect can be explained more clearly by comparing two scenes in *Dark*: the first scene of the first season of the show, *Secrets*[378] with the last scene of the last episode, *The Paradise*.[379]

At minute [00:01:31] of the first episode of *Dark* the front of a house surrounded by trees and a lawn appear in the daylight.[380] A title informs us that the date is 21 July 2019. Straight after, in the second scene, a man (Michael) seals off a letter, while gloomy and repetitive extradiegetic, fragmented music accompanies the intradiegetic sounds in the sequence. As the narrative progresses, the viewer discovers the environment where the action plays out. A room in an attic displays the signs of an artist's studio: a dirty, scrunched up cloth inside a sink, traces of paint on

[376] Saint-Amour, 'Bombing and the Symptom', p.62.
[377] Saint-Amour, 'Bombing and the Symptom', pp.62-63.
[378] Odar and Friese, 'Secrets', *Dark 1*.
[379] Odar and Friese, 'The Paradise', *Dark 3*.
[380] Odar and Friese, 'Secrets', *Dark 1*.

the ceramic, paintings on the wall. The man grabs a stool as his controlled and confident movements lead him to commit suicide by hanging. While it is possible to hear the struggle of the man approaching his death, the camera leaves the scene and shifts to the letter left by him at the beginning of the sequence; at this point, the focus of the lens shifts to his image framed in a picture. In this shot, the man is surrounded by another younger man, a woman and an older woman, a clear suggestion that what the camera is disclosing is the intimacy of a family portrait. In the picture, everyone is smiling, aside from the man who has just taken his own life.

The screen goes dark for a few seconds to reveal, later, a body that, with a sudden movement, jolts upwards into a sitting position. This position gives away the identity of this character: through a close-up, the younger man in the picture which closed the prior sequence appears (Jonas). His face is distraught, and he is breathing rapidly. This scene is followed by a long shot which offers a view of a bedroom, with Jonas now moving to the side of the bed, seeking with his feet a stable surface on the floor, yet still hyperventilating, his face clammy. In another close-up, Jonas, in an attempt to gather himself together, touches his face, and later reaches briskly for a pill from a box positioned on his bedside table. The camera follows this quick movement, framing the pills which stand on the side of a half full glass of water. He swallows a pill of antidepressant medication without helping himself to the water. As the camera lingers upon his close-up for a while longer, Jonas is shown attempting to control his breath, which decreases ever so slightly, without reaching a complete stillness, the body still expressing an anxious state.

In this scene, a commentary or dialogue are not essential to appreciate what Jonas is experiencing, also because the pills on the bedside table are a clear indication of his state. The direction of this sequence is keen to mediate a further level of meaning, wherein the symptomatology of terror is explored minutely. I use the expression terror, in this context, rather than simply *panic*, because, through an analysis of the series as whole and retrospective reading of this initial sequence, it is possible to frame it as a prelude of the terror – reaching peaks of horror[381] – which the characters experience throughout their journeys. Adriana Cavarero offers an etymological definition of the concept of terror which she associates to three qualities:

[381] An etymological discernment between “terror” and “horror” as observed by Cavarero will be essential to frame the evolution of Dark vis-à-vis the nuclear explosion-as-event and aesthetics. In Adriana Cavarero, *Horrorism: Naming Contemporary Violence*, trans. by. William McCuaig (New York, N.Y.: Columbia University Press, 2011), Ebook Central ebook.

movement,[382] trembling or shaking[383] and loss of control.[384] Brisk movements accompany one as they awake from a nightmare, as do tachycardia and difficulties associated with catching one's breath, commonly known as panic. The first stage of terror is "fright", according to Cavarero, which she addresses as "the sudden start of fear."[385] But "fright" and the movement of "awakening" are also two interconnected qualities of trauma. Drawing upon Freud, Cathy Caruth observes that "fright is the term by which Freud defines the traumatic effect of not having been prepared in time."[386] In this sense, trauma lies not as much in what is experienced while dreaming, but in the same "experience of waking from it", and in the "surprise" of having survived the nightmare, which is nothing other than the repetition of the original trauma.[387] It is in the repetition of the enigma of survival, to sum up Caruth's idea, that trauma thrives and replicates itself.[388] What emerges from the close reading of this sequence is the representation of this awakening from a nightmare and the exploration of the drama of survival which goes hand in hand with it. Yet, it is worth wondering how this recurrence manifests itself within the narrative. It is possible to identify a series of visual signs to corroborate this idea: for example, the composition of the frame and shot draw attention to the half-used box of pills on the bedside table, which is a clear signifier of the presence (or recurrence) of episodes of mental health issues, which the context where the sequence takes place relate to depression, anxiety and panic attacks. Further to this, the detail of the glass of water suggests that the ingestion of pills should be facilitated by water intake; yet, the unused glass of water implies, seemingly, a certain level of expertise behind the automatic action of swallowing the pill without water.

The centrality of these sequences is also demonstrated by the fact that these few minutes are utilised several times over the course of the show. Yet most significant is that this section wraps up the conceptual journey of the series, as it appears at the beginning of the final episode of the third and final series. Their reiteration is, this time, accompanied by a commentary. Towards the end of the sequence in which the man steps up on a stool to hang himself,[389] it is possible to hear

[382] As Cavarero highlights: "Acting directly on them, terror moves bodies, drives them into motion." In Cavarero, *Horrorism*, p.5.
[383] According to Cavarero: "He who is gripped by terror trembles and flees in order to survive, to save himself from a violence that is aiming to kill him." In Cavarero, *Horrorism*, p.5.
[384] Cavarero explains that "'Terror' in this sense displays a specific link with the kind of total fear, synonymous with absolute disorder and loss of all control, known as panic." In Cavarero, *Horrorism*, p.5.
[385] Cavarero, *Horrorism*, p.4.
[386] Cathy Caruth, *Unclaimed Experience: Trauma, Narrative, and History* (Baltimore, Md.; London: Johns Hopkins University Press, 1996), p.64. Ebook Central ebook.
[387] Caruth, *Unclaimed Experience*, p.64.
[388] Ibid., p.64.
[389] Odar and Friese, 'The Paradise', *Dark 3*. The scene occurs between min. [00:01:00-00:01:19].

a female voice, a superimposition from another sequence which will be revealed later in the episode. This female voice covers this sequence, leaking into the following sequence, and utters the words: “Every journey has a beginning. But yours has no end. It goes on forever and ever.”[390] The sequence ends up with Jonas touching his face. It is not essential to show him taking his pills, as this further level of understanding is already revealed by the commentary, which highlights this idea of eternal repetition, in the words of an unending journey.

The connection between the first scene, showing the tragic death of a man, and the second scene, where a young man awakens from a nightmare while enduring an episode of anxiety, implies an affinity between the two stories, framing the first as the leading cause of the second. This is confirmed by the progression of the narrative, through which it emerges that these two people are father and son. Through this montage, Jonas’s trauma is identified as a consequence of his father’s passing. However, *Dark* reconfigures these anxieties by putting them in dialogue with other past, contemporaneous as well as future events. In this way, the scene described above can also be interpreted as an anticipation of the story to come: as an insightful premonition of the future apocalypse, but also of Jonas’s subsequent sacrifice. Jonas can be seen as an updated revisitation of a protagonist of early 21st century cinema such as *Donnie Darko*, which also belongs to the category of “puzzle films.”[391] Peter Mathews points out in relation to Donnie Darko that “plagued by apocalyptic visions” he “travels back in time in order to die, and thus undo the terrible events that occur,”[392] a comment that resonates with Jonas’s own experience in the show. However, unlike in *Donnie Darko*, in *Dark* the action of undoing the events leading to the apocalypse is positioned within a collective experience of trauma, informed by the constant and semi-hidden presence of the nuclear power plant, which brings about a ultimate reconciliation which not only entails the sacrifice of the main characters, namely Jonas and Martha, but also of those connected with them. In this way, this first scene, involving Jonas waking up from a perceived nightmare, can be read through the lenses of the last scene of the episode *The Paradise*, in *Dark*’s third season.

[390] The original dialogue is: “Jede Reise hat einen Anfang. Aber deine hat kein Ende. Sie besteht auf immer fort”. It occurs at min. [00:01:00-00:01:19], in Odar and Friese, ‘The Paradise’, *Dark 3*.
[391] Miklós Kiss, and Steven Willemsen, *Impossible Puzzle Films: A Cognitive Approach to Contemporary Complex Cinema* (Edinburgh, [Scotland]: Edinburgh University Press, 2017), p.10. Ebook Central ebook.
[392] Peter Mathews, ‘Spinoza's Stone: The Logic of "Donnie Darko"’, *Post Script*, 25.1 (2005), 38–48 (p.38) <https://www.proquest.com/scholarly-journals/spinozas-stone-logic-donnie-darko/docview/2142319/se-2?accountid=13828> [accessed 26 February 2024].

In the final minutes (01:03:55 - 01:08:14) of the last episode of *Dark*,[393] a familiar shot introduces the closing sequence. This establishing shot discloses the context where the sequence will play out, revealing a location which appears to be the same as in the sequence commented above in this chapter: the exterior of a family house surrounded by trees and a lawn. Yet, on this occasion, it is nighttime and there is a thunderstorm outside. The lights inside the house are turned on on the ground floor. This detail circumscribes the area where the action will be taking place. The manifold clues scattered throughout this shot can be read, from the outset, as anticipating the presentation of a new fictional universe displayed in the series' final sequence. This first static shot is followed by a close-up of a picture exhibiting three people: a young woman, an older woman and a man, a signifier which determines to whom the house in question belongs. As the camera cuts into an extreme close-up of this family picture, it is possible to hear the sound of music playing and the distinct noise of friendly chatting among people which occupy the same diegetic space. This background activity foreshadows the scenes to come, in which six people, two men and four women, are preparing to partake in a meal at a dinner party. While these friends converse amicably, a loud thunder, assumingly, causes a power cut in the house. At first, the characters react to this sudden event nervously, as they appear at once scared and amused by the lights going off, with someone wondering: "Is this the apocalypse?"[394] Subsequently, they stand up one after the other to look for some candles. Only one character, Hannah, holds her place at the dinner table. Her face, illuminated by lightning, is almost frozen as she stares at a yellow raincoat positioned on the backrest of a chair before her. Unlike Jonas in the sequence explored above, Hannah's physical reaction is characterised by stillness, whereby the classic qualities associated with panic, as seen earlier in this chapter, are absent. Employing Cavarero's categories once more, Hannah displays some of the symptoms typical of horror, as if she had fallen prey to it. According to Cavarero:

> In horror there is no instinctive movement of flight in order to survive, much less the contagious turmoil of panic. Rather, movement is blocked in total paralysis, and each victim is affected on its own. Gripped by revulsion in the face of a form of violence that appears more inadmissible than death, the body reacts as if nailed to the spot, hairs standing on end.[395]

Prompted by her friends, who attempt to bring her back from this seeming state of paralysis, Hannah utters the following words: "I'm not sure. I think I just had a déjà vu or something. This is going to sound utterly absurd, but… what happened now, last night… that's what I dreamt

[393] Odar and Friese, 'The Paradise', *Dark 3*.
[394] Odar and Friese, 'The Paradise', *Dark 3*, min. [01:05:00]. Translation from: "Ist das die Apokalypse?"
[395] Cavarero, *Horrorism*, pp.7-8.

about."[396] Hannah notices that the phenomena preceding and following the power outage (the thunder, the flickering of the lights, the subsequent darkness, an in-text reminiscence of what happened in the first episode of *Dark* before Mikkel Nielsen's disappearance[397] were the same she experienced in a dream she had the night before, and which, by her own admission, she discerns, rather, as déjà vu. In her dream, these signals anticipated the end of the world, since she claims: "And somehow, the world had ended."[398] This apocalyptic scenario, which is presented as a figment of Hannah's imagination, is imbued with sublime connotations, which I will return to in the following section - for the time being, however, I shall conclude the discourse around the structure of Dark based on repetition initiated earlier in this chapter.

Hannah's dream appears towards the end of the series, and it constitutes the last piece of a puzzle which takes the shape of a circular structure. In the opening of the scene described above in this chapter, Jonas springs up from his bed, in a frantic act of awakening from a nightmare. This sequence is repeated numerous times in the series, yet its evolution presents, each time, a variation. Accordingly, the same static shot of the exterior part of the house is a recurrent element which intimates a shift in narrative, by introducing multiple set-ups. This shift enables connections between different sequences and episodes of the show. As such, the scene where Hannah reveals her dream to her friends and the scene in which Jonas awakes from a nightmare are the extreme ends of the same narrative continuum, which intimates the hypothesis for which Jonas had been awakening from the same nightmare which Hannah is recalling. In support of this thesis and of the connection between Hannah and Jonas in this instance, it is worth stressing that there are two elements which trigger Hannah's déjà vu: the incoming darkness caused by the thunderstorm, and the yellow coat, which is an iconic garment worn by Jonas over the course of the three series, and which is also donned by fellow time-travellers throughout the show. The yellow of the coat, moreover, is a linking point between the travellers and the nuclear power plant, since, as Silos Robas notices: "the yellow of the time travellers' coat also has symbolic value in that it is mirrored in the yellow radioactive barrels and protective garments in the nuclear plant, the source of the energy that makes time travel in the series possible."[399]

[396] Odar and Friese, 'The Paradise', *Dark 3.*, min. [01:05:25 - 01:05:42]. Translated from: "Ich hatte gerade ein Déjà-vu oder so was. Das hört sich jetzt vollkommen absurd an, aber… Ich hab' genau das hier letzte Nacht geträumt."
[397] Odar and Friese, 'Secrets', *Dark 1.*
[398] Odar and Friese, 'The Paradise', *Dark 3*, min. [01:05:58]. Translated from: "Und irgendwie war die Welt zu Ende."
[399] Silos Ribas, 'Looking into the Abyss', p.266.

This act of awakening is characterised by repetition and distinction. Drawing upon Lacan, Caruth suggests that: "As an act, the awakening is thus not an understanding but a transmission, the performance of an act of awakening that contains within it its own difference."[400] Difference is, therefore, intrinsic to the notion of repetition in trauma. Repetition, Caruth continues, directly quoting Lacan, "demands the new."[401] Hannah's and Jonas's traumas overlap in this final sequence and are ideally put in communication with one another. However, while Jonas awakens from a sense of dread and anguish, he is not capable of unpacking, Hannah is hit by the revelation of a nightmare which does not belong only to her, but also to a child who was hers in another parallel dimension, and of which, it is suggested by this episode, she is pregnant in this reality. Returning to the idea of apocalypse, and the complex meaning it assumes within the show, there are two elements at play in this context: one which relates to the apocalypse as revelation, and the other which signals the characters' search for the truth. As Derrida remarks in *Memoirs of the Blind*: "As its name indicates the *apocalypse* is nothing other than a revelation or a laying bare, an unveiling that renders visible, the truth of the truth: light that shows itself, as and by itself."[402] As such, the apocalypse in *Dark* is used to recall, on the one hand, the total destruction of Winden occurring throughout the show, and, on the other, to allow the characters to reckon with a moment of truth about their own identity and condition, as the one experienced by Jonas and Martha before their ultimate disappearance, or by Hannah through her déjà vu. Hannah is, thus, keen to share this revelation, this knowledge both old and new with her friends, by telling a story. Caruth expounds the act of sharing one's trauma with others thus:

> The implications of such a transmission will only be fully grasped, I think, when we come to understand how, through the act of survival, the repeated failure to have seen in time – in itself a pure repetition compulsion, a repeated nightmare – can be transformed into the imperative of a speaking that awakens others.[403]

Hannah is awakening for the first time to the acknowledgement of what has (not) happened, namely the apocalypse, which was avoided through Jonas sacrificing his own existence, and she is recalling this non-event through a dream. As such, she is the witness of an apocalypse which

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This associative process is also true for another symbol characterising the show: the triquetra, which signals the intersection of three parallel worlds. This symbol, however, is also reminiscent of the international radiation symbol, represented by a trefoil with a small circle in its centre.

[400] Caruth, *Unclaimed Experience*, pp. 106-107.

[401] Ibid., p.107.

[402] Jacques Derrida, Musée du Louvre, and Musée Napoléon, *Memoirs of the Blind: the Self-Portrait and Other Ruins*, trans. by. Pascale-Anne Brault and Michael Naas (Chicago: University of Chicago Press, 1993), pp.121-122.

[403] Caruth, *Unclaimed Experience*, p.108.

has occurred only in dream, and whose potential for destruction is strictly linked to the role that humanity plays in preserving the future of the world.

Ouroboros, Cyclicality and the Denial of History

The act of involving humanity's responsibility in avoiding total destruction, is tantamount to the concept of the atom bomb and its societal, transformative role. As outlined earlier in this section, Hales depicts the atomic phenomenon as "a process that pressed the atom bomb away from human responsibility."[404] *Dark* re-appropriates this responsibility. In the show, the origin of the loop is identified by the invention of time-travel on behalf of a grieving father, Tannhaus, who loses his son and daughter-in-law in a car accident during a storm. The repetition of the symbolism entailed by the atmospheric condition of the storm, an element of the natural sublime per se,[405] is crucial to disentangle the labyrinth of aesthetic and meaning in the show up to its conclusion. As observed earlier in this chapter, it is through the thunderstorm that the memory of the apocalypse resurfaces in Hannah's mind. After evoking the apocalypse through the retelling of Hannah's dream, the friends sitting around the table make a toast to a "world without Winden."[406] But, as the lights in the room return, Hannah's partner quickly observes: "It looks like Winden doesn't want to just disappear."[407] This dialogue signals a clear reference to the disappearance of the former reality, and the reinstated origin world, insofar as it implies that a version of Winden has vanished to allow the reality before the invention of time-travel to be restored, but it also mirrors the uncanny disappearances which punctuate the series. Moreover, at the question of what name they have decided to give to the child she is bearing, Hannah replies that she believes that "I think Jonas is a beautiful name."[408] By implying that the name of Hannah's unborn child will be the same as the protagonist of the show, whose sacrifice saved Winden from the apocalypse, *Dark* circles back to the idea of the loop. This enigmatic final line, in fact, alludes to the ritual cycle of death and rebirth, evoked by the figure of the ouroboros returning regularly throughout the series. As suggested above, the ouroboros "refers to the mystery of cyclical time, which flows back into

[404] Hales, *Atomic Sublime*, p.10.
[405] Brady, *The Sublime in Modern Philosophy*, p.53.
[406] Odar and Friese, 'The Paradise', *Dark 3*, min. [01:07:31]. Translated from: "Eine Welt ohne Winden."
[407] Odar and Friese, 'The Paradise,' *Dark 3*, min. [01:07:43]. Translated from: "Sieht so aus, als ob Winden nicht so einfach gehen will.
[408] Odar and Friese, 'The Paradise,' *Dark 3*, min. [01:08:14]. Translated from: "Ich glaube, ich finde Jonas einen schönen Namen."

itself" and it is symbolised by a "tail-biting snake."[409] This idea of time, associated with Egyptian origin myths and cosmogony,[410] "enables renewal, repetition, and regeneration."[411] In this respect, drawing on Mircea Eliade's *The Myth of the Eternal Return* and on Assman's definition of the cyclicality relative to the creation of the sun in Egyptian mythology, Pape notices that there is a severe disruption between one cycle and another, which means that the relationship between the different cycles is of discontinuity rather than continuity[412]. Pape observes that, in this way:

> The world's successive cycles do not produce or feed into each other. Each cycle constitutes a new cosmic beginning. This points to an important characteristic of cyclical notions of time: their implicit suspension or denial of history.[413]

This "implicit suspension or denial of history" is, therefore, symbolised by the figure of the loop as a serpent biting its own tail. As will be further explored in Chapter IV, the snake assumes a central symbolic power in an ambivalent way. In fact, on the one hand it evokes processes of cyclicality at the heart of nuclear technologies, and the eternal loop of creation of nuclear energy and eternal destruction of radioactive waste; on the other hand, the serpent stands for the interruption of these repetitive processes, and, insofar as it appears in the non-fiction film *Burial* as a-symbolic, living and breathing non-human animal, it becomes an allegory of resistance and re-appropriation of a sense of becoming, which the cyclicality of rituals annuls.

In this sense, this "implicit suspension or denial of history" can be applied to texts structured through cyclicality and repetition like *Dark*, and this aspect creates a critical lens through which to interpret the last scene of the show. As Anna Batori points out, discontinuity is part and parcel of *Dark*'s aesthetic and narrative values, since "The various temporal and spatial dimensions of the series not only transcend time and space via atemporal and spatial storytelling jumps, but it creates a map of inconsistencies of double discontinuity."[414] The categories of discontinuity and continuity have been explored above in this chapter in relation to the status of disappeared assumed by some characters in *Dark*. The vanishing of some children, in fact, produces a disorder of time and space, for which present and past overlap in an uncanny way and in which the past "is both continuous with the present and discontinuous from it; which simultaneously is and is

[409] Assmann, 'Ouroboros', p.27.
[410] Assmann, 'Ouroboros,' p.21.
[411] Assmann, 'Ouroboros,' p.27.
[412] Pape, Toni, '#Cycles', p.7.
[413] Ibid., p.7.
[414] Batori, '"Everything is Connected"', p.2.

not."[415] This idea will be further examined in Chapter III in relation to *Dark* and the notion of the palimpsest. Here, I will argue how space engages in the complex dynamics of memory and the nuclear uncanny, establishing a continuous and discontinuous relationship between past and present, while also bringing together diverse histories and narratives on an aesthetic level. Similarly to the condition of the disappeared highlighted by Domanska, Silverman contends that the palimpsest "institutes a notion of memory as the haunting of the present and an uncanny superimposition of the visible and the invisible [...] in which the present is always contaminated by multiple elsewheres."[416] If the status of the disappeared promotes *Dark*'s uncanny relationship between past and present, while the series is also a palimpsest in which multiple histories conflate, this temporal discontinuity is connected closely to a German malaise which underpin its vision with history. In fact, Batori argues that this structural discontinuity is the expression of "a nation's stuckness in history."[417] According to her, the series is informed by a notion of cyclicality and Nietzschean eternal return which produces the effect of inescapability from the constant repetition of history. As she states:

> The series offers no way out of the burden of the past and suggests that, because time is not linear and, following the idea of the Nietzschean eternal return, everything lives in a connected circle of events, the events of the past cannot be altered. In this way, the characters drift in a floating state (*Schwebezustand*), an in-between state of their (unknown and often fearful) identity.[418]

Batori points out that *Dark*'s structural repetition is a renegotiation of the same stasis detected in postmodernist narrative by Friederic Jameson, resulting in "a new crisis of historicity and memory."[419] Jameson identifies this crisis as "the very failure of the "then" - that of future narratives - that could give a new identity to the "now," the becoming of history" and enables nostalgic aesthetics and narratives.[420] To a certain degree, *Dark* engages in a consumerist notion of nostalgia which broadly fits into Jameson's idea of "nostalgia films."[421] As Jameson observes:

> Nostalgia films restructure the whole issue of pastiche and project it onto a collective and social level, where the desperate attempt to appropriate a missing past is now refracted through the iron law of fashion change and the emergent ideology of the generation.[422]

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[415] Domanska, 'Toward the Archaeontology', p.404.
[416] Silverman, *Palimpsestic Memory*, p.5.
[417] Batori, '"Everything is Connected"', p.10.
[418] Ibid., p.5.
[419] Ibid., p.3.
[420] Ibid., p.3.
[421] Fredric Jameson, *Postmodernism, or, The Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991), p.19 Ebook Central ebook.
[422] Jameson, *Postmodernism*, p.19.

Jameson suggests that films drawing on a nostalgic revisitation of the past are devoid of an active and deep relationship with history; rather, their aim is to channel "'pastness' by the glossy qualities of the image", filtering it through the dictates of fashion,[423] whereby "the history of aesthetic styles displaces "real" history."[424] The result of this operation is, therefore, that the past reappears in the present emptied of historical meaning, while it also hegemonises the present through fragments of aesthetic memory, thus enacting an "insensible colonisation of the present by the nostalgia mode."[425] This aspect resonates with what Silos Ribas maintains in relation to *Dark* and the saturation of objects, particularly from the 1980's, characterising the series: "*Dark* [...] re-creates a "make-believe land of the 1980's," with iconic cultural products that could easily be recognised anywhere, and which support a certain "cultural proximity" (Straubhaar) or cultural nostalgia for Netflix consumers."[426]

However, this fragmentary, cyclical vision of the past in *Dark* is germane to the nuclear theme at the core of the series. In fact, this conception of the past vis-á-vis the present stresses the fact that nuclear technologies, manifested through the icon of the atomic bomb and the nuclear power plant, are rendered a-historical through their sublime reification, which separates them from the history of destruction and violence they embody, while also creating symbolic affinities with nature and its cyclical rhythms. As mentioned above in this chapter, for Hales the atomic bomb, both spectacular and common, becomes a "natural, a fundamental, even a necessary aspect of everyday life", while also being "a man-made marvel of nature."[427] The atom bomb undergoes, therefore, the same process of aestheticisation noticed in respect to the notion of nostalgia articulated by Jameson, and which emerges in *Dark*. As an empty and bombastic fragment of the past, the atomic bomb in the show colonises the present with its constant threat, while also being placed in discontinuity with history through the production and reversion of its explosion. As argued above in this chapter, the series deconstructs the iconography of the atomic bomb, mapping out an ideal shift from conceptions of the nuclear sublime to a world aesthetically dominated by the nuclear uncanny, whereby fear is generated by an invisible threat colonising everyday life. However, the two notions establish a relationship of both continuity and discontinuity, by coexisting in the same aesthetic space, and, at the same time, renegotiating their significance within the show.

[423] Ibid., p.19.
[424] Ibid., p.20.
[425] Jameson, *Postmodernism*, p.20.
[426] Silos Ribas, 'Looking into the Abyss', p.270.
[427] Hales, *Atomic Sublime*, p.10.

In this sense, the ending of *Dark*, in which a reconciled origin world signals a breaking point from the former parallel realities, therefore showcasing this discontinuity, also hints at a subtle connection between these two disconnected spheres via the figure of Jonas and Hannah's dream of the apocalypse. This is why Hannah's announcement of the name of her unborn child displays an ambivalent status, insofar as it implies a potential interference of the vanished alternative reality in the present of the show, while also evoking the apocalyptic events narrated through her dream. Furthermore, the repetition of the name Jonas refers back to the notion of the uncanny via Hannah's pregnancy, therefore creating a discontinuous genealogical tree, which links the present of the show with its past. Returning to what Freud observes as generative of the uncanny, the repetition of "the same names" feeds into this liminal feeling denoting what is familiar and unfamiliar at once.[428] Furthermore, as Masco notices, in the uncanny, "This psychic slippage is, for Freud, always a return to something repressed, a repetition that ultimately is tied to castration anxiety and the urge to return to that ultimate experience of "home" - the womb."[429] Through a complex strategy of disappearance and reappearance, death and rebirth, the show casts the story of this uncanny, rather than sublime, return, which also implies the reinstatement of an original reality unspoiled by nuclear energy. As stated above, this idea of return is suffused with ambiguity. In fact, since *Dark* is a show about uncanny anticipations, it is not clear if Hannah's pregnancy signals a new reality following Jonas's ultimate sacrifice, or if it is the prelude of Jonas's story, and, as such, the origin of a future apocalypse which he will have to avoid all over again. In this sense, Hanna's dream of the apocalypse identifies that moment addressed by Saint-Amour of "eerie suspension" in which two contrasting options potentially leading to either total destruction or salvation are still possible.[430]

Reversing Total Destruction: The Role of Cinders in *Dark*'s Final Episode

Ultimately, in the show both the atomic sublime and the nuclear uncanny contribute to the aesthetics of invisibility of the nuclear phenomenon. As argued so far in this chapter, through the notion of the atomic sublime, the nuclear explosion and the nuclear power plant are perceived as

[428] Freud, *The Uncanny*, p.86.
[429] Masco, *Nuclear Borderlands*, p.28.
[430] Saint-Amour, 'Bombing and the Symptom', p.60.

indistinguishable from nature, as well as being framed as harmless and benign, but also evoking feelings of awe and terror. In this way the occurrence of an explosion and the same structure of the plant are mythicised through a process of cyclical ritualisation of life and death performed by the characters of the show. The latter, in fact, decide for the destiny either of preservation or annihilation of humanity in a quasi-religious fashion, which echoes the divine perception of power acquired by nations through the invention of the nuclear bomb. Describing the sense of invincibility generated by this deadly technology following its employment in Hiroshima and Nagasaki, Gabrielle Schwab observes:

> As psychoanalyst Edward Glover has already warned in 1946, Hiroshima and Nagasaki have actualised the most extreme fantasies of world destruction, thus establishing a psychic - if - not psychotic - breach - in the boundaries between reality and fantasy, feeding into totalitarian fantasies of omnipotent power as well as, and paradoxically, immortality: "We will outlive them all!"[431]

This idea of "totalitarian fantasies of omnipotent power" post-Hiroshima and Nagasaki outlined by Edward Glover is enacted by the characters in *Dark*. By creating two opposite factions led by Adam, Jonas's future self, and Eva, namely an elderly version of Martha, an inter-dimensional loop is generated for which Adams's fantasy of total destruction is reversed by Eva's attempt to save the world from the apocalypse.[432] In this way, the characters cause the apocalypse and outlive it at once, assuming a de facto status of immortality. However, as the ending of the show intimates, the sublime rituality attached to the apocalypse terminates through the demise of *Dark*'s protagonists. This death does not exclude a future return of the repressed, that is the apocalypse, but, at the same time, signals the factual termination of the cyclical occurrence of the explosion. In this way, *Dark* renegotiates the blind and repetitive actualisation of apocalyptic fantasies with the emotions generated by the nuclear uncanny. Emerging from the house, the nuclear uncanny in *Dark* generates a fear for which the apocalypse is "kept under control" (Vidler) within the (un)familiar boundaries of the dream.

[431] Schwab, *Radioactive Ghosts*, p.22.

[432] This structure seems to reproduce Schwab's theory according to which men and women have an opposite vision of life and death in relation to atomic destruction. Schwab articulates this aspect thus: "Draw-ing on Michel Carrouges's concept of the "bachelor's machine," I analyse male fantasies of the Bomb as a sublime object of male reproduction. The bachelor machine emerges in these fantasies as a nuclear war machine that heralds the triumph of masculine technology over both nature and the feminine. By contrast, women's antinuclear activism embraces a radically different politics of reproduction, stressing a politics of survival and responsibility for future generations in opposition to the reigning hypermasculinist militarism." This speculation is corroborated by the fact that, as observed above in this chapter, Martha is framed as an activist, and stands in clear opposition to nuclear technology. In Schwab, *Radioactive Ghosts*, p..xviii.

Despite the fact that the series keep the possibility for a return of an apocalypse open, it is also true that Jonas's and Martha's ultimate sacrifice, costing them their own existence, concludes the infinite cycle of suffering and trauma which they and their community experience, and puts on hold the prospect of an apocalypse, at least for the time being. By finding the origin of the loop, they stop Tannhaus's family from having a car accident, and they save Winden from absolute annihilation. In this sense *Dark* draws on the tension between two different kinds of incineration. The first type of incineration indicates the complete destruction of "the library" through an act of burning discussed earlier in this chapter, which Derrida indicates as the most extreme consequence resulting from the total obliteration brought about by a nuclear apocalypse. In *No Apocalypse Not Now*, Derrida defines a "total nuclear war" as a "non-event," namely something that "has never occurred, itself", but only as a "hypothesis," a "fantasy, or a phantasm", as well as a "speculation, even a fabulous speculation."[433] The apocalypse in *Dark* draws on this paradox in two ways: insofar as the show is a product of fiction, it speculates about the "non-event" of complete annihilation; at the same time, the self-sufficient fictional universe created by the show reflects on this total destruction as something that "has never occurred" if not as a "fantasy", or a dream, leaving the viewer to deal with the sibylline question Derrida poses himself related to the final global outbreak of an atomic war: "Who can swear that our unconscious is not expecting it? dreaming of it? desiring it?"[434] After all, in describing her dream, Hannah states: "And the weird thing is that it felt really good, for everything to be over." This also resonates with Adam's blind desire of total destruction in the series. In Episode 6 of *Dark*'s third season, Adam admits to a version of Martha, which he keeps captive in a cage situated in the cave system: "I have finally realised what paradise really is. Eternal darkness, in which nothing exists. But for that the apocalypse must happen, in my world and in yours."[435] In this sense, the two ideas of total destruction are specular and reproposed on a narrative level until the conclusion of the show. The second type of incineration, on the other hand, is connected with Jonas's and Martha's sacrifice, and conceptually linked with the idea of cinders developed by Derrida as both "catastrophe and benediction."[436]

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[433] Jacques Derrida, 'No Apocalypse, Not Now (Full Speed Ahead, Seven Missiles, Seven Missives)', *Diacritics*, trans. by. Catherine Porter, and Philip Lewis, 14.2 (1984), 20–31 (p.23) <https://doi.org/10.2307/464756>.

[434] Derrida, 'No Apocalypse, Not Now,', p.23.

[435] Odar and Friese, 'Light and Shadow', *Dark 3*, <https://www.netflix.com/watch/81183530?trackId=14170286> [accessed 26 February 2024]. Original title: "Licht und Schatten". The dialogue takes place at min.: [00:10:40]. Translated from: "Ich habe endlich begriffen, was das Paradies wirklich ist. Unendliche Dunkelheit, in der nichts existiert. Aber dafür muss die Apokalypse passieren. In meiner Welt und in deiner."

[436] Derrida, *Points*, p.207.

The image evoked by the first scene of episode I of Dark's final season, and mentioned above in this chapter, where the Unknown burns down the travellers' headquarters, its books and artwork echo the large-scale destruction which an apocalyptic event might bring about in a Derridean sense. Significantly, as Silos Ribas notices, the Unknown not only is "a representation of the two worlds being united and eternally recurrent", and as such attached to the symbolism of the "infinity loop,"[437] but he is also conceptually linked to the destruction potentially caused by the nuclear power plant. In this sense, Silos Ribas suggests: "Just as nuclear fallout poses a threat to the world, the fallout of Martha and Jonas's relationship - the Unknown - has the potential to become a destructive force for all involved."[438] Crucially, this scene can be read in parallel with the last scene in the episode *The Paradise* showing Martha and Jonas in the origin world, after they stop Tannahus's family from having a car accident, and therefore avoid the occurrence of the apocalypse. As such, these two scenes, positioned at the beginning and the end of the series respectively, narrate two opposite stories of incineration.

Derrida points out that while an individual death is reckoned with through a symbolic and, on some occasions, collective work of mourning, which "can be assumed symbolically by a culture and a social memory", utter nuclear destruction "would irreversibly destroy the entire archive and all symbolic capacity", and lead to the "absolute effacement of any possible trace."[439] Derrida explains:

> The only referent that is absolutely real is thus of the scope and dimension of an absolute nuclear catastrophe that would irreversibly destroy the entire archive and all symbolic capacity, would destroy the "movement of survival," what I call "survivance," at the very heart of life. This absolute referent of all possible literature is on a par with the absolute effacement of any possible trace.[440]

Derrida, therefore, warns that a potential nuclear catastrophe could produce the "remainderless and a-symbolic destruction of literature", without which mourning, or memory would be possible.[441] Returning to the non-weapons expert's perspective channelled by Masco, the idea of a "temporal-technological progress" linked to a global nuclear war privileges a conception of

[437] Silos Ribas, 'Looking into the Abyss', p.264.
[438] Ibid., p.266.
[439] Derrida, *No Apocalypse, Not Now*, p.28.
[440] Ibid., p.28.
[441] Ibid., p.28.

progress as technology,[442] rather than what Derrida refers to as "not humanity but the humanities, history, literature, languages, philology, the social sciences."[443] This is why the scene taking place in the underground lair assumes such a symbolic power in relation to the concept of total nuclear destruction, and of an incineration which would imply "the absolute effacement of any possible trace."[444]

On the other hand, the kind of incineration Jonas and Martha experience in *The Paradise* is of the order of the Derridean cinder. Their action of sacrifice, in fact, implicates another kind of sacrifice, which is the one of their existences, not only in terms of death, but of non-existence. In fact, the restoration of the origin world, as mentioned above in this chapter, means that the characters, including Martha and Jonas, will not be born at all. In a poetic image in which their bodies slowly become stardust, and in which the temporal reversal affects them materially, leading to their corporeal disappearance, the aesthetic quality of their vanishing acquires the conceptual meaning of cinders. According to Derrida:

> Ashes or cinders are obviously traces - in general, the first figure of the trace one thinks of is that of the step, along a path, the step that leaves a footprint, a trace, or a vestige; but "cinder" renders better what I meant to say with the name of trace, namely, something that remains without remaining, which is neither present nor absent, which destroys itself, which is totally consumed, which is a remainder without remainder. That is, something which is not.[445]

Martha's and Jonas's existence testify to this absolute destruction which leads to "non-memory." The series has been read through the lenses of the nuclear uncanny as a phenomenon characterised by repression, which is expressed as both the attitudes of secrecy and deceit at the heart of the family, but also as the repression of the threat of the nuclear apocalypse through the denial of the potential dangers stemming from the nuclear power plant. The scene in the first episode of *Dark* explored at the beginning of this chapter implies a certain safety of Winden's nuclear power plant, which is framed as a prophecy of the story to come. But if the series is characterised by the uncanny, and the eternal return of the repressed, embodied by the nuclear explosion, Derrida points out that:

> Cinders is the destruction of memory itself; it is an absolutely radical forgetting, not only forgetting in the sense of the philosophy of consciousness; it is even forgetting in the economy of the unconscious by repression. Repression is not

[442] Masco, *The Nuclear Borderlands*, p.44.
[443] Derrida, *No Apocalypse, Not Now*, p.22.
[444] Ibid., p.28.
[445] Derrida, *Points*, p.209.

> forgetting. Repression keeps the memory. Cinders, however, is an absolute non-memory, so to speak.[446]

Therefore, this scene of *Dark* symbolises the end of the repression, whereby what was hidden until that moment has been confronted, thus becoming "an absolute non-memory" at the level of the origin world. This is demonstrated by the fact that in the last scene of the episode, Hannah and her friend do not show any sense of memory towards what occurred in the alternate worlds. However, differently from what the total destruction of nuclear war would entail according to Derrida, namely "the effacement of any possible trace", something remains in cinders, which is the material proof of that non-memory, of the trace as non-memory, which, according to Derrida, is germane to every experience of mourning. As Dooley and Kavanagh observe:

> If memory testifies to the fact that we can never fully recollect the past, then mourning affirms that we are never finished with the past: that the task of comprehending the past always lies ahead of us.[447]

The non-memory of Jonas which Hannah has in the origin world can be understood as a working of mourning, as something that remains out of the total destruction of memory by cinders. This means that, in spite of the erasure of time, achieved through the destruction of alternate temporalities in *Dark*, there is a trace which might still survive the experience of the cinders if a total nuclear destruction is avoided.

Within the nuclear context, this idea of non-memory is also channelled through the speculation of "undoing" the past and, with it, forgetting deadly inventions. *Dark* challenges the idea that nuclear technologies are once and for all, that their same identity is interchangeable with the natural environment, that their same existence cannot be contested and opposed to. Ele Carpenter, for example, challenges the idea of the nuclear as "a fact of nature."[448] Carpenter argues that nuclear technology could advance unchallenged because of a science-based argument aimed at upholding and justifying its function within a broader societal context. Drawing upon the fields of social construction of technology (SCOT) and the sociology of scientific knowledge (SSK), for which, as MacKenzie & Zimmerman point out, "technical choices have strategic consequences,"[449] Donald MacKenzie and Graham Spinardi propound an alternative and less deterministic vision of technology to the mainstream, according to which principles like "universality and context independence […] are not to be taken as given but must be analysed as

[446] Derrida, ***Points***…, p.208-209.
[447] Dooley and Kavanagh, *The Philosophy of Derrida*, p.8.
[448] Carpenter, 'Shifting the Nuclear Imaginary', p.121.
[449] MacKenzie, and Zimmerman, 'Inventing accuracy, p.102.

precarious achievements."[450] In this context, MacKenzie and Spinardi introduce the concept of "tacit knowledge", namely an implicit knowledge embedded in people, not recorded into more concrete outputs, whether they be words or diagrams, and which "cannot effectively be stored or transferred entirely by impersonal means."[451] It is their belief that "tacit knowledge" should be woven into science-based methods; for, in this way, "relevant knowledge" could be "unlearned," thereby allowing nuclear weapons to be "uninvented."[452] Ele Carpenter expounds on this idea, observing that the perception of nuclear as "a fact of nature,"[453] obstructs tacit knowledge from contributing to the conversation explicitly. By the same token, "modernity as progress and mastery" seems to be insufficient to address the political and global complexity of the Cold War and its relation to the legacies of nuclear technology.[454] As stated by Carpenter:

> From the 'traditional' science point of view, in the nuclear context, the notion of mastery (military, technological, environmental) relies upon the subordination of belief to knowledge and conceals dependence on tacit knowledge: the socially constructed domain of the nuclear is represented instead as a fact of nature, unalterable and inevitably just the way things are.[455]

Jonas and Martha, involved in an ethical quest, challenge this "state of nature" and implement the principle according to which technology, particularly if destructive, transgenerationally traumatic and which can cancel every and each organised trace of humanity from earth, can be "uninvented."

Eva Horn points out that the image of society where humanity has ceased to exist dominates fictional realms.[456] In a similar way, Saint-Amour reflects on Susan Sontag's observation according to which "the science fiction film [...] is concerned with the aesthetic of destruction, with the peculiar beauties to be found in wreaking havoc, making a mess."[457] According to Sontag, however, this aesthetic conceals a more profound issue overshadowed by these spectacular representations, evoking, instead, "a mass trauma [...] over the use of mass weapons and the possibility of nuclear war. Most of the science fiction films bear witness of this trauma and, in a

[450] MacKenzie, and Spinardi, 'Tacit Knowledge', p.45.
[451] Ibid., p.45.
[452] Ibid., p.47.
[453] Carpenter, 'Shifting the Nuclear Imaginary', p.121.
[454] Ibid., p122.
[455] Ibid., 121.
[456] Horn, *The Future as Catastrophe*, p.2.
[457] Susan Sontag, 'The Imagination of Disaster', in *Notions of Genre* (New York, USA: University of Texas Press, 2021), pp. 186–201 (p.190).

way, attempt to exorcise it."[458] Saint-Amour, however, believes that the compulsive repetition of these images of destruction might be an ineffective way to dodge dealing with trauma, rather than confronting it. As he suggests:

> One might also object that by compulsively repeating a particular scene of traumatic violence, the filmic spectacles of monster-suited men wrecking model cities likely did more to act out than to work through the trauma engendered by the past nuclear bombing of cities, or that induced by the possibility of a future nuclear war.[459]

Dark fits into this cultural imaginary dominated by images of destruction, as well as being the expression of this fictional legacy. However, despite "compulsively repeating a particular scene of traumatic violence," the series also challenges and reverses this idea of destruction, imagining a future where humanity can still exist, as well as unimagining one annihilated by total war. The apocalypse in *Dark* is no longer "a moment of ultimate futurity,"[460] beyond which no future can be projected, and it is not the Derridean 'end time'. The apocalypse is, rather, a rhetorical instrument which allows to dispute the dominance of nuclear technologies, rendering their invisible power and diffusion finally evident, and imagining an alternative to their deadly legacy. The series mediates between individual and collective trauma and survival, proposing an alternative to the nightmare of total nuclear apocalypse.

[458] Sontag, 'The Imagination of Disaster', p.194.
[459] Saint-Amour, 'Bombing and the Symptom', p.61.
[460] Horn, *The Future as Catastrophe*, p.21.

Chapter II: “Impossible de Parler de…”

Knowledge and Witnessing in *Hiroshima Mon Amour* and *La Jetée*

Hiroshima Mon Amour and La Jetée: Colonialism, “Nuclear Universalism” and World War II

Unlike *Dark*, *Hiroshima Mon Amour* and *La Jetée* avoid the representation of the atomic explosion tout court. While they concentrate on the aftermath of the bombing, they also establish continuity and correspondences with other events surrounding and following the atomic attack on Hiroshima, creating relationality with stories and historical aspects apparently unrelated. They also constitute two different and yet interrelated examples of how the invisibility of the nuclear threat, beyond the iconography of immediacy of the atomic explosion, had been anticipated as a representational concern in productions following the destruction of Hiroshima and Nagasaki in the post-war period. *Hiroshima Mon Amour* displays Hiroshima over a decade after the atomic bombing, while *La Jetée* contemplates a future World War III which leaves Paris polluted by radioactivity, forcing its inhabitants to live underground. The aesthetical and conceptual perspective of these texts enables a reading based on the notion of the nuclear uncanny, which also connects with general affects of indifference and numbing punctuating French society in the post-war period.

Before delving into the specifics of this chapter, however, it is worth stressing the complexities underlying these two texts and their exegesis. It is necessary, therefore, to clarify the links between these two films as well as contextualise them historically, in order for me to trace the perimeter within which I situate my argument, also in respect to the thesis as a whole. In both *Hiroshima Mon Amour* and *La Jetée* the nuclear theme is enmeshed in the convoluted structure of the palimpsest, within which the spectre of nuclear war (and Cold War) and its multiple and deadly expressions, namely, for example, nuclear experiments (as will emerge in Chapter III), is

connected with other events punctuating World War II and colonialism. Sandrine Sanos notices that *Hiroshima Mon Amour* is a critical renegotiation of war viewed both through the recent past (World War II and the atomic bombing of Hiroshima) and the involvement of France in the new sanguinary conflict in Algeria (1954-1962), which was still taking place at the time the film was made. Sanos remarks that:

> As France found itself still at war, many started reflecting on the meaning and memory of the Second World War. Filmmaker Alains Resnais and novelist Marguerite Duras believed that this was possible and must be done. Turning to the Second World War, they decided to make a film 'against war' and on 'memory.'[1]

In *La Jetée*, Marker does not limit himself to manifest a general anti-war discourse. The film, instead, interacts directly with the vicissitudes of the Algerian conflict through specific representations of violence taking place in Algeria. This representation is conflated with the horrific experience of the concentration camps and of Hiroshima on an aesthetic level, as will be further considered in this chapter and in Chapter III. In this regard, Max Silverman states that in *La Jetée*: "The references to the Second World War and Hiroshima are clear, but there are also references to the apparatus of torture used in Algeria by the French army."[2] The themes confronted in *Hiroshima Mon Amour*, while clearly evoking War World II in its various and not necessarily mainstream declinations,[3] are influenced by the ongoing Algerian War, which was a concern of both Alain Resnais and Marguerite Duras, whose intention was to emphasise a condition of continuity implicating France in a war that had not finished with the bombing of Hiroshima in 1945. As Sanos further articulates:

> The film's argument that war and violence were not memory but an urgent question would have resonated powerfully in 1959, when viewers could not 'see' the worst of the Algerian War, whether it be torture, bombing or the internment camps that seemed a troubling return to the Second World War.[4]

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[1] Sandrine Sanos, '"My Body was Aflame with His Memory": War, Gender and Colonial Ghosts in Hiroshima mon amour (1959)', *Gender & history*, 28.3 (2016), 728–753 (p.729) < https://doi-org.sheffield.idm.oclc.org/10.1111/1468-0424.12247>.

[2] Silverman, *Palimpsestic Memory,* p.50. The link between torture and the Algerian War of Independence is argued in detail by Matthew Croombs, '"La Jetée" in Historical Time: Torture, Visuality, Displacement', *Cinema Journal*, 56.2 (2017), 25-45 <https://www.jstor.org/stable/44867507> [accessed 26 February 2024]. This will constitute a fundamental part of my reading of *La Jetée* in Chapter III.

[3] This aspect will be further expressed in this chapter through what Azoulay frames as the "overlooked" histories of World War II in Ariella Azoulay, *Potential History: Unlearning Imperialism* (London: Verso, 2019) p.253.

[4] Sanos, '"My Body was Aflame with His Memory"', p.737.

Both Resnais and Marker had been long-term collaborators in a variety of projects. Further to *Les Statues Meurent Aussi*, an essay-film denouncing the repercussions of colonialism via the commodification of African Art, it is worth stressing Marker's contribution to *Nuit and Brouillard*,[5] a documentary on the horror of the concentration camps, which Silverman also reads as "an allegory of the Algerian War".[6] Marker will return to this issue enacting a subtle and piercing critique of the indifference of Parisians about the Algerian War with his 1962 documentary *Le Joli Mai*, directed after *La Jetée*. Croombs identifies *Le Joli Mai* as ideally implementing the aesthetic of torture taking place in Algeria evoked by *La Jetée*, as he claims:

> Yet when returned to the political context of decolonization, the subject of the film Marker released in the following year, *Le Joli Mai* (*The Lovely Month of May*, 1963), it becomes apparent how explicitly these scenes, set in a dungeon "where daylight never enters," resonate with the peculiar discourse and imagery surrounding torture in Algeria.[7]

Finally, Marker participated in the first stages of *Hiroshima Mon Amour*, except he abandoned the project after just ten days.[8] This is to say that both Marker and Resnais were concerned with colonialism, the the atomic bomb (and its employment in Japan), World War II, with a particular focus on the Holocaust, and the Algerian War as complementary, rather than distinct, issues interlacing with one another within the milieu of contemporary France, insofar as informed a sense of continuity in the military and colonial assets of the nation. In this sense, they viewed the Algerian war as the expression of a never-ending status of warfare involving France, and whose critique was aimed at addressing the indifference through which the French population, but also more generally Western society, was regarding this incessant repetition of conflicts, as, ultimately, the expression of colonial ambitions. Indifference was also a response to World War II and the concentration camps, as much as towards the bombing of Hiroshima. Sanos, in fact, points out that in *Hiroshima Mon Amour* Resnais' intention was to "stress French indifference to the Hiroshima bombing."[9]

Putting aside *La Jetée* for a moment, I intend to focus on the contextualisation of *Hiroshima Mon Amour* as a text which fits into the stratified, intertextual and intersectional critique of war(s) present within its complex and nonlinear structure. However, the film also establishes a

[5] Alter writes that "Chris Marker has an uncredited collaboration as both cameraman and script editor on this documentary exposing the horrors of concentration camps." In Alter, *Chris Marker*, p.113.
[6] Silverman, *Palimpsestic Memory,* p.49.
[7] Croombs, '"La Jetée" in Historical Time', p.30.
[8] Guzmán, *Alain Resnais Interview 2,* min. [00:04:10 - 00:04:17].
[9] Sanos, '"My Body was Aflame with His Memory"', p.736.

problematic relation with the conception of war it delivers, and which presents a generalist and universalist representation of human suffering and injustice within the context of the atomic bombing of Hiroshima and Nagasaki. According to Sanos, for example, the anti-war values belonging to the film, while being an essential part of its narrative, are framed as a "universalist humanism that denounces war and violence."[10] Ultimately, however, they risk being perceived as a depoliticised attempt to address the "Algerian War and the memory of the Occupation."[11] For Sanos, the film's universalist approach to the topic of war delivered through an "interracial" love story,[12] adheres to a problematic representation of the *Other*, who, in this instance, is the Japanese protagonist. The film's intention is to remove differences between the characters[13] and, therefore, through a synecdochic transference, France and Japan. While attempting to avoid stereotyping, it instead upholds an idea of cosmopolitanism "recognisable and legible to a Western audience."[14] At the same time, this approach reproduces the dynamics of racial distinction between the two characters by lingering on their physical characteristics and differences, such as, for example, the use of their skin as a "racial marker."[15] Ultimately, Sanos claims that the film's "universalising impulse depoliticised the meaning of war and erased the experiences of suffering that did not fit a French telling",[16] insofar as it reproduces a structural hierarchy which indorses "some suffering bodies over others (often making colonial wars secondary)."[17]

In this context, Sanos links this idea of French "humanist universalism" with the notion of "nuclear universalism" developed by Lisa Yoneyama. Yoneyama defines "nuclear universalism" as follows:

> The idea that Hiroshima's disaster ought to be remembered from the transcendent and anonymous position of humanity, and that the remembering of Hiroshima's tragedy should invoke natural and commonly shared human thoughts, sentiments, and moral attitudes not limited by cultural boundaries, might best be described as "nuclear universalism." Through most of the last half century the politics of Hiroshima memories, and the contradictions and

[10] Sanos, '"My Body was Aflame with His Memory"', p.732.
[11] Ibid., p.731.
[12] Ibid., p.728.
[13] This removal of differences is signalled by Sanos as what Sanos the "film's purported erasure of difference". In Ibid., p.738.
[14] Ibid., p.737.
[15] Ibid., p.738.
[16] Ibid., p.747.
[17] Ibid., p.747.

> slippages it has produced, are at once impelled forward and constrained by this dominant universalist trope of peace and humanity.[18]

For Yoneyama the stratified identity of Hiroshima and Japan has been reduced to a rhetorical frame for which the process of memorialisation based on the atomic bombing of the city, and enacted nationally and transnationally, channels a discourse informed by a "universalist trope of peace and humanity" which has overshadowed the nuances of Japan's past. According to the author, this movement, informed by a "Westcentric" dimension of memory and memorialisation of Hiroshima, flattens out the imperial and colonial history in which Japan was implicated. As Yonemana states: "remembering the atomic destruction of Hiroshima and Nagasaki as events in the history of humanity has significantly contributed to the forgetting of the history of colonialism and racism in the region."[19] In this way, the complexities underlying the politics of memory and forgetting relative to the bombing of Hiroshima generate an "amnesic" attitude to history established alongside the memorialisation process represented by the city's "mnemonic sites."[20] Both this chapter and Chapter III of this thesis will enable a reflection of these sites of memory emerging from *Hiroshima Mon Amour* through the critical perspective of the tension between amnesia and memory, and how they limit the acquisition of knowledge in relation to the atomic bombing. Furthermore, Yoneyama outlines an iconography of peace (which recalls from afar the depoliticised iconography of the atomic bomb discussed in Chapter I) which these sites engender, as she claims: "In this urban imaginary, peace becomes an icon for the harmlessness and the well-being of postwar Japan. Seldom it is a reminder of death, anger, sorrow, or pain, at least in the official cartography of memory."[21] In the introduction of this thesis, it was observed that Hogg views contemporary representations of the nuclear threat as depoliticised, a fact that, therefore, renders the nuclear state invisible. *Hiroshima Mon Amour* is an example of how a text that belongs to the past, and that can be considered as an influential film within a British context, can also be perceived as "depoliticised." However, in this chapter I will consider how, within the broader spectrum of this critique, the characters in the film are traumatic subjects responding to the nuclear threat through affects such as indifference and denial.

Yūko Shibata takes the academic conversation around *Hiroshima Mon Amour* outside of a European and American framework, recontextualising the text and reading it through the frame

[18] Lisa Yoneyama, *Hiroshima Traces: Time, Space, and the Dialectics of Memory* (Berkeley: University of California Press, 1999) p.23-24.
[19] Yoneyama, *Hiroshima Traces*, p.21.
[20] Ibid., p.65.
[21] Ibid., p.65.

of Japanese Studies. Shibata reconfigures the dynamics in which the two characters of the film engage in a relationship haunted by the spectre of Japan's and France's colonial legacies, which informs their status as collaborators in Indochina during the war and complements the most wide-spread interpretation of the film which views Nevers as the site of Vichy-France and Nazi Germany collusion. Shibata maintains that:

> There are other layers that need to be investigated regarding the link between Hiroshima and Nevers. The study of Vichy France has registered an exclusive emphasis on its relationship with Nazi Germany, with little attention given to its relationship with the French territories in Asia. Yet a historical parallel existed between Europe and Asia in Vichy France's cooperation with the Axis powers. When the northern zone of France was occupied by Nazi Germany between 1940 and 1944, French Indochina was also subordinated to the Japanese empire between 1940 and 1945. After the French government concluded an armistice with Germany in June 1940 and established the Pétain regime, the Japanese army was stationed in the northern part of French Indochina in September 1940.[22]

Through this reading of the film outside of a west-centric configuration of peace and memory vis-á-vis Hiroshima, Shibata proposes a version of *Hiroshima Mon Amour* in which both Japan and France, as two imperialist countries, renegotiate their colonial history in Hiroshima, while also reckoning with a shifting global asset informed by the predominance of the United States as new colonial super-power. In the words of Shibata:

> The film narrative foregrounds the historical underpinnings of the film - the wartime collaboration in French Indochina between the two imperial powers. It also indicates the postwar loss of colonies for both, and their relegated positions as subordinates to the United States.[23]

In addition to this reading of *Hiroshima Mon Amour* through the lens of a changing colonial structure characterising post-war global dynamics, Shibata, like Sanos, addresses the politics of representation of the film and the racialised framing of the Japanese protagonist. However, Sanos believes that Duras's and Resnais's depiction of the character was an unsuccessful but benevolent attempt to represent the *other* in the film beyond racist stereotyping, which, nonetheless, leaves the film "haunted by colonial ghosts."[24] Contrarily, Shibata reassesses Duras's racial characterisation of the male character in light of a narrative reproducing a "colonial fantasy", while also echoing a post-war global reconfiguration moving from the domination of colonial forces to the American neo-colonisation. In this way, the divide coloniser/colonised

[22] Shibata, *Producing Hiroshima and Nagasaki*, p.22.
[23] Ibid., p.31.
[24] Sanos, '"My Body was Aflame with His Memory"', p.737.

becomes more nuanced in a film like *Hiroshima Mon Amour*, because the Japanese character is, at once, coloniser and collaborator of the French woman in Indochina during the war, and the racialised other onto which the colonial fantasies of the French woman are projected. The colonial re-elaboration of the power dynamics informing the couple in the film, and the spectre of colonialism which underpins them, is a fundamental reading of *Hiroshima Mon Amour*, which re-positions the film within a historical and global context and considers injustice beyond the divide between victim and perpetrator, in which the complexities and nuances of war re-emerge - and this is, ultimately, one of the aims of this thesis.

Relevant to the structure of this chapter and Chapter III, Shibata also points out that many studies within the "Euro-American" context have prioritised a reading of *Hiroshima Mon Amour* informed by Duras' corpus and production, which eclipses the influence of Resnais's oeuvre on the conception and final meaning of the film. As Shibata claims:

> Since the 1990s, many critics in "Euro-American" studies in North America have honoured the framework set up by Duras in defining the Japanese man as the intrinsic Other of the French woman. They have analysed *Hiroshima Mon amour* through reading Duras' other works in lieu of those of Resnais. As a result, Durasian themes often predominantly capture their attention in interpreting this film.[25]

Despite believing that, ultimately, *Hiroshima Mon Amour* is a film whose final product is the result of a balanced contribution of both writer and director, my intention is to return to Resnais' initial purpose, according to which his desire is to make a film about "French indifference to the Hiroshima bombing."[26] In this sense, the indifference towards the bomb is situated within a palimpsestic structure which mirrors and references the attitude displayed towards other kinds of conflicts, suffering, and injustice featuring in the film, both directly and indirectly. This reading of the film, therefore, will be re-contextualised within a European context, in order to frame *Hiroshima Mon Amour* as a self-reflexive critique of French society and the West, which also touches upon its tendency to ignore and deny the nuclear state and its deadly consequences. In this way, the characters' subjectivities will be viewed as undermined by the nuclear context in which they are situated, as well as being informed by the overwhelming and invisible effects of bombing and radioactivity, provoking what Gabrielle Schwab identifies as a "haunting from within."[27] This aspect does not preclude or is in competition with Shibata's and Sanos's interpretation of the film as

[25] Shibata, *Producing Hiroshima and Nagasaki*, p.27.
[26] Sanos, '"My Body was Aflame with His Memory"', p.736.
[27] Schwab, 'Transgenerational Nuclear Trauma', p.442.

haunted by colonial ghosts, but in this chapter and Chapter III the latter will be seen as complementing "a nuclear colonisation of the mind, which, like all forms of mental colonisation, operates at a largely unconscious level."[28]

Post-Traumatic Nuclear Subjectivities: Indifference, Denial, and Splitting in The Post-Atomic Age

The previous chapter was based upon a speculation of how the nuclear sublime, and the notion of the atomic icon influence and inform the identity of the text.[29] As a complement to the nuclear sublime, and moving from the analysis of nuclear energy (Chapter I) to atomic weaponry (Chapter II), in the following chapter I shall argue how the nuclear uncanny, alongside affects such as indifference, splitting, and numbing constitute the theoretical framework which links *Dark* to *La Jetée* and *Hiroshima Mon Amour*. Within these texts the nuclear uncanny addresses the invisible but overwhelming effects of nuclear bombing at a psycho-physical level. The reverberations of the nuclear phenomenon upon individuals produces what Gabrielle Schwab defines "nuclear subjectivities", namely "affects and emotions, fears and desires, denials and messianic hopes, fantasies and phantasms, all of which aggregate to generate new types of embodiment, subjection."[30] Some of the affects explored by Schwab and related to transgenerational nuclear trauma,[31] which include splitting, numbing, doubling,[32] and denial[33] are conveyed at a linguistic and aesthetic level in the two films, as a consequence of the failure to establish a meaningful emotional and affective engagement with what Hiroshima, and, *mutatis mutandis*, the nuclear event represent. I will read these affects identified by Schwab alongside Catherine Malabou's notions of "coldness and indifference", which characterise what she calls "destructive plasticity" in the context of the formation of post-traumatic subjectivities.[34] According to Malabou, the concept of destructive plasticity:

> Reveals that a power of annihilation hides within the very constitution of identity, a virtual coldness that is not only the fate of the brain injured, schizophrenics,

[28] Schwab, *Radioactive Ghosts*, p.9.
[29] The mushroom cloud is defined by Hales as "a visual icon". In Hales, 'The Atomic Sublime', p.5.
[30] Schwab, *Radioactive Ghosts*, p.3.
[31] Schwab, 'Transgenerational Nuclear Trauma'.
[32] Ibid., p.441.
[33] Ibid., p.445.
[34] Catherine Malabou, *Ontology of the accident: an essay on destructive plasticity*, trans. by. Carolyn P. T. Shread. (Cambridge: Polity, 2012) p.24.

> and serial killers, but is also the signature of a law of abandoning itself, escaping.[35]

Malabou points out that this kind of plasticity is most evident in trauma survivors, whether they have been involved in accidents affecting the individual at a biological level or in political events, and is perceived as "a farewell that occurs within life, just like the indifference to life by which survival sometimes manifests itself."[36] In this way, destructive plasticity generates a being that is other, alienated from their previous identity, whereby the process of "annihilation" affects the psycho-physicality of the subject, and manifests itself as a rupture with the past self, that is a break in temporal continuities.[37]

If brought together, the two concepts of nuclear subjectivities and post-traumatic subjectivities herald a new subject for which a transgenerational nuclear trauma takes the shape of destructive plasticity. Within this, "denial", "self-deception"[38] and ultimately "coldness and indifference"[39] are terms which will be expanded on in this chapter insofar as they qualify the characters in both *Hiroshima Mon Amour* and *La Jetée* as post-traumatic nuclear subjectivities. These characters appear to be detached from their life stories to the point of forgetfulness, while the past is evoked fragmentarily, in "a movement from memorial to amnesiac" as Emma Wilson observes in relation to *Hiroshima Mon Amour*.[40] This detachment and numbness, affecting the characters and informing the relationship they establish with their surroundings is expressed stylistically by Resnais. Julia Dobson suggests that:

> Resnais' use of contrapuntal editing, asynchronous sound and image, an independently mobile camera, smooth sinister tracking and panning shots, use of voice-over and detached delivery of dialogue creates a spectacular formal severity which, through formal distanciation, enhances emotional and ethical impact.[41]

This oxymoronic tension between the opposites, that is memorial/amnesiac, is embodied by the city of Hiroshima to the extent that, as Wilson maintains: "We come to question the relation

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[35] Malabou, *Ontology of the accident*, p.37.
[36] Ibid., p.37-8.
[37] Ibid., p.38.
[38] Schwab, 'Transgenerational Nuclear Trauma', p.439.
[39] Malabou, *Ontology of the accident*, p.59.
[40] Emma Wilson, *Alain Resnais* (Manchester: Manchester University Press, 2006) p.61.
[41] Julia Dobson, 'Vanishing points: Shifting perspectives on The Man Who Sleeps / Un homme qui dort' in Georges Perec's Geographies : Material, Performative and Textual Spaces ed. by Forsdick, Charles, and Richard Phillips, (London: UCL Press, 2019) pp.47-64 <https://doi.org/10.14324/111.9781787354418> p.56-57.

between memorials and the museum aesthetic of Hiroshima as city of peace and the seeming art of forgetting celebrated in its shiny, rebuilt urban spaces."[42] The rebuilt city of Hiroshima, as much as the underground Paris in *La Jetée*, identify landscapes detached from their past by the annihilating potence of the nuclear bombing. These nuclear landscapes, which the post-traumatic nuclear subjectivities represented by the films' characters inhabit, are imbued with the characteristics of the nuclear uncanny, whereby the proximity to the space left by the nuclear annihilation does not produce a knowledge of the event at a rational (but also relational), linguistic level, as I will argue in the first section of this chapter.

The ambiguous relationship with truth and knowledge present in *Hiroshima Mon Amour* and *La Jetée* contributes to the invisibility of nuclear catastrophes and their effect. It does so by utilising a different symbolic referent to the one explored in Chapter I and characterising these two texts. If in the first chapter of this thesis, I dealt with the limits of the icon of the atomic bomb, in this chapter the nuclear index will elucidate the notion of the impossibility of witnessing in a post-war context. Photography is summoned in both texts, and especially in the structure of the film in *La Jetée*, where still frames are edited together; and in the material used by Resnais in *Hiroshima Mon Amour* in the first fifteen minutes of the film. However, Marker and Resnais adopt a critical stance about the role of photography in its connection with truth, knowledge and witnessing, which enable a complex conversation on memory and non-memory and amnesia and memorialisation in the context of the two films, as well as within a post-atomic, Cold War age. In this context, both texts challenge the process of re-mapping and finding a trace of what was left destroyed by the war and epitomised in a final bout of tragedy by the nuclear bombing of Hiroshima.

Hiroshima Mon Amour and La Jetée in Context

"Impossible de Parler de HIROSHIMA": *Hiroshima Mon Amour* and the Illusion of Knowledge

Talking about the inception of *Hiroshima Mon Amour*, Resnais reveals that, after a first encounter with Marguerite Duras, his purpose was to create a film in which "The atomic bomb would be at the back, like that, it would be like something behind the characters, far away, a sort of

[42] Wilson, *Alain Resnais*, p.61.

landscape."[43] Resnais states that, in the film, the atomic bomb should appear "far away" (*au loin*) "in the background" (*dans le fond*), behind the characters (*derrière les personnages*), like "a sort of landscape" (*une espèce de paysage*).[44]

This idea is echoed in the synopsis of the film written by Duras. In the initial sequences, Elle and Lui, the two unnamed protagonists of the film, mirror each other's lines, employing a formula restated several times: "You saw nothing in Hiroshima. Nothing. "[Tu n'as *rien* vu à Hiroshima. Rien]; "I saw everything. Everything." [J'ai *tout* vu. *Tout*.][45] Conjuring up the dialogue between the two characters, Duras observes: "It is impossible to talk about HIROSHIMA. All we can do is to talk about the impossibility of talking about Hiroshima. The knowledge of Hiroshima was framed, a priori, as an epitomic illusion of the spirit."[46] The knowledge of Hiroshima is defined by Duras as an "epitomic illusion of the spirit",[47] and, as such, it cannot be grasped through representation, nor appreciated through passive engagement. In the first 16 minutes of the film, a selection of fragments of Hiroshima, such as the museum, the hospital, the square, the streets of the city, are exhibited. In this section of the film, long shots of buildings and the square are edited next to tracking shots of streets and corridors, punctuated by a convoluted and hectic musical soundtrack composed by Giovanni Fusco, and juxtaposed with the slow, numbing voice of the female character. The function of these shots and the montage is to create a critical frame in which the physical traces of the past, whether they are relics collected after the bombing or monuments to (or sites of) memory, are spotlit as inadequate. In turn, they pin down something as conceptually inexplicable, "unspeakable" (*impossible de parler*),[48] as the bombing of Hiroshima. By the same token, as Emma Wilson points out, as a flâneur, Elle assumes the role of human counterpart to those streets and monuments.[49] She acts as a reminder of the failure of any attempt to interpret

[43] Guzmán, *Alain Resnais Interview 2,* min. [00:08:44-00:08:54]. "La bombe atomique, ce serait dans le fond, comme ça, serait quelque chose qui serait derrière les personnages, au loin comme ça, une espèce de paysage."
[44] Ibid., min. [00:08:44-00:08:54].
[45] Marguerite Duras, *Hiroshima Mon Amour - Scénario et Dialogue.* (Paris: Éditions Gallimard, 2013). iPad Bookstore ebooks p.12.
[46] Duras, *Hiroshima Mon Amour*, p.6. "Impossible de parler de HIROSHIMA. Tout ce qu'on peut faire c'est de parler de l'impossibilité de parler de HIROSHIMA. La connaissance de Hiroshima étant a priori posée comme un leurre exemplaire de l'esprit."
[47] Ibid., p.6.
[48] Ibid., p.6.
[49] "The meandering routes of the city walker, aleatory, lost in his passage through the city, install forgetting as process. To walk is to miss or lack a place. [...] For Certeau, the walker has a knowledge of the city that is as blind as in an erotic encounter. The words are resonant for Resnais: his night walker through the city is a woman, her adoption of the role of *flâneur* (stroller) is transgressive, her encounter with the city glancingly erotic as she recalls the image of the streetwalker. Yet more insistently her encounter is, like that of Certeau's walker, bodily, sensory, blindly corporeal." In Wilson, *Alain Resnais*, p.61.

Hiroshima. As a museum goer, she embodies the inertia through which onlookers skim through the new, kaleidoscopic landscape rebuilt in the wake of the atomic bomb, alongside the paraphernalia associated with it, and garnered in a museum. In this way, neither Elle's intimate physical mapping of the streets of the city, nor the museum's official reframing of artefacts offer an intelligible portrayal of Hiroshima, which still remains impenetrable. This idea is put into words by the female character in the film, Elle, at minute [00:05:04].[50] In an attempt to defend the authenticity of her involvement with the city and the atomic bombing on an emotional level, she claims:

> Four times at the museum in Hiroshima. I saw people walking. People were walking, pensive, past the photographs, the reconstructions, for lack of anything else, past the photographs, the photographs, the reconstructions, for lack of anything else, the explanations, for lack of anything else.[51]

Not only are these lines significant because of their content, but also for the way in which this segment of dialogue is conveyed. From a rhetorical point of view, the third sentence of this extract is characterised by two figures of speech, namely asyndeton and repetition. Malabou dedicates a chapter to Duras' writings in connection to the notion of "ageing before ageing", that is a "possibility'' resulting from "the rhythmic and ontological ambivalence of time."[52] According to Malabou, Duras expresses this quality of time to generate a nonlinear trajectory, which leads the individual "to follow an unmarked, unpredictable track", through a writing style "based entirely on suppressing links and causal connections."[53] It is a stylistic choice that is enabled by the use of the rhetorical figure of asyndeton. Defined by the absence of coordinating, "chronological" and "logical conjunctions" within a sentence, the asyndeton renders the text difficult to comprehend for the spectator, by channelling a sense of disorder and confusion of the character.[54] In the specific case of the excerpt examined above, the sentence starting with "les gens" is devoid of such grammatical connectors.[55] In their place, Duras positions a short utterance reiterated several times, i.e. "faute d'autre chose",[56] and therefore combining the asyndeton with the rhetorical figure

[50] *Hiroshima Mon Amour*, dir. by Alain Resnais.
[51] Duras, *Hiroshima Mon Amour*, p.14. "Quatre fois au musée à Hiroshima. J'ai vu les gens se promener. Les gens se promènent, pensifs, à travers les photographies, les reconstitutions, faute d'autre chose, a travers les photographies, faute d'autre chose, les reconstitutions, faute d'autre chose, les explications, faute d'autre chose."
[52] Malabou, *Ontology of the Accident*, p.55.
[53] Ibid., p.55.
[54] Ibid., p.61-62.
[55] Duras, *Hiroshima Mon Amour*, p.14.
[56] Ibid., p.14.

of the repetition. Malabou remarks that "repetition scatters, disseminates",[57] thus reinforcing that same effect of disorder and confusion already introduced by the asyndeton.

Repetition and asyndeton. The first figure relies on excess, the disproportionate use of a word or expression within the same sentence; the second is an omission, and delineates a sort of selective aphasia, a grammatical and therefore semantic paucity. However, in the extract of dialogue proposed above in this section, the sentence repeated by Elle, "faute d'autre chose",[58] is imbued with excess and scarcity at once. The abundance produced by the repetition is offset by the meaning which these words carry with them, since "faute d'autre chose" can be translated literally as "for lack, in the absence of anything else".[59] Through this formula, the rhetorical excess is used to indicate absence. Furthermore, a third figure of speech, enumeration, through which Elle lists[60] the deluge of items to be found in a museum ("les photographies, les reconstitutions, [...] les explications"[61] offers the superficial, commodified, kitsch illusion which promises to transform each visitor into a witness of the atomic bombing. This excess of commodity which aims to fill the void left by the incompassionate force of the bomb, the "lack of anything else" of which Duras talks about, is rendered, on a rhetorical level, by mixing diverse devices which channel opposite effects, like asyndeton, repetition, and enumeration. Duras employs the same stratagem she devised at the beginning of the dialogue between the two lovers, in the lines mentioned above in this section: "Tu n'as *rien* vu a Hiroshima. Rien."; "J'ai *tout* vu. *Tout.*"[62] Nothing (*rien*) and everything (*tout*), both repeated twice, address how the crowded still life of objects, photographs, explanations fail to counterbalance the abysmal, absolute emptiness ("faute d'autre chose") which followed the bombing of Hiroshima.[63]

Repetition resonates with Resnais's stylistic code. As observed with Duras, Resnais combines diverse rhetorical devices in order to heighten tension between opposites. This effect is created by, for example, juxtaposing repeated, still images of the same building, shot from different angles and perspectives, to achieve a sense of movement, such as the scene starting at minute [00:04:46].[64] In this segment, the voice over of Elle states: "Four times at the museum" [Quatre

[57] Malabou, *Ontology of the Accident*, p.62.
[58] Duras, *Hiroshima Mon Amour*, p.14.
[59] Duras, *Hiroshima Mon Amour*, p.14.
[60] The list continues beyond the extract proposed, so does the use of repetition.
[61] Duras, *Hiroshima Mon Amour*, p.14.
[62] Duras, *Hiroshima Mon Amour*, p.12.
[63] Duras, *Hiroshima Mon Amour*, p.14.
[64] *Hiroshima Mon Amour*, dir. by Alain Resnais.

fois au musée…],[65] and is urged by Lui's pressing question: "Which museum is in Hiroshima?" [Quel musée à Hiroshima?]"[66] Resnais substitutes Elle's uttered answer, which should elucidate that the museum in question is the Peace Museum in Hiroshima, with a series of shots of the building. The first shot,[67] seemingly, functions as an establishing shot, with the aim of identifying the specific location to which Elle is referring, but is followed by a series of static shots of the exterior structure of the museum, which, edited together, walk the viewer from the outside to the inside of the building, thus achieving a sense of movement.[68] A first long shot of the frontal structure of the museum (the establishing shot) is accompanied by other details of the building, with the last two shots exhibiting the outdoors stairs and a stairwell leading to the entrance and the foyer. Crucially, rather than displaying one shot of the museum, which would offer a visual illustration of the context of the scene to come, Resnais chooses to edit together a series of shots of the same building using diverse perspectives and angles, arguably to create the same tension between opposites which Duras constructs by synthesising asyndeton and repetition. Despite the fact that the establishing shot offers a glimpse of activity by framing some moving vehicles spotted in the background, the other shots are devoid of movement, achieved through an immobile camera as well as the absence of animated subjects in the frame. Therefore, the movement is provided by the fact that the static shots are linked together by a quick montage. Resnais offers the viewers the opportunity of moving through the building of the Peace Museum, almost walking around and across it, by editing the shots together in post-production. Movement and pace are summoned from immobile shots, as much as Duras creates, on a rhetorical level, an antithetic tension between performative excess, as the one displayed in the museum, and the emptiness which this excess carries out.

By the same token, within the first fifteen minutes from the start of the film, Resnais alternates scenes of the museum and the city, narrated by the voice of Elle, the hypnotic rhythm of which is interrupted occasionally by Lui, with five static shots of a bare back with a hand slowly caressing it. Once more, these shots present slightly different angles and perspectives from one another, albeit maintaining the same content, and evoke the two interlacing bodies introduced in the first few minutes of the film. Unlike the shots of the museum analysed above in this chapter, Resnais includes some movement within the frame, as the repetition carries out a different meaning. As noticed earlier in this section, through the repeated shots of the Peace Museum, Resnais traces

[65] Resnais, *Hiroshima Mon Amour*, min. [00:04:46].
[66] Ibid., min. [00:04:48].
[67] Ibid., min. [00:04:45-00:04:50].
[68] Ibid., min. [00:04:50-00:04:59].

almost a route into the building for the viewer to follow. The transition from a shot into the other is achieved through a basic cut, which suggests a linearity and continuity of time and space within the scene, ultimately producing a coherent, homogenous path for the viewer to follow, and which includes in order: the square in which the Peace Museum is located, some medium shots of the museum, the stairs, the stairwell. Contrariwise, the shots of the two bodies appear as glimpses which not only disrupt the flow of the sequence, but they also break the time/space continuum of the visual narrative abruptly, which becomes nonlinear as well as spelling out "the rhythmic and ontological ambivalence of time," as Malabou observes about Duras's writing.[69]

The final result obtained through Duras's employment of the rhetorical figures of speech is the creation of a subtext whereby the speaker, Elle, appears desperate to offer a series of concrete clues to corroborate her emotive proximity to the tragedy of Hiroshima. By the same token, the visual effect allowed by the repeated shots, which disrupt the spatio-temporal linearity of the sequence, is to confuse and interrupt the flow of the narrative, to act upon this linearity and render it fragmented, unstable, progressively less confident. By delivering lines inherently contradictory, the speaker disproves and renders hollow the same arguments she conveys, denoting the fact that any attempt to "know"(*connaissance*) Hiroshima is an "illusion" (*leurre*), as stated by Duras.[70] The museum, the reconstructions, the real and reproduced footage shown by Resnais in these sequences substitute, virtually, synthetically, the real experience of the bomb, and allow the fabrication of a final product for mass consumption. This veiled critique of the museum is even more significant if *Hiroshima Mon Amour* is seen in light of one of Resnais's former documentary films he made with Marker, *Les Statues Meurent Aussi*. Here, museums are framed within a critique of the colonial attitudes of Western society, guilty to appropriate and decontextualise African artefacts, and, ultimately showing "the process whereby a religious fetish is transformed into a commodity fetish by Western civilisation."[71] In this sense, Maria Irene Aparício further comments the site of the museum depicted by Resnais and Marker as:

> A place where objects of everyday life have to die, in order to be considered art. And if we want to probe still further, the claim might also be made that museums tend to lock the meaning of life into mythological or heroic narratives.[72]

[69] Malabou, *Ontology of the Accident*, p.55.
[70] Duras, *Hiroshima Mon Amour*, p.6.
[71] Alter, *Chris Marker*, p.46.
[72] Maria Irene Aparício, 'Film and Memory: Where do Pictures Come From, in Statues Also Die?', in Photography and Cinema: 50 Years of Chris Marker's *La Jetée*, ed. by M. Teresa Flores, Margarida Medeiros, and Cunha Joana Leal, (Newcastle upon Tyne, England: Cambridge Scholars Publishing, 2015), p.251. Ebooks Central ebook.

Applying this framework to *Hiroshima Mon Amour*, the museum reproduces the same dynamics whereby "mythological and heroic narratives" are privileged to an engaged discussion of the war, its causes and consequences, including the destruction of two Japanese cities and the long-term effects of radioactivity impinging on the population's health. The attention on peace and the consequent symbolic role that Hiroshima plays globally, an aspect emphasised in the film, instead, silences and renders invisible the historical context which brought about its annihilation, and the various responsibilities ramifying from it – this aspect will be further argued in Chapter IV in relation to the implication of the United States in the memorial narratives of Hiroshima and its connection with the atomic bomb. Yoneyama argues that the discourse on peace underpinning post-war Hiroshima was more linked to "recovery" than destruction, insofar as "peace in this context signified postwar recovery - what was positive, future-oriented, and not bound by "bitter memories" of the past."[73] The label of Hiroshima as a "universal symbol of peace" is, arguably, reinforced by the film's association with love.[74] In a sense, while spotting light on a discursive and aesthetic space in which the sites of commodified memory are doubted and challenged (as will be further discussed in Chapter III), Resnais also strengthens flattened-out conceptions of universal peace aimed at rupturing the present and future of Hiroshima with the memory of the city "as the site of the first nuclear destruction."[75]

Furthermore, the rhetorical structure proposed by Duras, alongside the montage of succeeding tracking shots and shifting still frames established by Resnais, inform the transitional essence of the characters. Moving from place to place, from the inside of buildings, across corridors, to the outside, on the streets, and from the museum to the square, the protagonists remain on the threshold of meaning in search of what is not visible to sight or reason. Drawing on Michel de Certeau, Wilson maintains that "To walk is to miss or lack a place."[76] The characters in *Hiroshima Mon Amour* are casual viewers, walking the length of the city, missing and "lacking" Hiroshima, merely grasping an illusion of it. Beyond the distraction caused by this endless list of explanations, photographs, reconstructions, Duras writes: "C'est qui est vraiment sacrilège, si sacrilège il y a, c'est HIROSHIMA même."[77] By doing this, she points out that the only due act is to recognise the annihilation of Hiroshima as a sacrilege.

[73] Yoneyama, *Hiroshima Traces*, p.26.
[74] Yoneyama, *Hiroshima Traces*, p.25.
[75] Ibid., p.26.
[76] Wilson, *Alain Resnais*, p.61.
[77] "What is really sacrilegious, if there has ever really been a profanation, is HIROSHIMA itself." In Duras, *Hiroshima Mon Amour*, p.6.

Crucially, and addressing Resnais' observations at the beginning of this section once more, through the film both the writer and the director envision a situation whereby the atomic bombing is not perceived as a shocking, ethically unacceptable profanation, a "sacrilège."[78] Instead, it is something which happens "in the background"[79] allowing the characters to exist in spite of it. Resnais, in particular, emphasises the element of "normalisation" as regards one's attitude to the atomic peril in another extract of the interview proposed earlier in this chapter. By recalling the conversation he had with Duras, he considers:

> During this conversation, I told her: 'You see, it's weird, me, we have been together for three or four hours, and over the course of this period of time, there are some aeroplanes which carry atomic bombs in their cabin, which are going around the world endlessly. So, these bombardiers are flying above our planet and our conversation, and are ready to drop new atomic bombs, and while we haven't changed our exterior attitude in a visible way, nonetheless we are here, drinking our beer and tea, and the day goes by always as it were the same as before. Therefore, basically, the film which we should make is not at all what has been anticipated, which is with the atomic bomb in the foreground.[80]

Resnais identifies the nuclear threat not as an immediate concern, but as a normalised, widely accepted phenomenon to be treated with indifference already in the 1950s. These observations fit into what Gabrielle Schwab describes as a "blindness at the heart of the gravest danger humans have ever faced."[81] According to Schwab:

> Eclipsing the nuclear threat from consciousness, splitting [...] helps one to live without becoming paralysed by fear. At the same time, however, splitting exiles those very fears into the nuclear unconscious, generating a haunting from within.[82]

By conveying a sense of powerlessness, splitting and denial, indifference is key to reading the film through a nuclear lens, insofar as splitting and denial, according to Schwab,[83] are affects which determine the construction of nuclear subjectivities. In the specific case of *Hiroshima Mon*

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[78] Ibid., p.6.
[79] Guzmán, *Alain Resnais Interview 2,* min. [00:08:44-00:08:54].
[80] "Au cours de cette conversation, je lui ai dit: "Mais voyez, c'est drôle, moi, nous sommes ensemble depuis trois ou quatre heures et pendant ce temps là il y a des avions qui ont des bombes atomiques dans la carlingue et qui font le tour de la terre perpétuellement, donc notre planète et notre conversation est survolée par ces bombardiers qui sont prêts donc à lâcher des nouvelles bombes atomiques, et cependant nous n'avons pas changé terriblement notre comportement extérieur, tout cas nous sommes là, en train de boire d' la bière ou du thé, et la journée se passe de la même manière. Alors, au fond, est-ce que le film qu'il faudrait faire c'est pas du tout celui qui était prévu, c'est-à-dire avec la bombe atomique au premier plan." In Guzmán, *Alain Resnais Interview 2,* min. [00:07:53-00:08:37].
[81] Schwab, 'Transgenerational Nuclear Trauma', p.438-439.
[82] Ibid., p.439.
[83] Schwab, *Radioactive Ghosts*, p.3.

Amour, the two protagonists appear to be "haunted from within."[84] They manifest a state of hallucinatory anxiety caused by events which they have not experienced in the first place, like the annihilation caused by atomic bombing, but still act as the sole witnesses of those ghosts who populate Hiroshima, since, as Schwab points out, "splitting exiles those very fears into the nuclear unconscious."[85] In this sense, they are interceding between the dead and the living from their position of an "in between."[86] As Deleuze observes:

> The character in Resnais' cinema is Lazarean precisely because he returns from death, from the land of the dead; he has passed through death and is born from death, whose sensory-motor disturbances he retains. Even if he was not personally in Auschwitz, even if he was not personally in Hiroshima… He passed through a clinical death, he was born from an apparent death, he returns from the dead, Auschwitz or Hiroshima, Guernica or the Algerian war.[87]

In *Hiroshima Mon Amour*, the main characters try to fight the sense of indifference towards their own past and the history of Hiroshima, while also being affected by it at a psycho-physical level. By the same token, they are forced to confront themselves with, and voice the widespread sense of indifference contaminating French society, if not a universalist projection of it,[88] both in relation to the bombing of Hiroshima and other contemporaneous and past issues, like World War II and the Algerian War. Paraphrasing Deleuze, they have returned from a land of death to be (re)born from the ashes of Hiroshima. *Hiroshima Mon Amour* is suffused with an aesthetic of cinders in the sense that Derrida imparts to the notion, namely "something that remains without remaining, which is neither present nor absent, which destroys itself, which is totally consumed, which is a remainder without remainder."[89] The progressive destruction of memory experienced by the subjects, and the battle between recovering the past and erasing it that they express are visually channelled through the ashes by which they are covered at the beginning of the film. Brett Ashely Kaplan, drawing on Caruth's reading of Derrida's and Freud's notion of cinders, observes in relation to *Hiroshima Mon Amour*:

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[84] Schwab, 'Transgenerational Nuclear Trauma', p.439.
[85] Ibid., p.439.
[86] Giles Deleuze, *Cinema 2: The Time-Image*, trans. by. Hugh Tomlinson and Robert Caleta (Minneapolis: University of Minnesota Press, 1997) p.208
[87] Deleuze, *Cinema 2*, p.207-208.
[88] In the introduction to this chapter, I discussed what Sanos identifies as the "anti-colonial and universalist humanism that denounces war and violence" in Sanos, '"My Body was Aflame with His Memory"', p.732. This aspect emerges from the screenplay through Elle's words, in which she addresses a generalised and universalist conception of racial hatred as the trigger of public protests occurring in Japan, such as, for example, from minute [00:11:29], when she says: "Against whom do these entire cities grow angry? The anger of entire cities whether they like it or not, is against the principle of inequality set forth by one people against another people, against the principle of inequality set forth by one race against another race, against the principle of inequality set forth by one class against another class." In *Hiroshima Mon Amour,* dir. by Alain Resnais.
[89] Derrida, *Points*, p.209

> The stunning image of the ashed lovers functions as an apt metaphor for the "burning up" of memory itself in the aftermath of catastrophe and as the image threads its way through our imaginaries it provides a space through which to unpack the indelible nature of memory as trace.[90]

Insofar as the film's structure develops through a dynamic and nonlinear pattern of associations (as will be further explored in Chapter III), the ashes layering up on the two lovers' bodies at the beginning of the film, identified as a "metaphor for the 'burning up' of memory itself in the aftermath of catastrophe", recall conceptually and aesthetically the human shadow etched in stone displayed in the film at minute [00:12:33].[91] In the screenplay, the description of the scene explains that this is: "The shadow "impressed" [*photographiée*] on the stone of a disappeared of Hiroshima"[92]. As pointed out in Chapter I, this artefact, now situated in the Hiroshima Peace Memorial Museum, shows the spot on the stairs of the Sumitomo Bank in Hiroshima where a person was sitting, left darker after the bomb's explosion as if their shadow stayed impressed and superimposed on the stone while their body disappeared suddenly.[93] The scene in which this site is exhibited is complemented by Elle's voice-over who, after explaining her constant effort of keeping memory alive, and, therefore, oppose, unsuccessfully, forgetting, claims: "Like you, I desired to have an inconsolable memory, a memory of shadows and stones."[94] As Elle is uttering the line "Like you, also I tried to fight with all my strength against oblivion. Like you, I also forgot",[95] the camera lingers on some images of the Hiroshima Peace Memorial Park. Yoneyama notices that "Situated at the heart of the city, close to the site of the atomic bomb's detonation, the park was built on a vast, open field of ashes created by the explosion."[96] While also being built on "the ashes created by the explosion", the park, according to Yoneyama, is the site of another, forgotten side of Japan's history, insofar as "Hiroshima memories have been predicated on the grave obfuscation of the prewar Japanese Empire, its colonial practices, and their consequences."[97] The ashes falling and accumulating on the bodies of the two lovers, which convey poetically the

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[90] Brett Ashley Kaplan, 'Too Painful to Forget, Too Painful to Remember: Ashes of Memory in Marguerite Duras and Alain Resnais's Hiroshima Mon Amour (1959) and Duras's La Douleur (1985)', *Memory Studies*, 14.4 (2021), 834–55 <https://doi-org/10.1177/1750698020988773> p.835.

[91] *Hiroshima Mon Amour*, dir. by Alain Resnais.

[92] "L'ombre 'photographiée' sur la pierre d'un disparu de Hiroshima." In Duras, *Hiroshima Mon Amour*, p.14.

[93] The idea of a disembodied shadow is an effective but unrealistic condition – since a shadow, which is material absence, cannot exist without a physical referent. However, this image perfectly summarises the unexpected and uncanny suddenness of the explosion, as well as the violence of the bomb.

[94] "Comme toi, j'ai désiré avoir une inconsolable mémoire, une mémoire d'ombres et de pierre." Duras, *Hiroshima Mon Amour*, p.14.

[95] Ibid., p.14.

[96] Yoneyama, *Hiroshima Traces*, p.13.

[97] Ibid., p.15.

struggle between memory and non-memory, find their material equivalence in the "memory of shadows and stones", namely the trace left by a human being on the steps of a bank in Hiroshima, and the burden of non-memory that it embodies - while also erasing the memory of Japan's colonial legacies.[98] Significantly, the main characters' "disembodied voices"[99], whose commentary of the first fifteen minutes of the film is shaped as a dialogue between one another, are echoed by the disembodied shadow of a human being, insofar as they both adhere to the narrative of absence evoked by this double, overlapping absence. As Beck and Bishop remark:

> These bodies are like the most famous victim of Hiroshima: the famous photograph of the absence of a body, that most famous (non)body that constitutes a white shadow permanently embedded in the stone of a bridge,[100] the person vaporised by the explosion and now forever part of the pores in the stone.[101]

This "(non)body" becoming one with the stone, "forever part of the pores in the stone" is the material proof that cinder is the only trace remaining from this incineration. This postulation becomes more significant in light of the description of the artefact on the website of the Hiroshima Peace Memorial Museum, which explains: "Several families have suggested that the person killed on the steps may have been one of their own."[102] This statement emphasises the fact that no witness was left after the bomb was dropped to recognise to whom this shadow belonged, nor another human being could testify to

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[98] The shadows are not actual bodies' shadows, but they are produced by the chemical reaction of the heat encountering objects and functioning as shields. As explained on the website, atomicarchive.com: "Because the radiant heat given off at the explosion easily charred combustible objects while ceasing so quickly that surfaces not in the direct line of radiation were unaffected, there are clearly marked "shadows" visible where objects were shielded against the heat. By projecting back the sharply defined outlines of these shadows, Japanese and Allied scientists have determined the height and diameter of the fireball. The two fireballs were apparently several hundred feet in diameter." In Atomicarchive.com, 'The Effects of Atomic Bombs on Hiroshima and Nagasaki', *Atomicarchive.com © 1998-2024*, < https://www.atomicarchive.com/resources/documents/bombing-survey/section_III.html> [accessed 7 July 2024].

[99] As Beck and Bishop point out: "In this famous sequence, we hear the French female and the Japanese male who has become her lover discussing what she has supposedly seen in Hiroshima. We do not see either person's face, only hear their disembodied voices, as in some play by Beckett." In Beck and Bishop, 'Introduction', p.25-26.

[100] Beck and Bishop bring about the example of the "shadows" of individuals left on the Yorozuyo-Bashi Bridge, rather than reference to the intertextual reference within the film. See Àbe Mark Nornes, 'The Body at The Center - The Effects of the Atomic Bomb on Hiroshima and Nagasaki, in *Hibakusha Cinema: Hiroshima, Nagasaki and the Nuclear Image in Japanese Film* ed. by Mick Broderick, (London: Kegan Paul International, 1996) pp.127-168. P.133. Crucially, the image present in the book comes from the documentary, *The Effects of the Atomic Bomb on Hiroshima and Nagasaki* discussed at the end of this chapter.

[101] Beck and Bishop, 'Introduction', p.25-26.

[102] Hiroshima Peace Memorial Museum. 'Human Shadow Etched in Stone', *Reality of the Atomic Bombing* <https://hpmmuseum.jp/modules/exhibition/index.php?action=ItemView&item_id=112&lang=eng> [Accessed 27 February 2024].

the disappearance which took place on those steps, and could tell who was sitting there at the time of the explosion, since they had disappeared too. As Derrida further observes, "The cinder is not: This means that it testifies without testifying. It testifies to the disappearance of the witness, if once can say that. It testifies to the disappearance of memory."[103] This trace as cinder signals the "battle" in which the characters in *Hiroshima Mon Amour* engage against oblivion, and that they are inexorably destined to lose - in spite of the "photographs, reconstructions, explications."[104]

However, this overwhelming aesthetic of cinders governing the film, while erasing a part of Japan's colonial history, preserves and transmits a series of "overlooked" histories of the Second World War, which clash against a post-war state of indifference and forgetting.[105] In this world of thought which Rensais creates through cinema,[106] they address the impossibility of understanding Hiroshima through words ("l'impossibilité de parler de HIROSHIMA"[107] and, at the same time, they are haunted by a new, unknown feeling as voiced by Elle: "the indifference, the fear of indifference ["l'indifférence, la peur de l'indifférence."[108] The characters in *Hiroshima Mon Amour* manifest indifference to their own survival, and to all those life-events which occurred when they returned to life. For example, Elle treats the period following her youth in Nevers in a pragmatic, detached way, and the same could be argued as regards Lui's life in the aftermath of the war. Both characters have families, with whom they claim to be happy, but none of them are represented in flashback, nor appear as characters in the film.[109] Ultimately, it is the narrative belonging to their past which is associated with feelings, which characterise the dominant narratives delineating their identities and framed through loss, trauma, and projected shame. As Deleuze observes:

> Resnais has often declared that it is not characters that interest him but the feelings that they could extract from them like their shadows, depending on which regions of past they are placed in. Characters are of the present, but feelings plunge into the past. Feelings become characters.[110]

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[103] Derrida, *Points*, p.209.
[104] Duras, *Hiroshima Mon Amour*, p.14.
[105] Azoulay, *Potential History*, p.252.
[106] "It is in the most concrete way that Resnais attains a cinema, creates a cinema which has only one single character, Thought. Each map is in this sense a mental continuum, that is, a sheet of past which makes a distribution of functions correspond to a distribution of objects." In Deleuze, *Cinema 2*, p.121-122.
[107] Duras, *Hiroshima Mon Amour*, p.6.
[108] Ibid., p.32.
[109] Duras, *Hiroshima Mon Amour*, p.53.
[110] Deleuze, *Cinema 2*, p.124.

In *Hiroshima Mon Amour* feelings belong to the order of the past, identified in Nevers, the war, the bombing of Hiroshima. Everything that comes after the past of the film is secondary, it is attached to the realm of post-traumatic subjectivity,[111] and, as such, is informed by narrative indifference. Malabou states that indifference and coldness are attributes of "destructive plasticity", namely "this power of change without redemption, without teleology, without any meaning other than strangeness."[112] Malabou maintains: "The worst dissensions of the subject with the self, the most serious conflicts, do not even look tragic. Paradoxically, they are signalled by indifference and coldness."[113] Interpreting the words of Duras in light of Malabou's theory, redemption is not an option, since Hiroshima and indifference are the ultimate sacrilege from which return is no longer possible.

This reaction of indifference perceived in *Hiroshima Mon Amour* resonates with the reading of the film which Sandrine Sanos offers. Writing about the reception of *Hiroshima Mon Amour* within a historical context informed by the Algerian War, Sanos argues that the response of French people to the violence of the war was characterised by indifference. As she states: "Despite the anti-colonial left's efforts to denounce torture and the injustice of the war in print, most French people seemed to remain indifferent to these facts."[114] In turn, both Resnais and Duras express concern about French apathy vis-à-vis the nuclear destruction of Hiroshima. This concept is reiterated by Resnais in the interview proposed above in this chapter, wherein he expounds the rationale behind the genesis of *Hiroshima Mon Amour*, claiming that the vision behind the film was to position the atomic bomb in the "background, behind the characters, in the distance, like a kind of landscape."[115] The indifference perceived by these authors and observed by many intellectuals and critics of the time,[116] is reproduced through fictional characters and motifs, which voice those concerns and anxieties about a reaction to the nuclear bombing which is perceived as a "sacrilegious act"[117] even more because it is lived with indifference, which renders it further invisible in the public consciousness. At the same time, these characters are also complicit in another forgetting which overshadows the film, which is the spectre of colonialism on which the whole story is constructed.

[111] Malabou, *Ontology of the Accident*, p.14.
[112] Ibid., p.24.
[113] Ibid, p.14.
[114] Sanos, ''My Body was Aflame with His Memory', p.729.
[115] Guzmán, *Alain Resnais Interview 2*
[116] Sanos, ''My Body was Aflame with His Memory', p.729.
[117] Duras, *Hiroshima Mon Amour*, p.6.

Resnais and Duras articulate the emptiness of the traces resurfaced in the wake of the atomic bomb through a critical viewpoint in which the characters, frozen by the fear of indifference, express the impossibility of talking about or understanding the atomic bombing of Hiroshima. Drawing upon the events of Hiroshima, Chris Marker's *La Jetée* spotlights another aspect of these concerns, fears and anxieties emerging from the dropping of the atomic bomb, World War II in general, and the concentration camps in particular, namely the role of the witness after Auschwitz and Hiroshima.

In the film, the main character is another sort of "Lazarean" hero, the image that Deleuze applies to the characters sketched out by Resnais,[118] and introduced above in this chapter. The protagonist returns, unbeknown to him, from his own death, in order to witness his demise all over again. As suggested by Max Silverman:

> The post-apocalyptic scenario, in which an unnamed Lazarean hero is selected as a guinea pig in experiments in time travel by the victors of the Third World War due to his attachment to an image from his past, is the setting for an exploration of memory, imagination, time and, ultimately, humanity.[119]

Against this "post-apocalyptic" backdrop, *La Jetée* expresses nuclear anxieties by alluding to the nuclear theme through a series of clues scattered throughout the text and shaping a future Paris in the wake of a fictitious World War III as a dystopia. Within the first six minutes from the start of the film some contextual factors sketch out the milieu in which the story takes place, which is imbued with nuclear signifiers. Images of a bombed-out Paris function as a double reference to past bombings, as those which happened during the Second World War,[120] and, indirectly, the atomic bombing of Hiroshima and Nagasaki, both projected into a post-apocalyptic future. Max Silverman articulates these sources upon which *La Jetée* constructs its narrative thus:

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[118] Deleuze, *Cinema 2*, p.207.

[119] Silverman, *Palimpsestic Memory*, p.50.

[120] At minute [00:03:27] a sequence of pictures showing the destruction of Paris, preceded by the black screen and introduced by the voice-over of Jean Negroni. In *La Jetée*, dir. by Chris Marker. As Baltazar & Pombo observe, these images are "explicit references to the destruction of Paris in World War II." In Maria João Baltazar and Fátima Pombo, 'The Face of a Woman to Survive the War: Childhood memory in Chris Marker's *La Jetée*' in *Photography and Cinema: 50 Years of Chris Marker's La Jetée*, ed. by Teresa M. Flores, Margaride Medeiros and Cunha Joana Leal (Newcastle upon Tyne, England: Cambridge Scholars Publishing, 2015) pp. 170-182. p.180.

> The ruins of Paris resemble images of destroyed cities in the Second World War or Hiroshima after the atom bomb [...], and the underground passages of the Palais de Chaillot where the experiments take place and where Resistance fighters hid during the Occupation of France [...] resemble a concentration camp or torture chamber filled by wide-eyed inmates.[121]

Following this seeming nuclear destruction, survivors and prisoners dwell underground, an element which, as well as being inspired by the "torture chamber" and the "concentration camp", as Silverman highlights,[122] owes to the aesthetic of the bunker, as will further explored in Chapter III. The city is "rotten by radioactivity" [pourrie par la radioactivité],[123] rendering impossible any form of life overground.

On a structural, stylistic level Marker engages in a reflection on the limits of the media of photography and cinema in conveying historical truth and memory, as well as in being a witness to history. Idiosyncratic to Marker's style is the relationship between cinema and photography.[124] As Alter points out in relation to the analysis of *Les Statues Meurent Aussi*:

> As was the case with *Letter from Siberia*, one detects an ambivalent stance toward the process whereby everyday life becomes transformed into culture and thereby is "museified," or mummified. Cinema, by its very nature, participates in this process by documenting and recording events, people, objects, the past, and the present, freezing them in a two-dimensional audiovisual verisimilitude. Marker's films excel in calling attention to their own artifice and thereby encourage a self-reflexive questioning of what happens when life becomes celluloid.[125]

This aspect is true also for a fictional film like *La Jetée* since, as Croombs points out, it presents affinities with Marker's overall corpus, insofar as it includes themes and critiques coherent with his other works.[126] In this sense, Marker's predilection for still frames enables the construction of the film's narrative. However, Marker's use of photography is aimed at challenging the "trace of the real" which photographs stand for, and in particular their function as index.[127] Indexicality

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[121] Silverman, *Palimpsestic Memory*, p.50.
[122] Ibid., p.50.
[123] *La Jetée*, dir. by Chris Marker, min. [00:05:01]
[124] For example, Atler observes that in *Letter from Siberia* Marker juxtaposes photographic documentation ("the true image of reality") with fictional representations using also photography. She also notices that Marker employs the same strategy in *American Dreams*, "in which he deconstructs U.S. society based on a vision of reality derived by photographic images." In Alter, *Chris Marker*, p.27.
[125] Alter, *Chris Marker,* p.45-46
[126] Croombs, '"La jetée" in Historical Time', p.26.
[127] Mary Ann Doane, 'Indexicality: Trace and Sign: Introduction', Differences (Bloomington, Ind.), 18.1 (2007), 1–6 <https://doi.org/10.1215/10407391-2006-020 > p.1.

identifies photography as a medium whose concrete expression, namely photographs, "like footprints and death masks, are traces of the world left by the subjects themselves."[128] As noticed by Plantinga:

> Charles Sanders Pierce defines an indexical sign as one that bears a relationship of *causality* or *proximity* to that which it represents. He distinguishes the index from the icon, which *resembles* its referent and the symbol, which bears an *arbitrary* or purely *conventional* relationship with its referent.[129]

Despite the fact that the film is imbued with surreal elements, enabled by the employment of the genre of Sci-fi and the reference to a fictional Third World War, the techniques of cinéma-vérité and documentary, which Marker develops in collaboration with Resnais both in *Statues Also Die* and *Night and Fog*, allow the director to locate real events as the foundation of a social and political critique. In addition to Hiroshima and the World War II, the Algerian War is one of the multiple layers the film reflects upon, as well as being the historical source which informs the images of violence and torture which permeate the film, an element which will be explored in Chapter III. The use of a fictional set-up to convey a commentary of the horrors of war and repression could be a strategy employed by Marker to avoid the state censorship of French films in the 1950's and 1960's, particularly those productions covering the Algerian War, as noticed by Croombs.[130] In this sense, the indirect juxtaposition of themes such as the Algerian War, the nuclear bombing of Hiroshima as well as World War II and the Holocaust are brought together by a similar reaction aroused by these issues, namely state censorship and indifference. Suppressive and censorial tendencies were widespread both in France during the Algerian War, and in Japan, in the aftermath of the atomic bombing of Hiroshima and Nagasaki, during the Allied occupation. As mentioned by Tessa Morris-Suzuki:

> Censorship [...] did not end with Japan's defeat. Among the early acts of the Allied occupation of Japan was the reimposition of press censorship (albeit with less drastic punitive sanctions than those imposed by the wartime Japanese military). [...] the occupation authorities used these press controls to promote the values of liberal democracy and to silence criticism of the occupation [...] One aspect of this censorship was the banning of images showing the effects of the atomic bombs.[131]

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[128] Carl Plantinga 'What a Documentary Is, After All', *The Journal of Aesthetics and Art Criticism*, 63.2 (2005), 105–17 <https://www.jstor.org/stable/3700465 > p.106.
[129] Ibid., p.106.
[130] Croombs, '"La jetée" in Historical Time', p.29. For a list of films censored in France until 1962, see Benjamin Stora, and Mary Stevens, 'STILL FIGHTING: The Battle of Algiers, Censorship and the 'Memory Wars'', *Interventions* (London, England), 9.3 (2007), 365–70. p.366.
[131] Tessa Morris-Suzuki, *The Past Within Us: Media, Memory, History* (London: Verso, 2005) p.93-94.

This means that the narrative indifference which informs the text is a reverberation of the widespread apathy observed among individuals as a reaction against the horrors of the Holocaust, of Hiroshima, of the Algerian War. In the specific case of the film, this overarching effect is created at an aesthetic level by the communion between real and imagined events, which renders *La Jetée* "an exploration of memory, imagination, time and, ultimately, humanity."[132]

This bridge between memory as a trace of something that has occurred, "*That-has-been*", in the words of Barthes, and imagination as the illusion which this same memory generates, is also a reflection on photography, as mentioned earlier in this section.[133] The purpose of photography is to create a trace which develops an intimate and immediate relationship with the object represented by capturing its "veracity,"[134] being "absolutely, irrefutably present,"[135] as well as creating a "superimposition" of "reality" and the "past."[136] This process, which belongs to the essence of photography, is reinterpreted by Marker through a manipulation of the film image, into a "poetic photomontage."[137] By "poetic photomontage", Silverman means the operation of editing images together characteristic of Marker's style, and specifically the fact that montage "produces movement from the static photographs by a spatialized reworking of image and sound."[138] But at the same time, if addressed in its multilayered sense, the notion of photomontage signals the juxtaposition of elements which are real and imagined at once. Despite the fact that Marker uses real footage only to represent a bombed-out Paris, this process of conflating reality with fiction is expressed at a conceptual level.

Within this existent relationship between photography and the multidirectional historical layers onto which the exegesis of the film is attached, Marker enacts a manipulation of the still frames which are a constitutive part of his fictional document, enabling the narrative fulfilment of a further ambiguity embodied by the index. As Doane speculates:

> As photographic trace or impression, the index seems to harbour a fullness, an excessiveness of detail that is always supplemental to meaning or intention. Yet, the index as *deixis* implies an emptiness, a hollowness that can only be filled in

[132] Silverman, *Palimpsestic Memory*, p.50.
[133] Roland Barthes, *Camera Lucida*, trans. by. Richard Howard. (London: Vintage Books, 2000) p.76.
[134] Plantinga 'What a Documentary Is', p.106.
[135] Barthes, *Camera Lucida*, p.77
[136] Ibid., p.76
[137] Silverman, *Palimpsestic Memory*, p.52.
[138] Ibid., p.52.

> specific, contingent, always mutating situations. It is this dialectic of the empty and the full that lends the index an eeriness and uncanniness not associated with the realism of the icon or symbol. At times, the disconcerting closeness of the index to its object raises doubts as to whether it is indeed a sign, suggesting instead that the index is perched precariously on the very edge of semiosis.[139]

Seemingly, Marker views the "photographic trace" in its "eeriness and uncanniness,"[140] exploiting it as a liminal entity, insofar as it appears in strict connection with the notion of veracity, despite existing at the threshold between reality and its relentless manipulation. The still frames in the film are altered using different techniques, such as by superimposing a series of discordant images in order to create associations between seemingly opposite realities. Croombs notices that: "By overlaying the space of the camps over the space of the museum, or faint images of the man's writhing body over the hypnotic scene of the department store, he [Marker] presents "culture" as the site where France went to purify itself from the crimes of the dirty war."[141] However, Croombs points out that the position that the main character in *La Jetée* assumes in the past, namely French society during the economic boom of the 1960's, is based on the relationship he creates with the objects around him, whereby the dominant sense is sight rather than touch, an element which makes him adopt the role of a "spectator."[142] This distance created through the employment of sight as main sense is further strengthened by the choice of avoiding direct sound or dialogue within the film (with the exception of the overlapping whispers of the doctors speaking in German in the underground city.[143] Rather, Marker opts for a narratorial voice which operates outside of the direct context of the film, a voice-over, and as such detached from the story, which is narrated in the third person – recalling the disembodied voices observed in reference to *Hiroshima Mon Amour*.

This idea of sight embodied by the figure of the spectator as the paramount sensory experience played out in the film is detectable in the initial sequences taking place in the jetty of Orly.[144] The jetty represents the physical beginning and ending of the film. At a first encounter, the jetty resembles a fairground, a magical place of spectacle, entertainment, and family life, where

[139] Doane, 'Indexicality', p.2.
[140] Ibid., p.2.
[141] Croombs, '"La jetée" in Historical Time', p.40.
[142] "The dreamworld of the man's memory is thus associated with modernisation not only by its objects and settings but also by the man's relation to those objects and settings. In the absence of his physical body, he is positioned as a spectator of objects whose transcendental gaze is often directed toward a depopulated collection of images." In Ibid., p.33.
[143] Marker, *La Jetée*, min. [00:08:44-00:09:30].
[144] Marker, *La Jetée*, min. [00:02:14-00:03:16].

"parents bring their children to see the aeroplanes taking off"[145] It is in this domain of modern bourgeois everyday life that the main character of the story as a child witnesses his own death .[146] As such, the jetty is presented as an oxymoron: on the one hand, parents and children imbue this setting with a sense of familiarity and contentedness, and they appear entranced before the spectacle of ascending and descending planes, whereby the new technology is framed as entertainment. On the other hand, it represents the backdrop onto which trauma and death occur. Because of the loop-like quality of the film, an element which has been observed in Chapter I in relation to *Dark*, these two moments are rejoined by the protagonist witnessing his destiny both from an outside perspective, as mere and passive bystander, an innocent spectator, a child, and from an inside position, by experiencing his own demise in the first person, as an adult.

On a stylistic level, these first sequences are characterised further by a manipulation of each photograph which composes the film. The individual frames appear to be almost bleached out, and the unwrapping of this stylistic element unveils the diverse themes which construct the film. This effect is justified by the fact that the overground scenes are dominated by the constant presence of the sun, which is a meteorological condition characterising the narrative pertaining to the past in the film. But the extreme luminosity which renders these images less clear to read, almost faded, is connected to the role which memory and, above all, forgetting, play in *La Jetée*, insofar as the details concerning past events are more evanescent as the time goes by. According to this, the already vague knowledge associated with a specific moment in the past dissolves alongside the memories linked to it. These overexposed, ruined frames could also envision an anticipation of the atomic explosion which the future represented in the film holds. By evoking "a radiant light, 'brighter than a thousand suns,"[147] the past echoes a future wherein life in a bombed out Paris is made impossible by radioactivity.[148] Arguably, the flare also stands for the fallibility of the film image to capture memory and therefore the truth, and functions as a powerful symbolic and physical reminder of the potential and limits of cinema as a medium but also as a witness. By incinerating the frames, therefore, Marker reproduces materially the "burning up of memory" occurring at a narrative and aesthetic level in the film, and which is germane to the notion of cinder as non-memory.[149] It is by showing this principle of incineration which affects the materiality of

[145] "Les parents amènent leurs enfants voir les avions en partance" In *La Jetée*, dir. by Chris Marker, min. [00:02:27].
[146] "L'enfant dont nous racontons l'histoire", as introduced by the narrator in *La Jetée*, dir. by Chris Marker, min. [00:02:33]
[147] Horn, *The Future as Catastrophe*, p.42.
[148] Marker, *La Jetée*, min. [00:05:01]
[149] As Kaplan observes in relation to *Hiroshima Mon Amour*, stated above in this chapter. In Kaplan, 'Too Painful to Forget, Too Painful to Remember', p.835.

testimony, whereby the film-image is framed as “document”, that Marker signals the Derridean disappearance of memory and of the witness.

Marker manipulates the film by both corrupting and damaging the material component of the film, but also by swapping moving images with still frames. In this way, he operates, if not a destruction, at least a demystification of the film image, modifying its essence. Both actions stand as metaphors of the detrimental nature of 20th century human inventions, and the limits of the cinema in capturing the truth of some events or, at least, its ability to pierce through the thick layer of indifference immobilising society. Arguably, the beginning of *La Jetée* is informed by the role which the gaze plays in informing a tendency of passivity and indifference dominating French society in the 1960’s vis-à-vis past (the nuclear bombing, the Second World War) and contemporaneous (the Algerian War) violence. To a certain degree, Marker and Resnais work on the same topics, but they use diverse approaches to challenge either media (film, photography), and sites of memory (the museum in *Hiroshima Mon Amour*, the historical sites of resistance and destruction in *La Jetée*).

As observed above in this chapter, Resnais highlights the sense of indifference and numbing characterising the female protagonist by using an excess of movement. The tracking shots of Hiroshima follow their protagonists walking distractedly through its streets, if not skimming the relics, reconstructions, pictures, either left or created, by the atomic bombing. Marker, instead, ceases this movement. The frenzy dominating *Hiroshima Mon Amour* is frozen through a montage of still images, in which, nonetheless, past, present and future interlace endlessly. Somehow, the use of still images edited together offer the enhanced effect of probing into someone’s personal life, and tainting and violating one’s memories, following the same patterns that the doctors in *La Jetée* impose onto the protagonist, who is forced to relive his own past for it to be examined and exploited for the sake of science. By the same token, the spectacularisation of a bourgeois space such as the airport (the departing plane announced at the beginning of the film is an Alitalia flight going to Rome) denotes a certain commodification of experience. In this context, the passive subject consumes the spectacle offered by the jetty as a collective experience mediated by images (the jetty is full of families), arguably anticipating the figure of the bystander later explored in the film, but also that of the spectator delineated by Croombs, for which the access to reality is granted by his proximity to the consumerist milieu – which detaches him from memory and

history.[150] In a way, in *La Jetée* the ultimate destruction engendered by a nuclear war identifies, in the context of the film, a moment of non-return, "of a first time which would also be a last time,"[151] which sheds light on other atrocities (such as the Second World War and the Algerian War), but also functions as a magnifier for a commodified society which embeds these events as spectacle to be consumed and treated with indifference.

Spectators and Perpetrators: "Crises of Witnessing" in *La Jetée*

The figure of the spectator is linked closely to the impossibility of witnessing in *La Jetée*, where an excess and an access to sight brings about the opposite effect, since being a spectator, as much as being the museum goer in *Hiroshima Mon Amour*, does not imply a necessary understanding of what sight is rendering visible. This impossibility in the film occurs through the creation of a filmic structure based on a "spiralling effect" and an endless loop.[152] By juxtaposing past and present, and by projecting both into the future in an endless circuit, Marker evokes a conception of time that is circular in its structure, and, therefore, characterised by endless repetition. In relation to this structure of time employed by Marker, Silverman observes:

> Circularity is, indeed, the structural key to the ambivalence of memory in the film. There is no narrative development and resolution in the conventional sense; instead, there is simply a spiralling effect which leads out from and back to the point of departure, so that that point – the initial image – is also the point of termination.[153]

As observed in Chapter I in relation to *Dark*, the circular and cyclical structure of the series, evoking the figure of the ouroboros, which the characters try to interrupt, creates a sense of historical stuckness, to paraphrase Batori.[154] While in *Dark* severing the loop and freeing Winden from the endless repetition of the apocalypse coincides with the sacrifice of the two protagonists,

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[150] The relationship between spectator/spectacle is also present in Barthes' analysis of photography thus: "The *Spectator* is ourselves, all of us who glance through collections of photographs - in magazines and newspapers, in books, albums, archives… And the person or thing photographed is the target, the referent, a kind of little simulacrum, any *eidolon* emitted by the object, which I should like to call the *Spectrum* of the Photograph, because this word retains, through its root, a relation to "spectacle" and adds to it that rather terrible thing which is there in every photograph: the return of the dead" In Barthes, *Camera Lucida,* p.9.

[151] Derrida, 'No Apocalypse', p.30.

[152] Silverman, *Palimpsestic Memory*, p.50.

[153] Ibid., p.50.

[154] Batori, '"Everything is Connected", p.10.

in *La Jetée* the death of the main character does not symbolise the end of the eternal repetition of history.

This claustrophobic sense of inescapability is echoed by the shape of the underground camps in *La Jetée*, namely a labyrinth of galleries filled with prisoners and statues. Crucially, the underground city in *La Jetée* is at once a space of dwelling, and the site of conservation of artworks, functioning, de facto, as a museum and imbuing the environment with a sense of death, in which time and memory are frozen, disrupting historical time. This aspect recalls, once more, the critique of Western society, guilty of decontextualising artworks, de-historicising them emerging from *Les Statues Meurent Aussi.* But it also contributes to the atmosphere of death overwhelming the underground camps. As much as the statues appear "dead", the montage through which they are juxtaposed with the faces of victims and perpetrators alike, signals the complex status of prisoners and guards, as well as the liminality of their condition, insofar as they are frozen between life and death. This is better exemplified by those kept captive underground, as they are subjected to a variety of atrocious experiments, as well as being affected by madness or death. Conversely, the jetty is associated with atmospheres of joy and leisure, a utopian pre-war time dominated by the image of the sun,[155] the tactile feeling of atmospheric warmth,[156] by stressing that the day in which the events are narrated is a Sunday, a day of rest dedicated to family life.

The element of outside/inside witnessing in Marker results from a meditation on the Second World War and the horror of the Holocaust, viewed as an inescapable historical moment projected into the future perpetually. As observed by Medeiros, Flores and Leal: "*La Jetée* [...] indirectly circles the Holocaust."[157] As mentioned above in this section, the experiments and torture occurring in the underground world are carried out by a group of scientists. Despite the fact that they evoke torture methods used during the Algerian War,[158] these sequences are characterised by an identifiable overlapping of voices whispering in German.[159] The overground world shows the ruins

[155] "L'enfant dont nous racontons l'histoire devait revoir longtemps le soleil fixe" In *La Jetée*, dir. by Chris Marker, min. [00:02:24]
[156] "Dans ce chaud dimanche d'avant guerre" In *La Jetée*, dir. by. Chris Marker, min. [00:26:58].
[157] Flores, M. Teresa, Margarida Medeiros, and Cunha Joana Leal, 'Introduction: from La Jetée to contemporary hybrid visual cultures.' in *Photography and Cinema: 50 Years of Chris Marker's La Jetee* ed. by Flores, M. Teresa, Margarida Medeiros, and Cunha Joana Leal (Newcastle upon Tyne, England: Cambridge Scholars Publishing, 2015) pp. 1-12.
[158] Silverman, *Palimpsestic Memory*, p.50.
[159] Marker, *La Jetée*, min. [00:08:44-00:09:30].

of a destroyed Paris, which the film addresses as the consequence of a nuclear attack in a World War III far into the future, but the reality of which can be found in past events, such as the numerous bombings affecting European cities during the Second World War. In this regard, Nora M. Alter observes that in *La Jetée* "the still photos of a bomb-devastated cityscape bear an uncanny resemblance to the immediate postwar imagery of Germany, especially Berlin, as captured in films by Wolfgang Staudte, Günther Lamprecht, and Roberto Rossellini."[160] As observed by Saint-Amour:

> The utter devastation of cities and incineration of civilian populations by aerial bombardment just before and during World War II, such that the names of cities like Guernica, Libeck, Hamburg, Dresden, Tokyo, Hiroshima, and Nagasaki have become metonyms, not for those cities' structures or culture or citizenry, but for their annihilation.[161]

This narrative proximity with the events of the World War II sheds light on how memory and witnessing are articulated in the film. This framework is thereafter transposed into contemporaneous events, such as those related to the Algerian War. The main character of the film holds fragmented memories of his past, but the latter seems to qualify his entire existence, while also representing the stimulus for his journey. In relation to this, Copjec points out that: "Despite the fact that the film is often viewed as a film about the hero's need to remember, it is clear that the opposite is true; this is a film about the necessity of forgetting."[162] This relationship between remembering and forgetting appears to be selective and ambivalent. As such, the protagonist remembers the moment in which he witnessed the killing of a man, "a situation which had caused the child a moment of fear and madness."[163] However, he shows no recollection of the face of his mother, who appears as a suggested long-lost love and a figure surrounded by mystery, the identity of whom fails to be acknowledged by the man even at the end of the film, as death reaches this character in the same moment he confronts a transient moment of revelation.

In this context, the act of witnessing is also hampered by the wall created by the impossibility to recollect memories as they are occurring. In defining the "crises of witnessing", Felman and Laub point out that the Holocaust is an event without witnesses, since its overwhelming nature would not allow any individual related to it a degree of separation and judgement to reflect the truth of what happened. As Laub observes:

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[160] Alter, *Chris Marker*, p.67.
[161] Saint-Amour, 'Bombing and the Symptom', p.72.
[162] Copjec, J, VAMPIRES, BREAST-FEEDING, AND ANXIETY, *October* (CAMBRIDGE: Mit Press, 1991), lviii, 24–43 p.36.
[163] Hilliker, 'The History of the Future in Paris', p.5.

> It was not only the reality of the situation and the lack of responsiveness of bystanders or the world that accounts for the fact that history was taking place with no witness: it was also the very circumstance of being inside the event that made unthinkable the very notions that a witness could exist, that is, someone who could step outside of the coercively totalitarian and dehumanising frame of reference in which the event was taking place, and provide an independent frame of reference through which the event could be observed. One might say that there was, thus, historically no witness to the Holocaust, either from outside or from inside the event.[164]

Laub expounds this concept even further, by stating that the absence of anOther individual who would determine one's identity through recognition coincides with the "annihilation" of that same identity.[165] According to Laub, what characterised the Holocaust in its utter unspeakability was that: "There was no longer an other to which one could say "Thou" in the hope of being heard, of being recognised as a subject." It is by not being recognised as an "I" by an other (a "Thou") that the process of witnessing becomes "unbearable", no matter what is the perspective from which this witnessing takes place, from outside or inside, from the position of the bystander, the victim or the prosecutor, or, ultimately, by blurring the lines between all these identities.[166] Silverman maintains in reference to *La Jetée* that:

> A Lazarean aesthetic has disturbed the dichotomy between individual and collective guilt and blurred the boundaries between victim, perpetrator and witness to such an extent that this now becomes an unanswerable question in conventional 'psychological' terms.[167]

As Silverman implies, Marker seems to expand on this ethical and experiential limit expressed by Laub. In the film, personal experience of annihilation of the "I" embodied by the protagonist, an unnamed character, and therefore whose same identity remains blurred, is associated with the near annihilation of humanity through nuclear destruction, and seems to address the question: is it possible to witness if there is no future? The suspended moment in which the truth is revealed, and where the adult recognises the other in himself (a child from a past which is also a present) lasts only for a moment and does not leave any witness, if not the traces of the destruction of experience, which takes the shape of the Derridean cinders. As such, the death of the adult, the only individual to have had a glimpse of the truth, is not substituted by the same level of awareness from the child, since his own death will remain simply an image of his childhood.

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[164] Shoshana Felman, and Dori Laub, *Testimony: Crises of Witnessing in Literature, Psychoanalysis and History* (New York; London: Routledge, 1992) p.81.
[165] Felman and Laub, *Testimony*, p.82.
[166] Ibid., p.82.
[167] Silverman, Palimpsestic Memory, p.47-48.

"Psychic Tension, and Sensory Confusion": Sights of the Nuclear Uncanny and the Nuclear Index

While also being an essential component which influences and informs both *Hiroshima Mon Amour* and *La Jetée*, the notion of witnessing puts an emphasis on the futility of an oculocentric dimension present in both films. As noticed above in this chapter, these films insist on displaying visual traces (as cinders) of the nuclear destruction. These traces are manifested through "photographs, reconstructions, explications" in *Hiroshima Mon Amour*, alongside the tracking shots of the museum, the hospital, and the streets of the city. By the same token, the underground gallery in *La Jetée* is populated by the debris of a lost civilisation, where statues exist alongside dehumanised prisoners, both a reminder of the nuclear annihilation of an overground world in which the visible effects of the bomb, and the invisible presence of nuclear radioactivity render life no longer possible. *La Jetée* and *Hiroshima Mon Amour* thus confront the spectators with a sensory overstimulation of nuclear signifiers. The concept of "overstimulation" utilised in this context speaks to the definition which Masco offers in *The Nuclear Borderlands*. Masco, in turn, draws upon Walter Benjamin and applies this notion to the nuclear phenomenon.[168] He frames overstimulation as an excess of stimuli deriving from the constant intrusive proximity to modern technology to which the body is subjected, which produces "an anaesthesia-effect."[169] By anaesthetising individuals, technological overstimulation causes an "increasing sense of isolation and insulation from experience brought about by the combined effect of the swift pace of new industrial technologies and a flood of new urban forms."[170] As observed above in this chapter, *La Jetée* is constructed, partly, through the relationship that the main character creates with the objects around him, and that, as Croombs suggests, render him a "spectator".[171] The same phenomenon was identified in relation to *Hiroshima Mon Amour* in which the nuclear visual stimuli offered by the museum, the hospital and the city appear to be consumed predominantly through sight. It is worth noticing in this context that Elle is involved in the "reconstitutions" of the events following the atomic bombing of Hiroshima because she is shooting a film "international"[172] and "sur la paix",[173] in which she plays the role of a Red Cross nurse. The sequences related to the past in *La Jetée* and to the destruction of Hiroshima in *Hiroshima Mon Amour* are overwhelmed by these visual signifiers, which associate leisure, but also knowledge-as-leisure, with the

[168] Joseph Masco, *The Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico*, 2nd edn (Princeton: Princeton University Press, 2020) Kindle edition ebook p.7.
[169] Masco, *The Nuclear Borderlands*, p.7.
[170] Ibid., p.7.
[171] Croombs, '"La jetée" in Historical Time', p.33.
[172] Resnais, *Hiroshima Mon Amour*, min. [00:29:22]
[173] Ibid., min. [00:29:24]

disembodied, distancing commodification of experience which sight engenders, at once spectacular and domestic, extraordinary and familiar.

When Elle is describing the material evidence which corroborates her understanding of Hiroshima, which includes "reconstitutions" (reconstructions) and "films", she observes: "It is simple: the illusion is so perfect that the tourists cry."[174] Crucially, Elle talks about tourists as the main target for this visual material, and it could be speculated that they cry as they would while watching a movie at the cinema. An additional clue which confirms the correlation between leisure and the nuclear landscape, which frames the nuclear event through a consumerist lens, is around minute [00:12:40],[175] in which the camera follows an "atomic bus", inside of which a cheerful and smiley guide is shown in the process of, arguably, offering an "atomic" tour of Hiroshima.

As articulated above in this chapter, Masco notices that this "overstimulation", defined by Benjamin and linked to the raising and spreading of new technologies following the First World War, affects the individual on a bodily dimension, by presenting it, in fact, as an "overstimulation of the body".[176] As Masco notices:

> Benjamin believed this overstimulation of the body after World War I forced individuals to retreat inward, to take psychological refuge from the new dangers of an increasingly industrialised world by cutting themselves off from sensory experience, by anaesthetising themselves in everyday life.[177]

However, he also extrapolates this concept from a broader speculation about "new technologies", and he applies it to the specificity of the nuclear context. Masco contends that this nuclear overstimulation is connected to the visual realm, rather than the body as a general referent, both materially and aesthetically. In terms of the effects which can be detected from the exposition to the atomic blast, Masco describes a phenomenon called "flashblindness", for which: "The visual intensity of a nuclear explosion, which reaches the brilliance of thousand midday suns, readily blinds; without eye protection the observing retina can burn, resulting in lesions on the eye and permanent blindness."[178] At the same time, Masco returns to the original argument put forward

[174] "L'illusion, c'est bien simple, est tellement parfait que les touristes pleurent" In Duras, *Hiroshima Mon Amour*, p.14.
[175] Resnais, *Hiroshima Mon Amour*
[176] Masco, *The Nuclear Borderlands*, p.7.
[177] Ibid, p.7.
[178] Ibid., p.9

by Benjamin, observing the centrality of the power of technology to operate "mass control" over individuals by exploiting their aesthetic potential whereby not only "industrial warfare" could be presented as "beautiful" but also "seductive."[179]

Drawing upon these observations, both films reflect critically on, and challenge the anaesthetisation brought about by an overstimulated oculocentric dimension. By construing it as an inability of the characters to discern between reality and illusion, "memory" and "imagination",[180] "sensory experience" and "traumatic hallucination."[181] Returning to some lines uttered by Elle in *Hiroshima Mon Amour* during her "recce" of the city and the museum analysed above in this chapter, she insists on the fact that, when tourists watch the films and the reconstructions of the bombing of Hiroshima exhibited in the Peace Museum, they "cry" (*les touristes pleurent*), because "the illusion" (*l'illusion*) is "so perfect" (*tellement parfaite*),[182] that shedding tears is the only reaction possible. In the screenplay, Duras lingers on, and repeats this idea of the "illusion", which is something that can be achieved and garnered only through sight, by *watching* the traces, both fictional and material, left by the bomb, and by displaying a reaction performed through the eyes, namely the act of crying. This reliance on the "trace" is presented as a descriptive and didactic shortcut, insufficient to enlighten the traumatic consequences of the nuclear event, as observed above in this chapter. At the same time, the reiteration of the photographic trace in both films signals the role which the index plays within the visual representation of post-nuclear annihilation. In relation to the texts analysed, this element of indexicality of the atomic trace will be defined as a nuclear index. Despite the fact that the nuclear index is connected with the real, whether this entails the depiction of events linked to the actual bombing of Hiroshima (as in *Hiroshima Mon Amour*), and of an invented - but still likely - attack on Paris (as in *La Jetée*), it is positioned "precariously on the very edge of semiosis",[183] as Doane observes in relation to the notion of index. This index is endowed with "eeriness and uncanniness,"[184] insofar as it draws upon a familiar landscape of ruins, excess and spectacularisation, as the one left by the multiple bombings which occurred during the World War

[179] Ibid, p.7.
[180] Silverman, *Palimpsestic Memory*, p.50.
[181] Wilson, *Alain Resnais*, p.52.
[182] Duras, *Hiroshima Mon Amour*, p.14.
[183] Doane, 'Indexicality', p.2.
[184] Ibid., p.2.

II,[185] and, at once, it relates to the unknown, "le commencement d' une peur inconnue", as uttered by Elle in *Hiroshima Mon Amour*.[186]

In the first chapter of this thesis, it was observed that the icon of the atomic bombing frames the photography of the nuclear explosion as "a visual icon so unprecedented that, for a moment at least, it lay outside the webs of signification that comprised a watching culture."[187] This icon, which was proposed as a "natural, a fundamental, even a necessary aspect of everyday life,"[188] was created to be observed and admired, the ultimate "seductive" and "aestheticising" point reached by warfare,[189] as Masco observes, and therefore outside of the realm of contestation or criticism. In the case of both *Hiroshima Mon Amour* and *La Jetée*, the nuclear index is disconnected from the mythologising rhetoric belonging to the nuclear icon (although, in the case of *Hiroshima mon Amour*, the myth-making process of Hiroshima as city of peace takes its place). The mushroom cloud is physically absent from both films. It is substituted by its relics, collected in the aftermath of the bombing. Hales maintains that the atomic bomb was offered to the public as "a necessary aspect of everyday life,"[190] and therefore normalised to make it more acceptable and unchallenged. The process that both films put forward is the opposite: while the representation of the bomb is avoided, the common objects which make up the matrix of everydayness and domesticity are taken outside of their context and put inside a museum in *Hiroshima Mon Amour* or in an underground space in *La Jetée* which appears to be filled with statues and artworks, just like a museum. This process of re-collocating ordinary objects (*Hiroshima Mon Amour*) or artworks of extraordinary importance (*La Jetée*), in order to show them for the first time, outside of their original context, offers a trajectory which forces the spectator to look at the real for what it is. Unlike the mushroom cloud described by Hale, this never-seen-before, unique, spectacular conflation of military power and death, which is translated into something familiar, trustworthy, "natural",[191] the objects (hair, bottle tops, a bicycle), the photographs (of scarred, devastated

[185] Drawing a parallel between the sense of a nuclear uncanny anticipation (*bukimi*) of Japanese people before the attack on Hiroshima, and the bombing of metropolis during the Second World War, Saint-Amour observes: "Such a feeling of weird anticipation or uncanniness may have been allied to the symptom as return-of-the-repressed insofar as it arose from an experience not of singularity but of repetition - the repetition, say, that inheres in awaiting an expected catastrophe others have experienced (for example, conventional aerial bombardment) while also repeating what must once have been their hopes to be exempted through some special dispensation." In Saint-Amour, 'Bombing and the Symptom', p.61.
[186] Duras, *Hiroshima Mon Amour,* p.32.
[187] Hales, 'The Atomic Sublime', p.5.
[188] Ibid., p.5.
[189] Masco, *The Nuclear Borderlands*, p.7.
[190] Hales, 'The Atomic Sublime', p.5.
[191] Ibid., p.5.

bodies), the filmic reconstructions, and real footage, in *Hiroshima Mon Amour*, the decontextualised, eerie, almost human statues, and the frames of a bombed out Paris, in *La Jetée*, widen the distance between the spectator and the event. By presenting a relationship of "*causality* or *proximity* to that which it represents,"[192] by resembling its referent, the index privileges a physical vicinity to what it is representing. However, *Hiroshima Mon Amour* and *La Jetée* highlight the fact that this "proximity" between reproduction of the reality and reality itself expresses a performative, descriptive overview of facts, without channelling the knowledge of the events proposed.

These visual stimuli identified with the nuclear index further stress the chasm existing between sight and experience (or lack thereof) in these two films, and, alongside it, the limits which the act of seeing as witnessing and knowledge entails within the wider nuclear context.
While sight is framed as an unreliable, anaesthetised, if not empty, sense, the same invisibility and suddenness of a nuclear attack address the slippery nature of this phenomenon, and the ensuing anxiety that it produces. Masco associates these qualities of the nuclear age with what he identifies as the nuclear uncanny. According to Masco:

> The nuclear uncanny exists in the material effects, psychic tension, and sensory confusion produced by nuclear weapons and radioactive materials. It is a perceptual space caught between apocalyptic expectation and sensory fulfilment, a psychic effect produced, on the one hand, by living within the temporal ellipsis separating a nuclear attack and the actual end of the world, and on the other, by inhabiting an environmental space threatened by military-industrial radiation.[193]

As observed above in this chapter, Duras's use of figures of speech like asyndeton, repetition, and enumeration renders the dialogue delivered by Elle confused and disordered, but also fragmented, nonlinear and alienated, matching with the techniques of distanciation employed by Resnais. This effect is reinforced further by Lui's repeated line, "Tu n'as *rien* vu. *Rien*",[194] whose function is to doubt the validity of what Elle claims to have seen, and undermine the trustworthiness of her "perceptual space".[195] As Masco articulates, "psychic tension, and sensory confusion" emerge as a reaction to the nuclear uncanny.[196] Fear and anxiety created by the awareness that nuclear annihilation could occur at any moment and without warning, as well as

[192] Plantinga, 'What A Documentary Is', p.106.
[193] Masco, *The Nuclear Borderlands*, p.28.
[194] Duras, *Hiroshima Mon Amour*, p.12.
[195] Masco, *The Nuclear Borderlands*, p.28.
[196] Ibid., p.28.

repeating itself indefinite times, torment those who survive a nuclear disaster or attack. Schwab maintains that these nuclear-induced affects are at the base of the formation of postnuclear subjectivities, whereby individuals: "in addition to their nuclear trauma from the past, [...] inhabit an enhanced haunting from the future generated by the fear of a repetition of the horror they have already experienced in the past."[197] This "Haunting from the future", or, as Masco puts it, "apocalyptic expectation,"[198] creates the circumstances in which "survivors are haunted by the fear of a death that has already occurred at the level of the psyche."[199]

Masco invokes "sensory fulfilment" as another modality through which the nuclear uncanny manifests itself, and which affects the "perceptual space" of the individual, who, in turn, is not able to trust their senses. Further delving into Freud's theory of the uncanny, Masco points out that "the uncanny is that which blurs the distinction between the living and the dead, the hallucinatory and the real, and which, in essence, makes sensory experience untrustworthy and strange."[200] Earlier in this chapter, it was suggested that the two characters in *Hiroshima Mon Amour* exist in a space between the living and the dead, and as Lazarean characters, they come back "from the dead, Auschwitz or Hiroshima, Guernica or the Algerian war."[201] It is this uncertain distinction between what is animate (living) and what is inanimate (dead),[202] as well as between the "hallucinatory and the real" which causes an "untrustworthy and strange" "sensory experience"[203] typical of the uncanny. It was also noticed that both *Hiroshima Mon Amour* and *La Jetée* are characterised by a visual overstimulation, that is a "sensory fulfilment" linked to the nuclear index, conducive to the effects of disorientation and tension caused by the nuclear uncanny. This untrustworthiness of the senses, and sight in particular, qualifies the main character in *Hiroshima Mon Amour*, Elle, and is heightened by her personal trauma which, albeit unrelated to Hiroshima, discloses a further level of anticipation, represented by something terrible belonging to the past soon to be revealed.

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[197] Schwab, *Radioactive Ghosts*, p.43.
[198] Masco, *The Nuclear Borderlands*, p.28.
[199] Schwab, 'Transgenerational Nuclear Trauma', p.442
[200] Masco, *The Nuclear Borderlands*, p.28.
[201] Deleuze, *Cinema 2*, p.207-208.
[202] Crucially, the absence of distinction between animate and inanimate objects is part and parcel of Marker's stylistic cipher. Alter points out that: "The act of filming does not discriminate between living beings and inanimate objects but rather freezes what is in front of the camera on the same representational place and renders interchangeable what it captures. To that extent Marker's camera treats all subjects in front of its lens without differentiating between humans, statues, animals, landscapes, architecture, or signs. The magic of cinema both imbues inanimate objects with life and carries out the mortification of living subjects." In Alter, *Chris Marker*, p.46.
[203] Masco, *The Nuclear Borderlands*, p.28.

Visualising the Nuclear Uncanny: Flashback and Mise-En-Abyme in *Hiroshima Mon Amour*

Metadiegetic Hallucinations: Hiroshima Mon Amour and the Visual Representation of Flashbacks

There are two stylistic aspects of *Hiroshima Mon Amour* germane to the nuclear uncanny and to the impossibility of witnessing: the use of flashbacks, and the mise en abyme. As with the rhetorical figures identified in Duras's screenplay earlier in this chapter, these two narrative devices shed light on how truth and knowledge, and, *per contra*, their opposite specular realms, illusion and indifference, are framed in the film. "The illusion" created by these mechanisms enable a discursive framework which challenges axioms linked to witnessing, while also adding up to the "hallucinatory" atmosphere generated by the nuclear uncanny.

Emma Wilson points out that, in cinematic language, flashbacks can assume a double function.[204] They can either be a device aimed at offering more background information about the characters; or, drawing upon Caruth, Wilson observes that they are psychoanalytic interpretative tools, which identify a past traumatic experience recurring episodically, and unexpectedly.[205] Wilson believes that the latter definition is more in line with Resnais's employment of this technique, since: "Resnais' cinematic flashbacks take on the properties and affect of the traumatic hallucination."[206] The fragmented visual narrative of the film, where frames of Hiroshima are followed and, occasionally, overlap with scenes of Nevers, is justified in terms of "intermittencies of her [Elle's] consciousness."[207] Wilson suggests that the female protagonist of *Hiroshima Mon Amour* appears disoriented by the abrupt intrusion of the first flashback utilised in the film, which corresponds with the introduction of Nevers. This state of confusion was observed earlier in this chapter, and it affects the character on a linguistic level, but it is also a consequence of the "sensory confusion"[208] characteristic of the nuclear uncanny.

[204] Wilson, *Alain Resnais*, p.52.
[205] Ibid., p.52.
[206] Ibid., p.52.
[207] Ibid., p.52.
[208] Masco, *The Nuclear Borderlands*, p.28.

The sequence to which Wilson refers, and which presents the first occurrence of a flashback, is significant since it involves a complex web of interlacing thematic and aesthetic layers. In this segment, Elle, who is "the unwilling victim of these returning thoughts," appears to be overwhelmed by her first flashback.[209] The sequence takes place in a hotel room, in which Elle is staying while shooting a film in Hiroshima. Awake before her lover, she is outdoors, on the terrace, holding a cup in her hands. As she moves back indoors, she stops at the doorstep, contemplating her deeply asleep Japanese lover. The camera shows a still frame of the man: he is resting on his stomach, with the top half of his body bare-skinned, while the bottom part is covered by a white bedsheet. This image is substituted, abruptly, by the image of another man. In the words of Wilson: "The image in Hiroshima is supplanted for a mere four seconds by a glimpse of another man lying in pain or dying, blood-stained, a tremor running through his body."[210] Later in the film, Elle will explain that this man was her German lover, and the "glimpse" of the past unveiled by the flashback represents the moment of his death.[211] However, there is more to this juxtaposition of images than Elle's personal story, and the association between her past and present. At the beginning of the film, when Elle is listing, in a monotonous voice, the series of "photographs, reconstructions, explanations" which retrace the nuclear destruction posthumously, alongside a carousel of images which add up to her description, at minute [00:6:26],[212] the camera zooms in on a picture. The inscription, both in Japanese and English, on the bottom of this image reads: "Victims of Dambora Primary School." This photograph depicts a man lying on a bed in a prone position, his right arm bent on his side and his fist clenched. His head is placed on a folded pillow, and he appears to be caught in a slumber. His exposed skin exhibits scarring and burns characteristic of a nuclear explosion. Wilson points out that the scene of the death of the German lover lasts "a mere four seconds", which is the same amount of time that the camera lingers on the picture of the body of the Japanese man.[213]

The section of *Hiroshima Mon Amour* analysed so far signals the convergence of three bodies who, set side by side, "superimposed" one upon another, create a palimpsest in which diverse stories overlap and interlace. In this instance, the use of palimpsest draws upon Max Silverman's articulation of the same term. According to Silverman, in the conception of memory as palimpsest:

[209] Wilson, *Alain Resnais*, p.52.
[210] Ibid., p.52.
[211] The dying body of the soldier is shown at minute [00:58:47] in *Hiroshima Mon Amour*, dir. by Alain Resnais.
[212] Resnais, *Hiroshima Mon Amour*.
[213] Wilson, *Alain Resnais*, p.52.

> The present is shown to be shadowed or haunted by a past which is not immediately visible but is progressively brought into view. The relationship between present and past therefore takes the form of a superimposition and interaction of different temporal traces to constitute a sort of composite structure, like a palimpsest, so that one layer of traces can be seen through, and is transformed by, another.[214]

The past in *Hiroshima Mon Amour* displays the qualities foregrounded by Silverman, insomuch as it "is not immediately visible but is progressively brought into view." This past is represented by Elle's love story with a German soldier during the World War II and is brought to light within the diegesis of the film through the direct, first person testimony of the female protagonist as the narrative advances. However, as suggested above in this chapter, other elements influence the exegesis of *Hiroshima Mon Amour*, which are alluded to more or less explicitly, allowing non-fictional, factual events to make an incursion into the narrative. For example, the trace of the real, also identified as the nuclear index earlier in this chapter, coincides with the picture of the Japanese man seized by the nuclear conflagration and encountered at the museum in Hiroshima. Yet, there exists a hidden trace within this complex structure of entwined stories, which, omitted from the film, can be found elsewhere, in what Ariella Azoulay believes to be source material for Duras's construction of the character of the German soldier.[215] In *Potential history: Unlearning imperialism* Azoulay, detects the "forms of violence [...] disavowed by the archival regime", which inhabit different stages of history, not least the Second World War period.[216] In this context, she contemplates the idea that Duras might have come across a photograph taken by Henri Cartier-Bresson in 1944. Azoulay ponders:

> Did Duras physically encounter, in the archive or the newspaper [...] an image of a dead German soldier? Duras may have known this 1944 photograph of an unidentified soldier's corpse in Strasbourg, by Henri Cartier-Bresson, who, together with Duras, was involved with the journal *Libres*, dedicated to the liberation of prisoners of war and deportees. The dead body was left on the dock uncovered and exposed to Cartier-Bresson's camera - an unlikely situation for a French soldier.[217]

The picture to which Azoulay refers portrays the lifeless figure of a man resting flat on the ground near a bridge, his military cap has fallen from his head and is located next to him, his gloveless hands, the pallor of which is exasperated by the darkness of his garments, rest on his hips shaped in feeble fists, and the feet are crossed. Bracketing away for a moment the occurrence of the first flashback, which is the focus of this section, and jumping to the flashback at minute [00:58:47],

[214] Silverman, *Palimpsestic Memory*, p.3.
[215] Azoulay, *Potential History*, p.251.
[216] Azoulay, *Potential History*, p.250.
[217] Ibid., p.251-252.

Elle recalls the instant when she saw her dying lover lying on the dock of the Loire ("Quand je suis arrivée à midi sur le quai de la Loire il n'était pas tout à fait mort").[218] The position of the man, who is holding his stomach in pain, with his legs bent and arched, could be delineated as being captured only moments before he assumed the definite posture of death. If one were to imagine the fictional soldier's body gradually relaxing, his legs stretching to the ground, his hands leaving the wound on his stomach to stop on his hips, the evolution of this scene, if shown in its totality, would mirror the composition of the man in Cartier-Bresson's photograph.

Furthermore, Azoulay points out that, in her diaries, Duras reflects on "an image etched into her mind" evoked by the April 1945 "bombing reports."[219] In this recollection, she talks about the corpse of a young man ("the little sixteen-year-old-soldier"), whose motionless body is exhibited carelessly, "uncovered and exposed" to the sight of passers-by, left unburied and anonymous on Quai des Arts, and she expresses sentiments of empathy at the thought of this dead soldier's mother.[220] The image of these exposed, vulnerable bodies occupy, ideally, albeit with their differences, the same space as the objects, photographs and reconstructions which Elle absorbs in the museum in Hiroshima. Emma Wilson points out as regards the voyeuristic implications of these sightings:

> Through the Japanese man's words, through the self-consciously composite, 'false' documentary images, Resnais signals the inadequacy of images of this event, this city and its suffering. He opens out our perception of the voyeurism, and the failure, which inhere in his enterprise.[221]

These dead bodies translated into film, to which the German soldier in *Hiroshima mon Amour* resembles, express the same sense of inadequacy which Wilson explores. This fictional character, who preserves the same blurred, anonymous identity of the original (a nameless, unidentified German soldier in Strasbourg, a young soldier on Quai des Arts, one of the many), signals the volume and diversity of casualties punctuating the Second World War. If Azoulay emphasises the fact that "Duras rejects the linear order of the archive that commands her to alternately mourn and burst with joy with her own people" and, instead, "she opens up a space in which it is permissible to grieve for others," likewise the female protagonist of *Hiroshima mon Amour* displays ambivalent feelings when prompted by her Japanese lover to recover some

[218] Resnais, *Hiroshima Mon Amour*.
[219] Azoulay, *Potential History*, p.250.
[220] Ibid., p.252.
[221] Wilson, Alain Resnais, p.50.

memories pertaining to the end of the war.[222] Her response involves a sense of "surprise" (*La stupeur… à l'idée qu'on ait osé… la stupeur à l'idée qu'on ait réussi)* which overlaps with "the onset of an unknown fear" (*une peur inconnue*), as well as evoking the spectre of indifference.[223]

Earlier in this chapter, the idea of this "unknown fear" was associated with the notion of the index, the "eeriness and uncanniness"[224] of which emerges from the ruins left in the wake of the destruction of Hiroshima and intersects with the multiple bombings that had been sweeping a variety of European cities over the course of World War II. By the same token, in this section of the film, this very uncanniness of the index is encapsulated by another referent: not a bombed out city, "Guernica, Libeck, Hamburg, Dresden, Tokyo, Hiroshima, and Nagasaki,""[225] but a series of physical, human bodies: the inanimate figure of a German soldier captured by Cartier-Bresson's camera, the corpse of a young man engraved in Duras's memory, and, elsewhere, superimposed upon them, the bodies of those dying, dead or still alive in Hiroshima, either real or invented. In this way, both Resnais and Duras create a sort of visual genealogy of death punctuating World War II.

It is worth stressing that, according to Resnais, this web of bodies which span the narrative of the film do not engage with one another to form an equal relationship, whereby one story is not the mirror image of the other. In an interview Resnais, he states:

> I was startled to read that certain people try to compare the bomb explosion with the drama of Nevers as if the one were intended to be the equivalent of the other. It's not at all like that. On the contrary, we *oppose* the immense, fantastically enormous quality of Hiroshima and the little story of Nevers, reflected through Hiroshima as the light of a candle is magnified and *reversed* by a lens. The explosion of the bomb over Hiroshima is a gigantic event and it cannot be measured in relation to the case of this woman and her affair. [...] For the spectator who watches from the outside, the "important" thing is the shock of Hiroshima. Of course, if you choose to identify with the heroine, the problem is something else; but that is not what we wanted to express. [226]

Resnais maintains that the intention behind the film was far from suggesting an equivalence between Hiroshima, the bombing of which is defined as a "gigantic event" and should occupy the

[222] Azoulay, *Potential History*, p.250.
[223] Duras, *Hiroshima Mon Amour*, p.23.
[224] Doane, 'Indexicality', p.2.
[225] Saint-Amour, 'Bombing and the Symptom', p.72.
[226] Resnais, 'Hiroshima Mon Amour: A Composite Interview', p.58.

forefront in the spectator's consciousness, and Nevers.[227] The latter is situated on the extreme opposite vis-á-vis Hiroshima, insofar as it is described as a "little story".

Notwithstanding the evidence, the structure of the palimpsest emerges from the film through the traces of the real which inspired Duras in the construction of the characters. Sarah Dillon observes that originally palimpsest was a definition associated with a manuscript whose material component, namely the vellum, was cleared and recycled, for a variety of reasons.[228] According to Dillon, the process of preparing the vellum in order to be reused would result in an imperfect erasure of the original text, which would enable the old manuscript to resurface in time, also aided by chemical treatment of the material. The idea of a "ghostly trace" re-emerging within the text resonates with the hidden or erased references which permeate *Hiroshima Mon Amour*. If the nuclear index, embodied by the picture of the wounded Japanese man showcasing the veracity of the nuclear destruction in its deadly effects, plays a role within this dialogic structure, the "ghostly traces" of the anonymous soldiers who informed Duras's screenplay have escaped the version of history recounted by the "archival regime", for re-materialising in the film.[229]

In this sense, the superimposition of these bodies bearing so many different stories and belonging to opposite contexts offers an alternative interpretative key to the text. The power of the palimpsest lies in its evocative nature, which perturbs the stability of the narrative and roles, confusing and challenging the hierarchy of events presented in their factuality, nuancing the relationship between perpetrators and victims. Azoulay articulates:

> In Duras's script and Alain Resnais's film the same events appeared for what they were: violence, without distance, masquerade, or mercy for either the victims or the perpetrators. This informative and intimate portrayal of what remains out in the open when "the mission is accomplished" rejects perpetrators' claims to factual truth. Such factuality is often enchanted by the imaginary effect of censorship rather than the revelation of censorship's fictionality.[230]

Factuality and fictionality therefore intersect in *Hiroshima Mon Amour* causing an ethical short circuit radicalised by the uncanniness that the interaction between the real and the imagined triggers. The juxtaposition of the living body of Lui with the dying body of the German lover, which

[227] Ibid., p.58.
[228] Dillon, 'Reinscribing De Quincey's Palimpsest', p.244.
[229] Azoulay, *Potential History*, p.250.
[230] Azoulay, *Potential History*, p.251.

recalls, indirectly, the anonymous Japanese man injured during the bombing, and the "ghostly trace" of the German soldiers, evokes what Masco observes about the uncanny, as mentioned earlier in this section:

> Describing the uncanny as a slippage whereby "the distinction between reality and the imagination is effaced," Freud identifies the uncanny in a number of social forms: automatons, ghosts, dead bodies, and doppelgangers. For him, the uncanny is that which blurs the distinction between the living and the dead.[231]

Elle is unable to control the appearance of these intrusive flashes from the past, which are also enabled by the uncanniness of the nuclear index. The images, the photographs that she has passed by during her multiple visits at the museum in Hiroshima, where she has been four times by her own admission,[232] manifest themselves unexpectedly, mix and melt within the convoluted dimension of the palimpsest, and appear undifferentiated from other memories, erasing the distinction between "imagination and reality."[233]

Blurring the Boundaries Between "Victim, Perpetrator and Witness": Mise-En-Abyme and Vicarious Guilt in *Hiroshima Mon Amour*

As pointed out above in this chapter, in *Hiroshima Mon Amour* the characters' fragmented, episodically involuntary, and ambiguous memories are based on stratified, heterogeneous source material from which both Duras and Resnais take inspiration for the making of the film. Resnais states that these stories do not mirror one another.[234] On the contrary, they can be seen through a "lens" which extends the distances between the two worlds represented (Nevers and Hiroshima) and upsets the dynamics of spatio-temporal perception. Despite of this, as was observed in the section above, the superimposition of distant experiences of war and suffering generates an uncanny effect, in which the nuclear trace, and the body-referent attached to it (for example, the photograph of a man disfigured by the nuclear bomb) create a palimpsest of representations which intersect with the life and death of a German soldier, himself the fictional extension of an anonymous man photographed by Cartier-Bresson, and a young boy encountered by Duras. This palimpsest of uncanny bodies (documented, invented) conjures up the story of Hiroshima and

[231] Masco, *The Nuclear Borderlands*, p.28.
[232] "Quatre fois au musée à Hiroshima" in Duras, *Hiroshima Mon Amour,* p.14.
[233] Masco, *The Nuclear Borderlands*, p.28.
[234] Resnais, 'Hiroshima Mon Amour: A Composite Interview', p.58.

World War II through the lenses of "what was purposefully left out" from "the repertoire of images depicting war time violence", as Azoulay observes.[235]

At this stage it is worth taking a step further, in order to read these series of signs, this indexical structure of desperate bodies closely. Why does this representational reconfiguration of events and experiences have a disturbing, hallucinatory, if not, to use the same expression employed by Duras, sacrilegious[236] effect on the spectator? Why does the proximity between victims and perpetrators, despite the admitted intention to create an opposite outcome, and the visual continuity of these deaths, generate confusion, almost a "sensory fulfilment"[237] of signs belonging to specific historical occurrences (namely, the Holocaust, the bombing of Hiroshima) and applied to other contexts? And why should this proximity, this palimpsest of erased and official memories, of "legitimate and illegitimate violence" (Azoulay) create, instead, distance, as seen through a "reversed lens" (Resnais)?

The answer to these questions might lie in the fact that both Resnais and Duras expose some of the World War II events, which are close to their lived experience on different levels, in a more nuanced way. A more critical interpretation of the film, in fact, might suggest that the vicarious trauma of the Second World war in Europe and the spectre of personal implication with the Nazi regime is depicted, arguably, through Elle and Lui's parallel involvement in the same war. Indeed, when Elle asks Lui about his location during the atomic explosion,[238] Lui responds: "My family, they were in Hiroshima. I was fighting the war."[239] Lui puts an emphasis on the fact that he was away from Hiroshima at the time of the atomic attack, as he was fighting in the war. This is a point worth lingering on in order to untangle the complicated relationship of the film with past and contemporaneous histories of violence.[240] Arguably, both characters are situated within an observational realm which lies outside of some of the pivotal events punctuating the Second World War. Elle is engrossed in her personal trauma of loss, through which she filters the bombing of Hiroshima. This trauma also coincides with her "'sexual collaboration' with the Nazi occupier", and the ensuing shame and criminalisation which might cloud the memory of her tragic first love

[235] Azoulay, *Potential History*, p.252.
[236] Duras, *Hiroshima Mon Amour,* p.6.
[237] Masco, *The Nuclear Borderlands*, p.28.
[238] "Tu y étais, à Hiroshima…" In Duras, *Hiroshima Mon Amour*, p.38.
[239] "Ma famille, elle, était à Hiroshima. Je faisais la guerre." In Ibid., p.38.
[240] In this thesis the expression "histories of violence" is borrowed from Max Silverman. In Silverman, *Palimpsestic Memory*, p.5.

- and his dramatic demise.[241] This position renders her both a potential perpetrator, and a victim of the violence following the end of the war who *toundues* experienced, since she "was engaged in a nationally forbidden love."[242]

Lui's experience of the collective trauma of the bombing of Hiroshima is also characterised by an element of vicarious guilt. As observed above in this section, Lui is not in Hiroshima when the bomb is dropped, but he is fighting in a war. Being Japanese, his involvement in the war can be assumed to occur alongside the Axis powers, even though this information is not uttered by Lui, and is not further investigated by Elle. Sanos offering a critical reading of *Hiroshima Mon Amour*, remarks that:

> Neither Resnais, Duras nor their critics elaborated on the fact the Japanese man had escaped the bomb because he was a soldier fighting. The implicit analogies made between the French woman's past German lover and her current Japanese one - both were part of Axis imperialist and violent regimes that were defeated - are papered over in the service of anti-war humanism.[243]

Setting aside the "anti-war humanism" and following the lead proposed by Sanos, the insistent and inquisitive nature informing the relationship between Elle and Lui vis-à-vis her German lover and her youth in Nevers can find justification in this under-explored detail of the narrative. Towards the end of the third act, Elle encourages Lui to account for his curiosity about her love story with the German man, thus: "Pourquoi parler de lui plutôt que d'autres?"[244] After a series of answers, on which Elle follows up with more questions, Lui claims: "C'est là, il me semble l'avoir compris, que tu as dû commencer à être comme aujourd'hui tu es encore."[245] According to Lui, Elle's identity is determined by the fatalistic encounter with this German soldier, probably as much as Lui's own fighting during the war away from his family at the time when the atomic bomb was dropped over Hiroshima, is central to his identity-construction in a post-war New Hiroshima. The German lover is also a point of contact between the two characters. Lui and Elle's past signals an indirect (Elle) and direct (Lui) involvement in the Nazi regime. This implication is also the reason why Lui, unlike his family, escapes the annihilation of the atomic bomb. As mentioned in the introduction of this chapter, however, the ambiguous identity of the Japanese lover also implicitly addresses the colonial legacy of Japan. Shibata delineates this character within the complexities

[241] Sanos, ''My Body was Aflame with His Memory', p.731.
[242] Azoulay, *Potential History*, p.251.
[243] Sanos, ''My Body was Aflame with His Memory', p.737.
[244] Duras, *Hiroshima Mon Amour,* p.88.
[245] Ibid., p.90.

of Japanese past history, as his fragmented identity within the film is determined by his synchronic status of coloniser and colonised. In this sense, she states:

> I consider the Japanese man as a chimaera of colonialism, both the ex-coloniser before the defeat and the "colonised" in the postwar world order initiated by U.S. preeminence. He is an ex-imperialist who supported the construction of (30) the hegemony of Japan in Asia and the Pacific, as well as the racial Other of white Western imperialists. He allegorises a mainstream postwar Japan that has experienced both imperial history and colonial subordination under U.S. rule - a historical path of modern Japan. However, given Japan's prewar history as a non-Western imperial power, he is not the historical Other to Western imperialism. Therefore, his character resists fitting into the simple binary of the coloniser/colonised.[246]

The ambivalent status of the Japanese character, both coloniser and colonised, the racialised *Other* in the film, but also the collaborator of Western forces during the war, are discursively absent from the film, insofar as the focus on peace and the reconfiguration of the bombing within a Western and European discourse, as argued in this chapter, eclipses any critical representation of Japan. This aspect is also conveyed through the character of Elle, whose self-absorption and repressed trauma impede her to leave her story behind and being involved wholly to the history of the city, beyond generalised simplifications. In spite of her being an actor, she keeps swapping roles to inhabit the role of the spectator and assumes a safe distance between what she sees and her experience of the city and its history. Furthermore, as a post-traumatic nuclear subjectivity, she is split into the desire of compassion and her distance from it, as will be further explored in Chapter III.

This aspect is further strengthened by the self-reflexive status of the film, which can also be read as a projection of the relationship between acting and directing a film, and in turn, between the visual and the written. This thread links Elle/Emmanuelle Riva to Resnais/Duras, further blurring the lines between fiction and reality. Around minute [00:29:00], Elle explains to her lover that she is in Hiroshima because she is shooting an international film about peace,[247] indirectly referring to the film which the two actors, Emmanuelle Riva and Eiji Okada, are making. This film retraces the events following the explosion of the atom bomb, framing them through the angle of "peace", in which Elle plays the role of a Red Cross nurse. In this context, the device of the mise-en-abyme (or film within a film) allows a similar mechanism as the one triggered by the use of the flashback. Within *Hiroshima mon Amour* the flashback is a "metadiegetic analepsis", namely a return to a

[246] Shibata, *Producing Hiroshima and Nagasaki*, p.31.
[247] "International" [00:29:22] and "Sur la paix" [00:29:24] in *Hiroshima Mon Amour*, dir. by Alain Resnais.

previous spatio-temporal moment within the story (flashback) whereby a secondary narrative is embedded into a primary narrative (metadiegesis).[248] In this case, following the invitation of Lui, Elle initiates a secondary narrative, occurring in the past in Nevers, which exists alongside a primary narrative, namely the present in Hiroshima. As pointed out above in this chapter, the technique of the flashback disturbs and disrupts the order of the story, particularly in the way that both Resnais and Duras utilise it, insofar as a variety of narrative layers resurface from an apparent erasure to create a sort of "hallucinatory sensory fulfilment."

The strategy of the mise-en-abyme also implies the presence of a hierarchy among multiple stories within the same text. In general terms, a mise-en-abyme can be defined as "any aspect enclosed within a work that shows a similarity with the work that contains it", as Lucien Dällenbach explains.[249] It is undeniable that this definition can be applied to *Hiroshima Mon Amour*: as mentioned above in this section, Elle/Riva is in Hiroshima because she is making a film about peace, the title of which is not spelled out explicitly, but it might as well be *Hiroshima Mon Amour*. Halfway through the film, Resnais transports the viewer into a film set, to which Lui goes to see Elle once more, to convince her of their reciprocal need for another encounter. At minute [00:33:17], after a brief exchange of lines between the two lovers, the story is interrupted by a fictional peace demonstration crossing the streets of Hiroshima and showcasing banners against nuclear armaments.[250] In this scene, Lui and Elle observe the parade marching before their eyes. Elle, the French actress, played by Emmanuelle Riva, herself a French actress, shifts from her double fictional role to that of spectator, confusing once more the hierarchical, linear structure of the film, dividing "the text into two and thereby challeng[ing][...] its unity."[251] Once more, the role of the spectator acquires a central position within the film, and therefore the mise-en-abyme is another instrument which puts an emphasis on the fallibility of sight. By drawing focus towards the detachment between sight and experience, it reiterates that the only solution to this lack of first-hand knowledge is to assume a spectatorial position, or to act out a story told by others. As Elle observes in the first sequences of the film, when her voice-over accompanies real footage of Hiroshima with scenes filmed by Resnais during the making of *Hiroshima Mon Amour*: "Les films ont été faits le plus sérieusement possible. L'illusion, c'est bien simple, est tellement parfaite que les touristes pleurent."[252] To a certain extent, this intertextual element, for which the film shot by

[248] Gérard Genette, *Palimpsests: Literature in the Second Degree* (Lincoln; London: University of Nebraska Press, 1997) p.265.
[249] Lucien Dällenbach, *The Mirror in the Text* (Cambridge: Polity in association with Blackwell, 1989) p.8.
[250] Resnais, *Hiroshima Mon Amour*.
[251] Dällenbach, *The Mirror in the Text*, p.70.
[252] Duras, *Hiroshima Mon Amour*, p.14.

Elle is in line with those which she saw at the museum in Hiroshima, includes the mise-en-abyme into that regime of illusion on to which the film constructs its critical framework. By further fictionalising the event of the atomic bombing of Hiroshima, offering it for public consumption, for the pleasure (and leisure) of tourists, as well as of cinema-goers, Resnais and Duras accentuate the distance between the "hallucinatory and the real" related to the nuclear uncanny. Even though the film-within-the-film device is not, per se, uncanny, it relies on the same element of illusion that supports the conceptual and aesthetic structure of the nuclear uncanny.

Furthermore, the stratagem of the mise-en-abyme allows the characters to assume an instrumental function within the film. Elle is an actor, and, as such, recounting stories, embodying them, conjuring up events which do not present a direct link with her personal experience, is an essential part of her job. However, this does not come across as a genuine act of engagement with the suffering of the other, rather as a performative task that she is undertaking. On the other hand, as an architect, Lui's role is to reconfigure the appearance of a city, to build it anew, to organise space and time. This aspect might recall the reconstruction of New Hiroshima following the atomic bombing. As pointed out by Sanos:

> It might therefore seem unsurprising that the Japanese man is an architect whose aim is to 'rebuild' - suggesting, as one scholar has noted, the reconstruction of a nation - and who has not retreated from the world but, instead, intends to shape it: as Okeida tells the French woman, he does 'architecture. And politics'.[253]

The social position occupied by Lui, and embodied by the figure of the architect who, furthermore, is involved in politics, stands to symbolise not only the destroyed city of Hiroshima, and its subsequent reconstruction, but that of an entire nation. As mentioned above in this chapter, Lui's job fits into the rhetoric of peace. According to Yoneyama peace was equated to "recovery", and, as such, it had to be unbound from "'bitter memories' of the past."[254]

The mise-en-abyme, thus, reinforces the illusion of bearing witness to an event which the two protagonists did not experience in the first place. The use of this technique also mirrors the way Resnais uses other texts within *Hiroshima Mon Amour* as documents mapping out the aftermath of the explosion. Resnais states that his intention with *Hiroshima Mon Amour* was to employ other

[253] Sanos, ''My Body was Aflame with His Memory', p.734.
[254] Yoneyama, *Hiroshima Traces*, p.26.

Japanese films which focus on the atomic bombing of the two Japanese cities. He explains that: "I used newsreels in the scenes that illustrate 'I have seen…'. For the rest, I used Japanese films that dealt with the explosion. I have always wanted to quote films within films as you find in literature."[255] Shibata reads the interaction between *Hiroshima Mon Amour* and one in particular of the Japanese films included by Resnais, namely the 1956 documentary *Still It's Good to Live* directed by Kamei Fumio, through the notion of the palimpsest as formulated by Genette. She asserts that:

> *Hiroshima Mon Amour* is a remaking of Kamei's *Still It's Good to Live*, done in such a way that the relationship between the two constitutes a palimpsest intertextuality in the Genette sense. This palimpsest intertextuality requires a "relational reading" to excavate multilayered contexts and their significance, as Genette maintains.[256]

The palimpsestic structure of *Hiroshima Mon Amour* outlined by Shibata adds a further layer of interpretation to the complex palimpsestic aesthetic of the film in which I engaged within this chapter. Further relevance can be found by Shibata points out that other two Japanese films are included within the first fifteen minutes of *Hiroshima Mon Amour*: the 1953 fiction film *Hiroshima*, directed by Sekikawa Hideo and the 1946 documentary *The Effects of the Atomic Bomb on Hiroshima and Nagasaki*.[257] The latter captures the devastating effect of the atomic bombing on the two Japanese cities in the immediate aftermath of the event. However, while filming in Nagasaki, the production of the documentary was halted by the U.S. Army, who, in turn, were convinced by the film crew to let them complete their work, insofar as it would have served the Americans as material to document the destruction of the two cities. Shibata remarks that the film as well as all footage was seized upon completion. Some copies, however, were retained and it was screened for the first time in 1952 after the end of the American Occupation of Japan. Shibata, who calls this documentary a "ghost movie" insofar as it had never been screened, further observes that:

> It was an achievement for Kamei and Resnais to use footage from this officially nonexistent "ghost" film to offer a vivid portrayal of the victims' severe injuries and deaths, evidence of the hidden reality of human victimisation. Their films also posed a newsworthy challenge to U.S. censorship of visual records of the atomic bombing. This was particularly true of *Hiroshima mon Amour*, and was a groundbreaking aspect of the film, considering the power of its worldwide distribution.[258]

[255] Resnais, 'Hiroshima Mon Amour: A Composite Interview', p.58.
[256] Shibata, *Producing Hiroshima and Nagasaki*, p.8-9.
[257] Ibid., p.6.
[258] Ibid., p.6

Even though Shibata remarks that neither Resnais or Duras had never mentioned the presence of the film in their interviews,[259] its inclusion in *Hiroshima Mon Amour* signals how, within the convoluted structure of the palimpsest, fragments of repressed memories of the past re-emerge within the text, in spite of the imperative of indifference dominating practices of memory and societal axioms. In this sense, the presence of this "ghost film" within *Hiroshima Mon Amour* creates a significant moment of resistance, offering an outlet to convey scenes of destruction which had never been seen that proximate before, if not through the sanitised distance of aerial photographic documentation. Azoulay points out that:

> destruction and violence at this scale were not concealed, only reconfigured. Visual records of the erasure of Japanese cities and their populations were featured in Life magazine. The destruction of a city and its habitants was not censored.[260]

However, this reconfiguration renders the reality of the atomic bombing invisible, by creating a landscape which does not display the real, human and environmental scale of nuclear destruction. To a certain degree, *Hiroshima Mon Amour* re-balances the narrative of the spectacle reiterated by the aerial reproduction of annihilated cities, by using filmic representations to show what was excluded from the mediated hegemonic representation of the aftermath of the atomic bombing.

[259] Ibid., p.6
[260] Azoulay, *Potential History*, p.180.

Chapter III: “Pourrie par la Radioactivité”

Mapping the Uncanny in *Hiroshima Mon Amour, La Jetée and Dark*: Sight, Silence, Touch and the (In)visible Underground.

Nuclear Uncanny: From Post-Traumatic Nuclear Subjectivities to a Palimpsestic Nuclear Space

In the second chapter of this thesis the nuclear uncanny in *Hiroshima Mon Amour* was framed in terms of a “sensory confusion” that erodes the individual’s ability to discern “between the living and the dead, the hallucinatory and the real”.[1] As noted in the previous chapter, the dying body of the German soldier is palimpsestically evoked by the quivering hand of the dormant Japanese character. This body, linked visually and narratively to the realm of the living via the movement of a hand shot in detail (00:19:37),[2] not only connects the past with the present of the story, and therefore the German soldier with the Japanese lover, but it is also a visual superimposition of diverse strata of memory and violence, whose deceptive, “hallucinatory”, and therefore uncanny nature instigates bonds among seemingly separate realms. This palimpsest of bodies is bereft of apparent similarities with the story of those who died or survived in Hiroshima, insofar as they do not show the visible, physical signs of the bomb, nor the invisible effects of radiation toxicity. Still, the way they occupy the space triggers a series of connections reminiscent of the hundreds of thousands of individuals who were in Hiroshima when the bomb was dropped, and whose consequences affected them on a physical and psychological level.

In this chapter, I shall argue that the uncanniness of the image of the German soldier, not yet dead nor really alive, magnifies through an inverted mirror the condition of those who were in Hiroshima when the atomic bomb was dropped, and whose existence was suspended between life and death for an indiscernible period of time. This unburied body, collected the following morning and loaded on a truck,[3] reconnects visually to those individuals left agonising on the streets of Hiroshima, and displayed in the first fifteen minutes of *Hiroshima Mon Amour* through

[1] Masco, *The Nuclear Borderlands*, p.28.
[2] Resnais, *Hiroshima Mon Amour*.
[3] “Le lendemain matin on est venu le ramasser et on l’a mis dans un camion”, in Duras, *Hiroshima Mon Amour*, p.51.

the montage of three Japanese fiction and non-fiction films documenting the events triggered by the bombing. These bodies, in turn, echo progressively more explicit and unsettling footage of corpses of Jewish prisoners held in the concentration camp of Auschwitz-Birkenau, present in what can be considered *Hiroshima Mon Amour*'s companion piece, Resnais's and Marker's 1956 *Nuit et Brouillard*. They conjure up a condensed landscape of death, which oscillates between the necropolis of Auschwitz to the nuclear necropolis of Hiroshima, as will be discussed later in this chapter.

The image of a (nuclear)landscape of ruins and bodies will serve as a stimulus to explore how space informs the selected texts, and constitutes a further argument related to the nuclear uncanny, to be read alongside the theory explored and applied thus far in this thesis. Vis-à-vis the role which bodies play within the conception of the nuclear uncanny, space demands and imposes a multiform dialogic relationship with the characters, and, as a silent witness of the events narrated, records those nuclear memories escaping the same understanding of the subjects involved. The way these fictional individuals engage in their surroundings prompts further reflections on the limits of witnessing. While the characters appear to be alienated from the events they missed witnessing and fail in the effort to make sense of the past, I will explore the role which space plays in preserving those apocalyptic memories.

As mentioned in the second chapter of this thesis, the post-traumatic nuclear subjectivities wandering the streets of Hiroshima in *Hiroshima Mon Amour*, and those who variously populate an overground and underground pre and post-nuclear Paris in *La Jetée*, inhabit a landscape alienated from its past by the destructive action of the atomic bombing. At the same time, these characters move from interiors to exteriors in *Hiroshima Mon Amour*, *La Jetée* and *Dark*, as well as from the overground to the underground. In the overground, they exhibit an oft-conflicting relationship with the city, both dominating it from a distance, but also positioning themselves in the middle of its streets and buildings. In this way, they appear to be embraced by these spectacular beacons of urbanity. The bars, the shops, the night lights, and the museum in *Hiroshima Mon Amour*; the flea market full of indiscernible objects, the museum with its countless series of stuffed animals in *La Jetée*, but also the concrete expressions of the familial and everyday life, embodied by the houses, and the school in *Dark*, elicit an apparent physical contiguity between space, objects and those subjectivities who inhabit them, between animate human lives and their inanimate counterparts. However, as observed in the second chapter, the characters carry on expressing their detachment from the spectacle occurring around them,

performing a sort of disembodied proximity towards their immediate surroundings. The open spaces captured by the camera, despite the sense of dynamicity and freedom that the characters inspire by pacing the length of the metropolitan environment, acquire the contours of an open cage, from which, despite the absence of discernible obstacles, a way out is never envisioned. This sense of inescapability is heightened in the underground space, where, within an atmosphere of bodily oppression, escapism as hallucinatory memories (in *Hiroshima Mon Amour*), dreams and illusion (in *La Jetée*) and possibilities (in *Dark*) are generated.

In *Dark*, *La Jetée*, and *Hiroshima Mon Amour* the pulsating heart of the underground space, with its galleries, caves, cellars, and bunkers is alive with the past and future memories of the characters who inhabit them, and in which a variety of contrasting stories overlap and clash with one another in a final cognitive dissonance, as in a palimpsest. The underground spaces, therefore, will be seen as bearing signs of a trauma that is physically inscribed into the matter of the earth. This viscerality of the nuclear trace, anticipating the themes explored in Chapter IV, whereby the quietly threatening nuclear presence "deep in the bowels of the earth",[4] as stressed in the documentary *Into Eternity*, allows for a material mapping of memory constructed in terms of archaeological and geography stratigraphic process, while also conceptually and aesthetically reconfiguring through a palimpsestic structure. The latter is shaped through an aesthetic structure that moves from the visible scars on the bodies of the survivors of the bombing, as well as the invisible, yet deadly effects of radiation poisoning, to the traces left underneath the surface of the earth, which take the form of galleries, bunkers, underground cities, and cellars.

[4] Madsen, *Into Eternity*, min. [00:28:18].

Doubling and "Displacement of Affect" in *Hiroshima Mon Amour*

In *Hiroshima Mon Amour* the body of the German soldier is shown on the dock of the river in two different scenes of the film: the first time at minute [00:19:37], and the second time at minute [00:58:47].[5] The camera dwells on various moments of the process leading to the soldier's death. In the first instance his figure is introduced in the film, the camera lingers on the detail of the hand for a few seconds, before then abruptly covering the top half of his body through a pedestal shot. This camera movement reveals a young Elle wrapping in a desperate embrace the soldier's still torso, while the face of her lover remains in the foreground of the shot, blood spilling out of his mouth and nose, the eyes open - staring into the void of death to come. This section of the film is underscored by a musical soundtrack. The absence of speech, or an uttered explanation coinciding with the series of images presented - the body of the Japanese man in bed, that of the German soldier lying on the ground, Elle's upset and tense demeanour at conjuring up these visions, real or imagined - privileges a storytelling based on a visual association devoid of explicit background information relative to each character. As explored in the previous chapter, the abrupt appearance of this almost intrusive thought from the past has the function of disrupting the narrative unity of the sequence, imbuing it with "sensory confusion" (Masco) and "traumatic hallucinations."[6]

Unlike the first sudden flash from the past, the second occurrence of the German soldier on screen is accompanied by Elle's recollection of his demise and is replete with details which indicate the long agony bringing about his passing. She recalls the event thus:

> I stayed close to his body all day, and then, the night after. The following morning they came to collect him and they put him on a truck. That night was when Nevers was liberated. The bells of the church of Saint-Étienne chimed… chimed… Little by little he became cold underneath me. Ah! It took him so long to die. When? I don't know exactly. I was lying on top of him… yes… the moment of his death escaped me since… Since that moment, and even after, I can say that I couldn't find the least difference between this dead body and mine… Between this body and my body, I couldn't find anything other than similarities…[7]

[5] Resnais, *Hiroshima Mon Amour*.

[6] Wilson, *Alan Resnais*, p.52.

[7] Je suis restée près de son corps toute la journée et puis toute la nuit suivante. Le lendemain matin on est venu le ramasser et on l'a mis dans un camion. C'est dans cette nuit-là que Nevers a été libérée. Les

Elle accentuates the fact that it took her lover an extensive period of time to expire (*Qu'est ce qu'il a été long à mourir*). Her memory "escapes" the exact moment in which death occurred (*le moment de sa mort m'a échappé vraiment*), even more so because his body and her body had become one thing (*je n'arrivais pas à trouver la moindre différence entre ce corps et le mien*). This section of dialogue further emphasises the sensory confusion between the living and the dead informing the uncanniness of this set-up. Moreover, the German soldier is devoid of the treatment bestowed to human beings, at least momentarily. His unburied, exposed, vulnerable body occupies the same symbolic space of a lifeless object left on a landscape to which it does not belong, and caught in that liminality existing between life and death. In this sense, the film unveils a dialectical tension between the uncanniness of this dehumanised and objectified body, alongside the spectacularisation that its public exhibition engenders, and what the German soldier represents within the context of the Second World War. The ambiguity of this set-up instigates reflections as to what reaction both Duras and Resnais expect from the viewer vis-à-vis this scene, and whether it is their intention to split the spectator between the need for identification and compassion, and the realisation that this sequence belongs to a specific historical moment.

Crucially, the German soldier, Elle and Lui display different degrees of implication with the Nazi regime, while also indirectly conjuring up the colonial history of France and Japan haunting the film, as addressed in the second chapter. Insofar as they are situated at the crossroads between victimisation and perpetration, these characters occupy an ambivalent position within the film, rendered even more cryptic by a lack of details regarding their life-stories. Brett Ashley Kaplan notices that Duras and Resnais envisioned the German lover as an "anti-Nazi," but this is absent from the film.[8] Resnais clarifies this aspect by stating:

> It was out of respect for the viewer's freedom of judgement that we refrained from identifying the German soldier as an anti-Nazi; and in so doing, we refused to whitewash the heroine, to make sympathetic in order to keep a more than willing public from identifying with her.[9]

cloches de l'église Saint-Étienne sonnaient… sonnaient… Il est devenu froid peu à peu sous moi. Ah! Qu'est ce qu'il a été long à mourir. Quand? Je ne sais plus au juste. J'étais couchée sur lui… oui… le moment de sa mort m'a échappé vraiment puisque… puisque même à ce moment-là, et même après, je peux dire que je n'arrivais pas à trouver la moindre différence entre ce corps mort et le mien… Je ne pouvais trouver entre ce corps et le mien que de ressemblances" In Duras, *Hiroshima Mon Amour*, p.51-52.

[8] Kaplan, 'Too Painful to Forget', p.839.

[9] Resnais, 'Hiroshima Mon Amour: A Composite Interview', p.63.

This deliberate omission strengthens the sense of ambiguity defining the relationship between Elle and the soldier. It also represents an additional stylistic element relative to Duras's tendency to "suppress links and causal connections" which Malabou theorises, as discussed in the second chapter.[10] According to Kaplan, this oversight is intentional, and has the aim of highlighting the intricate interpersonal war-time dynamics emerging from the film, as well as spotlighting alternative histories of Vichy France. As Kaplan remarks: "Duras, in refusing neat polarities between victim and perpetrator, contributes to our understanding of the complexities of the occupation of France and challenges tidy allegiances."[11]

The insistence on the duality of the characters casts some light on the "complexities" of the historical context tackled by the film, as well as being essential to understanding the ambiguous condition underpinning and connecting victims and perpetrators. By the same token, it evokes the concept of doubling formulated by Gabriele Schwab. As observed in the second chapter, Schwab identifies "doubling" as one of the qualities employed to map out nuclear subjectivities. Drawing upon Lifton and Mitchell (1996), Schwab elucidates the notion of doubling as follows:

> The concept of doubling [...] helps to understand how people can entirely split off their humane and compassionate self when they perform tasks in the service of mass violence and genocide. [...] More generally, doubling helps to understand one of the most troubling psychological mechanisms that facilitate atrocious acts such as murder, torture or mass violence.[12]

Elle is not involved in "mass violence and genocide" directly, as maintained in this thesis, but her implication with those who were perpetrating these crimes is mediated by her love affair with the German soldier. As such, she is perceived as a character who is split into two: on the one hand, her past self resurfaces through the active narration of the traumatic memory of her time in Nevers. By narrating her past, Elle re-appropriates the unbearable memory of her life-story. As Schwab remarks in *Haunting legacies*, "Telling is an act of reclaiming life and self."[13] By alternating past and present tense, and enabling a shift whereby the Japanese man, from being the recipient of the story, becomes a sort of doppelganger of the German soldier, Elle solicits a reaction from her interlocutor, and, to a certain degree, informs Lui's actions.

[10] Malabou, *Ontology of the accident,* p.61.
[11] Kaplan, 'Too Painful to Forget', p.846.
[12] Schwab, 'Transgenerational Nuclear Trauma, p.441.
[13] Gabriele Schwab, Haunting Legacies: Violent Histories and Transgenerational Trauma (New York: Columbia University Press, 2010) p.175.

On the other hand, as Elle grows aware of her condition, whereby the obscure memory of her past reemerges progressively, she also appears to be able to connect with her "humane and compassionate self",[14] and attempt an empathetic interrelation with the city of Hiroshima. She can be said to suffer together with those who died and those who survived the violence of the atomic bomb, despite the fact that this identification is doomed to fail from the beginning of the film. In fact, as Lui insists several times, Elle *knows nothing* of Hiroshima.[15] In synthesis, Elle's seeming ability to fall in love with a Nazi soldier does not deter her from showing compassion and benevolence, and feeling emotionally connected to the tragedy of Hiroshima, and its people.

Schwab notices that "doubling is also generative of experiences of the uncanny."[16] *Hiroshima Mon Amour* was filmed over a decade after the bombing of Hiroshima, and yet the lingering effects of nuclear destruction feature in the film in a vivid and cogent fashion. These all-pervasive atomic repercussions haunt the direct survivors, but also those who were elsewhere at the moment of the bombing, such as Lui, and those who, like Elle, greeted the news of the destruction of Hiroshima by celebrating, the act of annihilation coinciding with the end of the war. Connecting doubling with the nuclear uncanny, Schwab observes:

> Survivors are haunted by the fear of a death that has already occurred at the level of the psyche. Moreover, the sense of the uncanny is enhanced by the material invisibility of the nuclear threat. [...] The waves of invisible radiation that had infiltrated the survivor's bodies continue the warfare indefinitely and out of sight, so to speak. Beyond its immediate annihilating destruction, the atomic work of death operates as a form of slow violence inside the bodies of victims, thus extending into the aftermath of the official end of the war.[17]

A double of her past self, Elle's unending mourning for her German lover resonates with the timeless unfinished grief of the people of Hiroshima, poisoned by the persistent effects of the nuclear bombing. In defining the theories which inspire his articulation of palimpsestic memory, Max Silverman argues that Freud's concept of screen memory is informed by this ambivalent relationship between spheres and layers of past and present memories, which, evoking one another, are situated in apparent tension, and contradiction. According to Silverman, the elements identifying screen memory include:

> The displacement of affect from one thing to another and one time to another in a chain of association; the overlapping and condensation of different elements in the same "space" to produce a hybrid configuration; the rupture of the notion of the discrete nature of memories and moments. The ambivalent relationality

[14] Schwab, 'Transgenerational Nuclear Trauma, p.441
[15] Duras, *Hiroshima Mon Amour*, p.13.
[16] Schwab, 'Transgenerational Nuclear Trauma, p.442
[17] Ibid., p.442.

> produced by this process means that the substitution of one thing for another at the heart of screen memory is never simply a conscious manipulation of the truth.[18]

Furthermore, for Dillon the palimpsest is characterised by "otherwise unrelated" texts, if not for occupying the same material space.[19] As observed in this thesis, Elle acts out a "displacement of affect", which connects her past torment with the ongoing grief colonising the streets of Hiroshima, and transfers this suffering from the public into private spaces of mourning, from mediated forms which enable a critical "documentation" and mapping out of the touristic sites of sorrow, to the intimacy of the house, which resonates with Elle's own experience of loss and received violence.

Objectifying Suffering in *Hiroshima Mon Amour*: Fragmentation, Visuality and Commodification

As argued in the second chapter of this thesis, the media constructs informing the opening section of *Hiroshima Mon Amour*, through which Resnais edits together sections of three fiction and non-fiction Japanese films, newsreel footage and his own original filmed sections, perform complex negotiations between the desire of witnessing and its impossibility, filling out the space left empty by historical testimony.[20] This choice of merging reality and fiction renders "sensory experience" "untrustworthy and strange",[21] shaking the already unstable bases on which witnessing is balanced, framing these vicarious media constructs as an insufficient way of reaching knowledge and understanding. This process, ultimately, renders the same paradigm of spectatorship uncanny. As such, Resnais never includes Elle within the frame of the camera in the first section of the film. There is no assurance, no certainty that she is an active witness of what she states to have seen in Hiroshima. The camera is never turned around to reveal who hides behind the point of view. Among the stage directions in the screenplay, Duras marks down in brackets: "We never see her in the act of looking."[22] Writer and director alike exacerbate the doubt relative to Elle's presence in the streets of Hiroshima, or in the houses of those who survived the bombing. But Elle can be seen as an intermediary used by Resnais to evoke another character in the film who

[18] Max Silverman, 'Screen Memory', p.125.
[19] Dillon, 'Reinscribing De Quincey's Palimpsest', p.245.
[20] As mentioned in the second chapter, the state censorship characterising the Allied Occupation of Japan translates into a ban "of images showing the effects of the atomic bombs" (Morris-Suzuki 2005:93-94).
[21] Masco, *The Nuclear Borderlands*, p.28.
[22] Duras, *Hiroshima Mon Amour,* p.10.

is absent, but who might as well be on the other side of the camera: the spectator. The spectators to which the point of view ultimately belongs are those same French people who Resnais considers indifferent to the bombing of Hiroshima, and who are called to understand and make meaning out of these images, of what they convey and signify. Crucially, Shibata believes that the techniques belonging to the avant-garde movement used by Resnais in this context, namely, "alienation, distanciation, and fragmentation," through which he frames the *hibakusha* in the hospital scene, both erase their histories and identity and "the contexts of their victimisation."[23] Shibata observes that:

> On the one hand, the fragmentation of the hibakusha formulates a resistance to the force that would victimise them by integrating their indescribable experience into a mechanical and rational intelligibility. On the other, this hollowing out of the history and identity of the hibakusha signifies Resnais' second massacre of them, since the abstraction of the hibakusha also echoes the fragmenting, abstracting, and exterminating power of the atomic bomb. Resnais' blanking out of the hibakusha conveys the absolute terror of the annihilating power of the atomic bomb, and this valorisation of nuclear power erases the factual existence of survivors and witnesses to this catastrophe, such as Ota and Hara. In this way, Resnais engrosses us in the moment of atomic explosion while preventing any ramifications.[24]

Resnais, however, is not limiting his representation of the *hibakusha* to "a mechanical and rational intelligibility". While recreating "the fragmenting, abstracting, and exterminating power of the atomic bomb", he reproduces the same dynamics of indifference overwhelming Western spectatorships and informing their perception of Hiroshima. As observed in Chapter II, Malabou believes that destructive plasticity, by generating indifference, disrupts the subject from their past self, an act expressed through a break of temporal continuities.[25] In this sense, the separation of the *hibakusha* from their own histories and context of victimisation outlined by Shibata can be seen as a process produced by the same spectators, whose indifference influences and manipulates their discernment of the suffering of the other, creating a temporal rapture between the past of the *hibakusha* and their current identity. This resonates with a broader Japanese national context for which the *hibakusha* had assumed a status of invisibility beyond the United States occupation of Japan. As Shibata maintains:

> The cover-up of the *hibakusha* victimisation during the U.S. occupation and the lack of understanding of their hardship in subsequent times created a specific social environment. The *hibakusha* confronted indifference and discrimination

[23] Shibata, *Producing Hiroshima and Nagasaki*, p.78.
[24] Ibid., p.78.
[25] Malabou, *Ontology of the Accident*, p.38.

> in both subtle and blatant forms, especially when they moved to remote places such as Tokyo and Hokkaido.[26]

This stratified indifference, moreover, denies and opposes connections between events which, according to Resnais, should be put in communication with one another, such as World War II, the bombing of Hiroshima and the Algerian War. In this way, these images are, once again, informed by the spectre of non-memory; by denying the *hibakusha* their identity and history, Resnais constructs divided and fragmented post-traumatic nuclear subjectivities whose memories are doubly eroded, first by the destructiveness of the bomb, and then by the indifference of the Western public.

Furthermore, Elle's physical absence from this section is indicative of the role that sight plays within the film. The oculocentric dimension of *Hiroshima Mon Amour* was discussed in Chapter II and expounded using Masco's interpretation of "overstimulation," which, in turn, expands on the concept originally developed by Walter Benjamin. Germane to the theme of the prevalence of sight is also Croombs's articulation of "visuality", which, originally theorised by Michel De Certeau, he applies to his interpretation of *La Jetée*. According to the notion of visuality: "Contemporary critical discourses associated modernization with the privileging of vision and the concomitant ideal of an object world that could be flattened and rendered legible."[27] Within this context, and drawing upon Baudrillard, Croombs points out that, in an image-dominated society driven by advertising, the subject becomes superfluous:

> Jean Baudrillard rightly pointed to the ubiquitous tendency within the period's advertising [...] to remove the subject from the image altogether, because "his" role is coterminous with the order he puts into things, an order he experiences from without.[28]

This same conceptualisation of "visuality", whereby, to paraphrase Baudrillard, the subject is left out, suits *Hiroshima Mon Amour*.[29] Arguably, the image-saturated aesthetic characterising the first section of the film creates correspondences between the axiom of visuality and an object-based ritual of commodification of memory culture. In this way, suffering is reified, and therefore banalised and flattened, de-subjectivised. This is why Elle's physical presence is deemed to be superfluous, and actively removed from this section. However, her position in this context is

[26] Shibata, *Producing Hiroshima and Nagasaki*, p.68.
[27] Croombs, '"La Jetée" in historical time', p.33.
[28] Ibid., p.33.
[29] Jean Baudrillard, *The System of Objects* (London; New York: Verso, 1996), p.28 Ebook.

conflicting. Not only does she assume the position of observer of the images shown (therefore posited as a spectator), a role imbued with voyeuristic connotations, but, because of it, she is both complicit and resisting the narrative that these objects enforce. In fact, the act of looking at fragments of real and manufactured images of suffering and memory is punctuated by her uttered interpretation of this visual content - the passivity of sight is counterbalanced and empowered by the agent deed of talking about what she sees, or, arguably, of inventing a story about it.

This oxymoronic coexistence between diverse perceptual spheres, the visual realm and the spoken word, which, at once, influence and clash against one another, is expressed vividly in the section starting at minute [00:11:28].[30] Historical footage of a public protest anticipates a series of images displaying sites of consumerism, wherein monuments and memorial buildings are put forward as merchandise. In the exact moment in which Elle captures the attention of her interlocutor with an “Ecoute-moi", a close-up of a scale reproduction of the Genbaku Dome appears on screen.[31] After the bombing of the city, this building was elevated to a peace memorial, since its metallic structure endured the devastation caused by the bombing of Hiroshima, despite being positioned in the vicinity of the bomb’s epicentre.[32] The miniature reproduction of the memorial present in the frame consists of a shining dome emerging from a core structure decorated with pearls, and surrounded by palm-shaped trees. Positioned on a wooden pedestal, the reproduction is, in turn, placed on top of a gift box. As mentioned above in this section, the image of the small-scale replica of the dome is anticipated by original footage of a public protest, framed through a bird’s eye view shot, which, panning past the mass of individuals filling the streets and embracing the buildings, shows those participating in the protest moving like a river, as well as being a double of the actual river flowing nearby, and included in the scene. The pan shot ends just in time to exhibit the Genbaku Dome in its entirety, before cutting to the close-up of the model displayed in the shop.

In addition to the retail replica of the memorial building, on the right side of the frame, out of focus, it is possible to discern the blurry bare contours of the Hiroshima Children’s Peace memorial. This

[30] Resnais, *Hiroshima Mon Amour*.
[31] Duras, *Hiroshima Mon Amour*, p.14.
[32] For references about the complex archaeologies of peace memorials, and in particular how a monument identifying the war was translated into a symbol of peace, see Olwen Beazley, ‘A Paradox of Peace: The Hiroshima Peace Memorial (Genbaku Dome) as World Heritage’ in *A Fearsome Heritage: Diverse Legacies of the Cold War* ed. by Wayne Cocroft, and A. J. Schofield, (London: Routledge, 2016) pp.33-50. Ebook Central ebook.

monument was erected in 1958[33] to commemorate the passing of Sadako Sasaki, a girl who died at age 12 after developing radioactivity-linked leukaemia.[34] At this point, the montage cuts into a medium shot, which enables the viewer to realise that the two objects are situated in a shop. This shot opens the view to various souvenirs of Hiroshima on display, including multiple copies of the Genbaku Dome and the Hiroshima Children's Peace memorial, as well as calendars, guidebooks, postcards and other memorabilia evoking, indirectly, the atomic bombing of the city. The ensuing two shots present a similar structure. In order, a shop reveals, in the background, the still figure of a woman who emerges from the plethora of objects, almost buried by them as they saturate, inundate, the narrow space in which they are situated, alongside various banners hanging from the walls, with writing in Japanese, and an invitation in English directed to tourists which reads: "How about a card for correspondence commemorating to-day's occasion?" Shibata observes that the female figure in the shop is "a blind female clerk quietly standing across the counter like part of furniture,"[35] an element which links back to the ocular-dimension of the film, while also challenging axioms of visibility.[36] Another shot captures a wooden kiosk located on the riverbank, on which a bilingual sign in Japanese and, more prominently, English denotes it as a "gift shop" - which has the appearance of being closed for the day. In the following shots, the montage introduces the original monuments of which these tokens are retail, sellable copies, while the mellifluous voice of Elle continues speculating about memory and forgetting.

In this instance, the series of shots emerging from the close-reading of this section frame the atomic bombing of Hiroshima within the context of commodity-fetish memory culture, whereby nuclear memory is framed as a reproducible object, reified, traded as a commodity, and sold as a kitsch souvenir in order to nourish mass tourism. The montage through which these artefacts are presented, the way they are shot and framed, the angles and the focus utilised make visible different details related to them. The transition from the historical footage panning the area where the dome is located, to the close-up of the replica, and, finally, to a medium shot of the shop, and so on, engenders associations between real buildings, which signal a historically inscribed and animate past and present, with their commodified, disembodied counterparts, which advocate for historical amnesia. Brought together by the montage, the conflation of these two sides produces a fragmented conception of temporality. Memory and forgetting are framed within the text via this

[33] It is worth noticing that *Hiroshima Mon Amour* came out in 1959, therefore the images related to Hiroshima featured in the film offer an up-to-date panorama at the city.
[34] Manhattan Project National Historical Park, *The Story of Sadako Sasaki*, 2023 <https://www.nps.gov/articles/000/the-story-of-sadako-sasaki.htm> [accessed 27 February 2024]
[35] Shibata, *Producing Hiroshima and Nagasaki*, p.81.
[36] Resnais, *Hiroshima Mon Amour*, min.[00:12:06].

framework. The past to which these objects refer, namely the bombing of Hiroshima, is both objectified and rendered a-temporal. In relation to *La Jetée*, Croombs points out that these objects acquire a performative role whereby "the historicity of distinct cultural forms" disappears "into a homogeneous collection of images."[37] In the context of *Hiroshima Mon Amour*, it is clear that the visual focus of the film is the city of Hiroshima, filmed over a decade after the atomic bombing. In presenting it, the director lingers on the iconography represented by its memory sites. However, and returning to Silverman's articulation of screen memory, there appears to be a "condensation of different elements in the same 'space'. In *Hiroshima Mon Amour*, this "condensation" takes the shape of a conflation between memory and forgetting. A tension emerges between the commodification of nuclear memory, for which "visuality" belongs to objects, to the way they take stage (on the contrary to the shopkeeper, who is "blind" to this process of objectification of memory), replacing the suffering of individuals within the frame, and its physical, corporeal reality - through which individuals become, once more, the concrete referents, both signifier and signified of suffering. Despite Silverman's claim in relation to screen memory, in *Hiroshima Mon Amour* this tension translates into a sort of "manipulation of the truth." This manipulation is visually signalled by the montage of documentaries, real footage and filmed reconstructions (namely, fragments of the fiction film *Hiroshima*), by the juxtaposition of souvenirs and individuals, which remove a clear distinction between reality and speculation, viscerality and "a glossy world of plastics, electric appliances, and magazine advertising."[38]

The intermediation of Elle's stream of consciousness, through which she remediates those already mediated images encountered in Hiroshima, initiates a discourse which sheds light on the ongoing and lasting effects of the atomic bombing, and the role of the unfinished mourning triggered by the atomic destruction. While Elle's own presence in Hiroshima is challenged, doubted, the visual narrative channelled by the camera becomes more and more intimate. It transitions from the museum to the hospital, from the square to the river bank, for, finally, bringing into view a variety of domestic environments (houses, bathrooms, bedrooms), shifting from the public to the private, and vice-versa. This movement reveals the persistence of the atomic trace shaped as "a form of slow violence inside the bodies of victims."[39] The survivors are occasionally addressed as "rescapé" (*survivors of an accident*), other times as "survivants provisoires de Hiroshima": provisional survivors of Hiroshima. This expression further strengthens linguistically the liminal condition of those individuals trapped between life and death. Through the walk across

[37] Croombs, '"La jetée" in historical time', p.35.
[38] Croombs, '"La Jetée" in historical time', p.26.
[39] Schwab, 'Transgenerational Nuclear Trauma, p.442

the museum, Resnais focuses on a cemetery of objects which shape a rituality of "visuality" informed by the idea of detachment. The camera dwells on hair, for example, which people in Hiroshima lost after the deflagration, as a side effect of the atomic blast. But the subjects to which this hair belongs are not included in this visual journey. Here, as from the first shots of the film, visuality is shown to lack a subject, and even to be deprived of a physical body. However, from around minute [00:09:00],[40] these fragmented bodies are given a physiognomy, first through the usage of archival footage of the period following the bomb's explosion; and later through new footage accumulated by Resnais during filming. If the newsreel footage, and the 1946 documentary *The Effects of the Atomic Bombing on Hiroshima and Nagasaki* capture the survivors outside in the streets of Hiroshima, and the utter destruction of these Japanese cities following the bombings, Resnais uses segments of Kamei Fumio's documentary *Still It's Good To Live* to offer a glimpse of the interior of the survivors' houses, from around minute [00:10:00].[41] The camera peeks inside the bedrooms, showing children and adults alike sleeping, and praying, exhibiting unequivocal signs of radioactivity poisoning, and scalding. Inside a room, a young person is framed while playing a *koto*, a kind of zither considered to be "the national instrument of Japan," as their face affected by radiation exposure and blindness is framed while concentrating over the wooden board. Another woman, shot from the back, her image reflected by the mirror, combs what is left of her hair. Another similar shot can be pinpointed later in the film, when Elle, running away from her Japanese lover and returning to the hotel room, is framed in front of the bathroom mirror at minute [01:11:04].[42]

As these images explicitly related to the tragedy of Hiroshima and including physical, living individuals wounded, devastated by the consequences of the bomb appear on screen, other images emerge, and mirror the gestures, the environments in which the former are displayed initially, as in a palimpsest. As mentioned above in this section, this technique produces a "condensation of different elements in the same 'space.'"[43]As well as taking place visually, the process of condensation and superimposition of conflictual images/meanings occurs discursively in relation to the formulation of more abstract concepts, such as memory and forgetting, as will be argued in the section below in this chapter. The latter, in turn, serve to connect Elle's story with the nuclear bombing of Hiroshima semantically.

[40] Resnais, *Hiroshima Mon Amour*.
[41] Ibid.
[42] Ibid.
[43] Silverman, 'Screen Memory', p.125.

As pointed out above in this chapter, while the camera dwells on the symbols of commodified memory culture, Elle's words punctuate these sequences, imbuing the diverse meanings of the images present on screen with ambiguity, while nuancing the complexities inherent to memory. In relation to this, Kaplan asserts:

> Already in 1959 "Hiroshima" had been commodified; indeed, when Elle insists that she remembers, she conjures a mediated "memory" of what has already been rendered representation in the museum. This is no one's memory but a state's attempt to instil memory.[44]

Crucially, Resnais showcases the museum's artefacts as an expression of an official state memory. In turn, as argued in both the second chapter and the section above, Elle enacts a re-mediation of memory, whereby the original mediation has been conveyed by both the museum and the shop's deluge of objects, engaging verbally, rather than corporeally, with the images on screen. However, it is also true that Elle might be seen as resisting the enticement which these objects and images exhibit. As observed in the second chapter, the repetition of the sentence "Faute d'autre chose," a sort of epistrophe interposed between the different elements listed by Elle and permeating the museum, has the effect of instilling doubt in her claims, rather than enabling a congruous description of what she sees. As Malabou points out, "repetition scatters, disseminates."[45] In the sequences analysed in the section above, the images related to the sellable signifiers of commodified memory culture, are concomitant with Elle's dialogue with Lui, which is centred on a reflection on memory and forgetting. Elle's lines are characterised by the repetition of the expression: "Comme toi" (*like you*). This time placed at the beginning of the sentence (rather than at the end, as is the case of "Faute d'autre chose"), the anaphora "Comme toi" can be read as an attempt to create an empathetic connection with Lui, and, *mutatis mutandis*, with Hiroshima.[46] Yet, it also rebuts this connection, by widening the gap between Elle's own life-story, and the city of Hiroshima. The insistence of "Comme toi" mirrors the same intentions applied to "Faute d'autre chose," and as such it emphasises the divergences between the two realms, which, nonetheless, do not preclude the desire for empathetic proximity.[47]

[44] Kaplan, 'Too Painful to Forget', p.843.
[45] Malabou, *Ontology of the Accident*, p.62.
[46] Duras, *Hiroshima Mon Amour*, p.14.
[47] Ibid., p.14.

But there is more to this section of dialogue than a confirmation of what was argued in the second chapter in relation to the museum scene. Returning to these lines with the benefit of hindsight, with the knowledge of Elle's story as unveiled to Lui in its entirety later on in the film, the focus on memory and forgetting at the core of her words assumes a double meaning, both in relation to the bombing of Hiroshima, as well as to Elle's own experience of violence and torture. It is through this theorisation of memory and forgetting that Duras and Resnais link together Hiroshima with Elle's private mourning, as the narrative moves from the flattened overground of Hiroshima, where the sites of hyper-modernity and consumerism are imbued with sanitised effigies of commemoration, to the underground, which offers a context into which memory can be unleashed, and wherein memory and forgetting can coexist in the same perceptual space.

As mentioned above in this section, Schwab maintains that telling one's story, particularly within the milieu of received brutality, "is an act of reclaiming life and self."[48] According to Schwab, torture undermines language and memory, producing a psycho-physical response leading to forgetting and amnesia,[49] wherein the latter is identified as a coping device utilised by survivors of trauma to block out "intolerable memories."[50] Elle is a recipient of torture, and this emerges as a public act of violence, signalled by the almost ritual shaving of the head in the town square; and as the private completion of an extreme punishment, culminating in her enforced isolation in the bedroom and the cellar. Despite the fact that she is haunted by the ghost of forgetting, Elle stresses several times in the first section of the film that memory is part of her identity; she is gifted with it.[51] However, in the following line she utters, memory and forgetting are formulated as connected entities which seep into one another, dissolving into each other, rather than belonging to separate spheres. Elle tells Lui: "Comme toi, je suis douée de mémoire. Je connais l'oubli."[52] She is endowed with memory. She knows forgetting. Yet again, Duras expunges conjunctions from the sentence, so that forgetting, seemingly, appears to be a component of memory, a side effect enrooted into it, and, ultimately, a necessary condition of remembering.

[48] Schwab, *Haunting Legacies*, p.175.
[49] Ibid., p.175.
[50] Ibid., p.164.
[51] "Je suis douée de mémoire," In Duras, *Hiroshima Mon Amour*, p.14.
[52] Ibid., p.14.

Far from being a void, an empty space, the process of *forgetting* engages in a more active, all-encompassing relationship with the subject, insofar as it is formulated as an excess of past, or, to use Schwab's expression, an "intolerable memory." As a consequence, not only are memory and forgetting condensed in the same perceptual space, indistinguishable one from another, but Elle offers her framework of memory and amnesia as the layer upon which Lui's understanding of Hiroshima should be constructed and superimposed - despite his peremptory interruptions aimed at doubting, if not dismissing and denying, her claims.[53] In this sense, the expression: "Comme toi", repeated three times and placed at the beginning of the sentence, signals her need for reciprocity as well as a "displacement of affect", her unbearable memory seeking a new raison d'être inside the suffering of Hiroshima, while she also challenges the images that function as a background to her act of telling.

Indeed, affect is also displaced in terms of spatiality. In fact, the diversity of spaces exhibited in the film engender and inform a multi-layered narrative. As observed in the introduction, the signs of nuclear trauma emerge as a scar in the underground spaces and enable an exchange of historical meanings that breach out of the immediate nuclear signifiers. Before exploring how the nuclear trace is inscribed into these subterranean environments, the theme of torture as introduced above in this section, with its close ties with memory and forgetting/amnesia, will enable a reading of *Hiroshima Mon Amour*, *Dark* and *La Jetée* comparatively. In both of these films and the series, the underground spaces are framed as sites of torture, although the characteristics they assume rely on the historical and cultural contexts to which they refer. Silverman observes that *La Jetée* owes its aesthetic of torture to Hiroshima, the World War II, but also the Algerian War's strategies of violence: "The references to the Second World War and Hiroshima are clear, but there are also references to the apparatus of torture used in Algeria by the French army."[54] Croombs puts *La Jetée* side by side with the journalist Henri Alleg's experience of torture in Algeria in 1957, to which he later testifies through a book, *La question*. Croombs believes that the scenes of torture in *La Jetée* mirror those documented by Alleg in his book.[55] It is unclear whether some of the themes in *Hiroshima Mon Amour* draw upon the contemporaneous events surrounding the Algerian War; however Sandrine Sanos reads the film through a historical lens, contextualising it within the various themes that inspire it - but also condemning, as argued in Chapter II, the film's dynamics drawing on "universalism" which risk

[53]"Non, tu ne connais pas l'oubli. [...] Non, tu n'es pas douée de mémoire". [No, you don't know the oblivion [...] No, you're not gifted with memory.] In Ibid., p.14.
[54] Silverman, *Palimpsestic Memory*, p.50.
[55] Croombs, '"La jetée" in historical time', p.26.

banalising the same understanding of the complexities related to the Algerian War and the contextual history of Hiroshima. Reconducting the analysis of the film to an aesthetic framework, as is the purpose of this thesis, and accepting that the Algerian War was a necessary theme confronted by the film, Elle's state of captivity in the cellar can be framed in terms of torture, particularly in relation to the way she inhabits and qualifies this space. In turn, the way Elle engages in the environment of the cellar evokes the concentration camp depicted in Resnais's *Night and Fog*, as will be argued later in this section.

Despite it being conceived over seventy years later, *Dark* recontextualises within a different set-up the same torture devices utilised in *La Jetée*. First of all, as outlined in the first chapter, the bunker is part of a space determined by the overbearing presence of a local nuclear power plant. Alongside the reproposition of an underground space represented by the labyrinthine cave system underneath the nuclear power plant (and parallel to *La Jetée*'s underground camps), the bunker assumes a central position in negotiating a complex aesthetic. The series is imbued with cultural referents deriving from 1980's Germany, as observed in the first chapter of this thesis, but also with those legacies of nuclear anxiety belonging to the Cold War period. Drawing on these legacies, the bunker is a structure which lies in the threshold between two historical realities, the Second War World, and the Cold War, and as such is the ambiguous expression of both and none at the same time. Significantly, *Dark* does not mention directly any historical background onto which its story pans out. It creates, instead, a self-sufficient universe devoid of any concrete reference to history as it happened - if not for the occasional fragments of past which appear and disappear in a desynchronised fashion, in the form of pop cultural references (like songs), aesthetic markers (clothes, furniture belonging to the past) or brands (the wrapper of *Raider*/*Twix*). However, in Chapter I it was noticed that the constant presence and reference to the nuclear power plant is aimed at constructing a dialogic relationship with contemporaneous events, namely the decision to shut down all the nuclear power plants in Germany by 2022. By the same token, the bunker echoes these same dynamics via an indirect association with the war time period and the Cold War era. In *Bunker Archaeology*, Paul Virilio describes the evolution of his perception of bunkers, through which he puts together a phenomenological reading of these underground shelters as potential archaeological discoveries and case-studies. At first, he considers them as "vestige of the Second World War, only an illustration for a story, the story of total war";[56] before then justifying his attraction for these structures through an archaeological

[56] "This solid inclined mass of concrete, this worthless object, which up to then had managed to martial my interest only as a vestige of the Second World War, only as an illustration for a story, the story of total war." in Virilio, Paul, *Bunker Archeology* (New York: Princeton Architectural Press, 1994) p.11.

lens, and likening them to “a complete series of cultural memories [...] the Egyptian mastabas, the Etruscan tombs, the Aztec structures.”[57] As John Beck remarks, the relevance of Virilio’s reflections contained in *Bunker Archaeology* derives from their ability to signal “The complex set of associations the bunker embodies – security and terror, solidity and vulnerability, past conflicts as warnings of future devastation.”[58] Furthermore, and relevant to how the bunker in *Dark* is framed, Virilio highlights a sort of ideal contiguity, despite their dissimilarities, between bunkers and housing, “the urban habitat, and the shelter”[59] thus:

> This immediate comparison between the urban habitat and the shelter, between the ordinary apartment building and the abandoned bunkers in the hearts of the ports through which I was travelling, was as strong as a confrontation, a collage of two dissimilar realities. The antiaircraft shelters spoke to me of men’s anguish and the dwellings of the normative systems that constantly reproduce the city, the cities, the urbanistic.[60]

“A collage of two dissimilar realities” as well as being “warnings of future devastation” in *Dark* the bunker is subjected to a constant metamorphosis, an aspect that emphasises the space-time dysmorphia onto which the show is constructed. In this sense, at times it takes the shape of an underground squat, or the operative centre for an investigation. But mostly the bunker is turned into a bedroom functioning as torture chamber, where a child is held captive. This jarring association between ordinary and violence, the apartment of which Virilio talks about, and the antiaircraft shelter, occupy the same semantic space in *Dark*. Its first appearance in the series occurs in Episode 1[61] and is linked to the disappearance of a teenager from town - Erik Obendorf. The scene begins with a close-up shot of an old-fashioned television screen, where a video of the song, *You spin me around (like a record)* by British band Dead or Alive, is played. The song was a hit record in the mid-80s and is a clear signifier that this is a central period for the narrative strategies in which the show engages. An ensuing series of three shots focus on other details of the environment introduced: a set of wooden toys, a panda bear sat on a chair, and concludes with a tray with a half full glass of milk and a saucer with an untouched chocolate biscuit on top. These shots, with their focus on inanimate objects, precede the introduction of the human being held in the room. At this point, Erik is pictured while lying on the bottom side of a bunk bed, where the latter is situated in a room furnished in a stereotypical aesthetic fashion attached to male

[57] Virilio, *Bunker Archeology*, p.11.
[58] John Beck, ‘Bunker Archaeology’, in *The Virilio Dictionary*, ed. by. John Armitage, John, pp. 41-42 (Edinburgh: Edinburgh University Press, 2013) Ebooks Central ebook
[59] Virilio, *Bunker Archeology*, p.13.
[60] Ibid., p.13
[61] ‘Secrets’, *Dark 1*, min. [00:23:11].

childhood. The prevalent colour of the room is blue, and is decorated with figures of stylised animals, while the bed covers draw upon a Christmas theme.

Erik appears at first with his back turned away from the room and positioned facing the wall, his hands covering his ears at the sound of music coming from an intradiegetic source. The camera turns around to offer a medium shot of the television once again; the following shot exhibits the room in its entirety, while the camera zooms out ever so slightly towards the end of the scene, in order to linger on the sense of uncanniness created by the incongruity of the elements emerging from the frame. In fact, surrounded by common, and seemingly ordinary objects associated with a reassuring domestic environment, and related to infancy (the toys, a red wooden desk, a lamp and two chairs), a metallic chair with a variety of obscure devices and connected to wires occupies the centre of the stage, dominating and yet appearing as semantically detached from the other objects.

As explored so far in this chapter and in the second chapter, in *Hiroshima Mon Amour* and *La Jetée*, a network of objects saturates the overground spaces and allude to a consumerist worldview which further detaches the subjects from their surroundings, as well as from the historical events which these same *things* should simulate. Unlike these two films, in *Dark* objects feature in the bunker, characterise the space, and offer an idea of temporality, which, nonetheless, produces a conflation of past and present: in fact, as in the example put forward, Erik comes from the year 2019, while the room evokes the 1980s. As mentioned in Chapter I, this is the expression of what Anna Batori addresses the "nation's stuckness in history."[62]

As Silverman maintains, Freud envisioned "banal objects as the containers and carriers of repressed but latent memories."[63] In this instance, *Dark* summons up these latent memories by, seemingly, creating a connection between the uncanniness generated by spaces evoking the nuclear threat (the bunker, the nuclear power plant), and, vicariously, Chernobyl, and transferring these uncanny memories through association via those objects which fill up these same spaces. Silverman expands the argument related to "banal objects" by stating:

[62] Batori, '"Everything is Connected", p.10.
[63] Silverman, 'Screen Memory', p.125.

> Surrealism, of course, actualises this process most spectacularly by overlaying the present everyday with the drives and fears of the unconscious to produce uncanny assemblages, resembling Freud's description of displacement and condensation in dreams.[64]

The everydayness and apparent innocuity of the toys decorating the bunker-cum-bedroom are construed as uncanny via their re-contextualisation into an environment whose domesticity is doubted, insofar as its shifting role is attached to the idea of imprisonment and torture. These objects do not exude a state of homeliness and the familiar, but of fear and imminent threat, also because they belong to a time that is "out of joint," vis-à-vis the temporal dimension to which the character held captive, Erik, belongs originally.

Furthermore, even though in this first scene taking place in the bunker Erik is not wounded or attacked physically, some elements which constitute the semiotics of torture can be detected. The continuous, piercing sound of music, *per se* apparently harmless, inflected to a vulnerable subject and causing sleep deprivation, for example, is one of those. Erik's body language expresses a desperate need for resting: he is inside the bed, with his hands, at first, covering his ears to block these intrusive, repetitive noises. According to Schwab:

> Torture [...] operates at the most primordial and archaic levels of body, mind, and soul. It uses a violent assault on the senses to break down or kill the self. Torture can operate through sight, sound, smell, and touch. Sensory deprivation and assault - blindfolding, isolation, sleep deprivation, deafening noise, and so on - aim at a fundamental disorientation and disintegration of the self, inducing states akin to psychosis.[65]

These subtle, but still significant torture methods which punctuate this scene are reinforced later on in the same episode. In a second scene the ritual of torture of which the metallic chair, in turn reminiscent of an electric chair, was only a symbolic remainder, alongside the insistent noises from the television, and the ensuing sleep deprivation are rendered more extreme upon a petrified Erik. The methodologies used in this context can be juxtaposed with the techniques of torture which play out in *La Jetée*. In the second occurrence of the bunker as torture chamber in *Dark*, the same television which, in the precedent scene, was showing a British pop song, now is playing Nena's *Irgendwie, irgendwo, irgendwann*, a German hit from 1984. In this scene, Erik is sitting on the metallic chair, and a man whose face is not visible, is fastening his ankles, wrists and chest with leather straps. These actions appear to be expertly and confidently conducted. After

[64] Ibid., p.125.
[65] Schwab, *Haunting Legacies*, p.158.

positioning a pendant around Erik's neck, which a detail shot indicates as a pfennig coin from the 1950's, it is possible to see, behind Erik's profile, which shows that his mouth is wrapped up by a piece of cloth and is shot in focus, the blurry figure of the man who is setting up the device appears, and is redolent of one of the eerie men inhabiting the underground camps in *La Jetée*, as his wearing a dark waterproof jacket with his hoodie covering half of his face. Finally, his hands bring together the two sides of a round-shaped visor by locking them at the level of the child's eyes, this action corresponding to the end of the episode. In a similar repetition of the same scene in Episode 2,[66] which differs from the previous images though the changing detail of the content transmitted by the television (this time is a fictional scientific explanation of black holes, rather than some 1980's footage as in the scenes analysed above in this section). Towards the end of this short scene, the cloth around Erik's mouth quiets the sounds he is heard to emit once the experiment is initiated, and his muffled screams are juxtaposed with the voice on the television, as the camera moves away from the close-up of his face to the television screen. Considering the palimpsestic nature of this scene, Anna Batori argues that the theme of torture which involves children is reminiscent of Nazi experiments occurring during World War II. As articulated by Batori,

> Writings on Nazi physicians who tortured children to do clinical research on their bodies and brains in the first half of the 1940's has been widely discussed in scholarship. More than half of the special units where scientists of the Third Reich experimented on humans were allocated to children who underwent bone, muscle and nerve transplantation as well as immunisation, sterilisation, genetical and electroshock experiments. According to estimates, around 5,000 children were murdered within the euthanasia killing programme in the children's wards. This implicit parallel with German Nazism in Dark is conveyed via the dungeon where children are held captive to test the time machine.[67]

Batori believes that re-enacting the Nazi-experiments is also a way for *Dark* to reckon with the impossibility of changing the past. Within the semiotically convoluted space of the underground, the aesthetics of Nazi-experiments, therefore, conflate with images of nuclear testing, blending the boundaries between these two pasts. By the same token, they also create a critical genealogy of torture which draws parallel between these two histories of violence.

Like this scene of *Dark*, in *La Jetée*, the underground camps are the sites in which time-travel and mind-controlling experiments take place. In one of the scenes showing how these experiments pan out, the protagonist of the film is lying on a hammock, and a liquid is injected into his arm. His eyes are covered by a less sophisticated version of the visor which appears in *Dark*, and his

[66] 'Lies', *Dark 1*, min. [00:22:14]. Translated from the original title ""Lügen".
[67] Batori, '"Everything is Connected", p.4-5.

mouth is not covered or constrained by a cloth. His mouth, in fact, expresses how the progression of the experiment provokes different stages of pain on the individual to which it is administered, until his body lies unconscious on the hammock. As noticed by Croombs, who juxtaposes the time-travel testing in *La Jetée* with Henri Alleg experience of torture in Algeria as suggested above in this chapter, the protagonist clenches his teeth "on the side of his bed to cope with the onslaught of torture."[68] This is, therefore, less explicitly linked to the techniques of torture to which Alleg testifies in his book, which include "tightening his jaw on a rag used to muffle the sounds of his screams,"[69] which is, instead, reproposed in *Dark* as a trope of torture.

Alongside the sensory confusion begotten by sounds and noises, resulting in the victim of torture's sleep deprivation, Schwab suggests that sight impairment brings about similar consequences to those noted in relation to the overstimulation of the sense of hearing, insomuch as it provokes psychotic reactions and loss of reality and self. According to Schwab:

> A renowned professor of behavioural science conducted experiments to prove that, through mere sensory deprivation such as wearing goggles and earphones in an isolated room, he can induce psychotic states in just forty-eight hours, including hallucinations, severe paranoia, and loss of reality.[70]

Goggles, sunglasses, and visors are different items worn by characters in *La Jetée* aimed at hiding eyes, and which appear in both perpetrators and victims throughout the film, assuming multiple functions depending on who is donning them, and in which time dimension these items materialise. For instance, the visor is a signifier of violence inflicted upon the individual, aimed at triggering "psychotic states". Specifically, this observation could engender an interpretation of *La Jetée* as the one brought forth by Croombs, according to which time-travel is a narrative device which channels allusive techniques of torture showcased in the film. The memories, or rather, images of the past summoned up by the protagonist during the experiments, therefore, could be read as hallucinations induced by torture, rather than movements through time and space brought about by scientific discovery. To a certain degree, this is what happens in *Dark*, whereby reflections around science, technology and responsibility within a nuclear landscape, shed light on the transgenerational trauma linked to nuclear disasters and World War II. They also address the reckless use of technology and progress as the milieu where suffering is generated and

[68] Croombs, '"La jetée" in historical time', p.30.
[69] Ibid., p.28.
[70] Schwab, *Haunting Legacies*, p.158.

perpetrated, and how people can re-appropriate collective responsibility in order to reverse this process, rather than reproducing it and furthering it in time.

Ultimately, as observed in relation to *Hiroshima Mon Amour* in the second chapter of this thesis, a hallucinatory atmosphere pervades both films, and blurs the boundaries between reality and its imaginary projection. Linking the discourse of sensory hallucinations to the sense of sight, beyond the framework based on the spectacularisation of memory culture, as argued in the second chapter and above in this chapter, the action of covering one's eyes reconducts the argument to the theme of the uncanny in general, and to the nuclear uncanny in particular. In Freud's original essay on the uncanny, eyes occupy a pivotal discursive space, particularly in relation to his reading of E.T.A. Hoffmann, *The Sandman*. While Freud associates the fear of losing one's eyes with castration anxiety,[71] in this context it is worth exploring the centrality of sight in connection with what is perceived as unfamiliar, and how situations generative of illusions, delusions, and hallucinations are closely linked to (if not generated by) the nuclear phenomenon. In his study on *The Uncanny*, Nicholas Royle points out:

> Freud's essay 'The Uncanny' may appear to be pervasively concerned with the visual. Its ocularcentrism is perhaps nowhere more marked than in its *focus* on castration and the fear of blindness. [...] No doubt uncanny feelings are very often generated by strange sights, unveilings, revelations, by what should have remained out of sight; and 'The Sandman' is a magnificent, relentless exploration of the uncanniness of seeing and not seeing, of the optical imagination.[72]

Despite sight not being an exclusive condition for the constitution of the uncanny, as will be explored later in this chapter as regards the uncanniness prompted by silence, both *La Jetée* and *Dark* construct an atmosphere of mistrust, eeriness and strangeness based on the visual ambiguity of familiar environments which are revealed as dangerous and distant, if not unrecognisable or fictitious. As argued above in this chapter, this effect could be put in parallel with the tendency of both texts to draw upon an aesthetic of torture in order to convey an atmosphere of precarity, wherein the vulnerable bodies of the subjects involved are the involuntary, and oft-times, unaware victims of extreme, life-threatening experiments aimed at harming their eyes.

[71] Freud, *The Uncanny*, p.86.
[72] Nicholas Royle, *The Uncanny*, p.45.

Considering the significance of sight and eyes from a uniquely nuclear perspective, in the second chapter of this thesis not only had flash blindness (Masco) been identified as an undesirable effect of nuclear explosions, but, in that context, it was mentioned as an example of the centrality of sight within nuclear discourses and aesthetics. In light of the analysis of the scenes of torture/experiments in *La Jetée* and *Dark*, the notion of a temporary or permanent visual impairment caused by the exposure to nuclear blasts and flashes can offer another layer through which these filmic segments are interpreted. In relation to flash blindness, Masco explains that, in the Cold War period, a series of experiments were undertaken involving human participants with the purpose of finding solutions to avoid the occurrence of blindness in soldiers after a nuclear explosion. He points out that:

> Within the culture of the Cold War, the intent of these experiments was not to eliminate or avoid the trauma but to find a prosthetic device, some form of visual protection, to enable the body to be insulated from repeated nuclear flashes. Such protection would allow the body to survive repeated nuclear shocks, but at a cost of being ever further anaesthetised from a tactile experience of the world. These flashblindness experiments reveal a Cold War anaesthetic system already ascendant in 1953, one enabling twelve people to volunteer for an experiment in which they were calmly strapped in a chair and, quite meticulously, blinded.[73]

It is not clear whether or not Marker was aware of these specific experiments. Indeed, televised programmes and written reports exploring nuclear testing were broadcast and published widely by the American media as early as the 1950s,[74] as is the case of the Nevada testing[75] mentioned by Masco.[76] During these tests, those who were present and witnessed the detonation of several atomic bombs were invited to fashion eye protectors or shown in the act of wearing goggles.[77]

Arguably, eye coverings became a characteristic item and part of the iconography of nuclear explosions, even though their necessity as a shield against a potential detrimental impact on health was kept ambiguous by those who led the experiments, as well as the American

[73] Masco, *The Nuclear Borderlands*, p.10.
[74] As addressed by the following document: United States Department of Energy, Terrence R. Fehner, and F. G. Gosling, *Atmospheric Nuclear Weapons Testing: 1951-1963*, 2006 <https://www.energy.gov/management/articles/fehner-and-gosling-atmospheric-nuclear-weapons-testing-1951-1963-battlefield> [accessed 27 February 2024]
[75] As an example of this, see: History, *Live from Nevada…It's an A-Bomb Test!*, 2018 <https://www.history.com/news/live-from-nevada-its-an-a-bomb-test> [accessed 27 February 2024].
[76] Masco, *The Nuclear Borderlands*, p.10.
[77] United States Department of Energy, Terrence R. Fehner, and F. G. Gosling, *Atmospheric Nuclear Weapons Testing*, pp.1-3.

government.[78] Regardless of the fact that Marker might have been influenced, even indirectly, by visioning these documents, there are various similarities to the experiments discussed by Masco, and those showcased in *La Jetée* and *Dark*. Masco further indicates that "Each nuclear flash blinded the volunteers, allowing scientists to measure exactly how long it took their vision to return."[79] In the final report completed after the flash blindness Nevada experiment quoted by Masco, scientists count the seconds within which vision would return in the subjects tested. Significantly, in *La Jetée* the only voices heard on the underground camps are those belonging to the German doctors, who, at points, are engrossed in the action of counting how long it takes to the protagonist to reach a level of unconsciousness which would, arguably, enable him to travel through time. They clearly discuss the minutage associated with the experiments.

By the same token, the description offered by Masco, which indicates "people [...] calmly strapped in a chair and, quite meticulously, blinded"[80] is recreated in the scene in *Dark* in which Erik is secured to the metallic chair, a ritual which precedes the time-travel experiments. In the series, these experiments, more often than not, will result in the death of those utilised as guinea pigs, mostly children, whose bodies will be found in other eras, and will display gruesome details of scarring and wounding emerging from the section of their face once enveloped by the visor, as shown at minute [00:04:00] of episode two.[81]

It is worth opening a bracket with respect to the sense of bodily detachment engendered by this seeming focus on sight. Like the volunteers of the 1953 flash blindness trials, the eyes of the protagonist of *La Jetée* are protected by a "prosthetic device", which, by impairing his sight, renders him "detached from a tactile experience of the world."[82] The anaesthetising effect produced by isolation and captivity, as that in which the prisoners in *La Jetée* are held, in addition to the hallucinogenic quality of the character's time-travel journeys, enhances both the sense of disembodiment, but it also reverberates that detachment which an objectification of memory culture, as argued above in this chapter, carries out. The main character in *La Jetée* is doubly

[78] The document published by the USA Department of Agency mentioned in this thesis, for example, shows a group of Air Force Officers staring at the blast without any protective equipment, "to illustrate that the civil populace need fear no harmful effects were it necessary to use the atomic rocket in a tactical situation." United States Department of Energy, Terrence R. Fehner, and F. G. Gosling, *Atmospheric Nuclear Weapons Testing*, p.175.
[79] Masco, *The Nuclear Borderlands*, p.10.
[80] Ibid., p.10.
[81] 'Lies', *Dark 1.*
[82] Masco, *The Nuclear Borderlands*, p.10.

"anaesthetised", both within the consumerist society of the 1960's which determines his physical body as superfluous before the myriad of objects which populate his present, and within the underground camps, which disable his capacity of viewing, by materially covering his eyes, impeding his view. As Croombs observes: "In the absence of his physical body, he is positioned as a spectator of objects whose transcendental gaze is often directed toward a depopulated collection of images."[83] Arguably, in *La Jetée* the haptic is barely explored, or, if it is present, like in the form of touch administered by the camps's doctor within the context of an experiment, it is to further anaesthetise the patient, and the violence is characterised by a sense of disavowal of the body which leads prisoners to reach a state of complete unconsciousness, madness, and death.

An additional layer of interpretation of *La Jetée*, retrieved from specific historical circumstances linked to the colonial legacy of the atomic testing in its intersection with the Algerian war, further clarifies the complexities and nuances of this text. As observed above, in *La Jetée* the experiments undertaken on the bodies of the inmates, visually conveyed through the main character's afflictions, are expressed through a multi-layered network of evocations. As such, these are, on the one hand, informed by recounts of torture of Algerian war prisoners, as the one experienced and told by journalist Henri Alleg, as well as drawing on the aesthetic of the concentration camps. On the other hand, the scenes of torture resonate with nuclear experiments such as those occurring in Nevada, in which willing volunteers were used as guinea pigs to test the effects of the atomic bomb on the human body.[84] As Silverman suggests, in the palimpsest:

> A metonymic chain draws diverse associations into the same 'space', the present is decentred and transformed into a constellation of multiple times, places, desires and fears (often pulling in different directions) in a way that denies a reading that simply refers back to a single source.[85]

The present of *La Jetée*, framed in terms of a dystopian future following a total nuclear war, is "decentred and transformed" via the intersection of diverse historical sources, which, in turn, form the underlayer on which the narrative of the film grows and develops. There is another level of interpretation stemming from the historical events broadly tackled by Marker and related to the Algerian War, which can bring these diverse sources together, as they become interconnected within the intricate structure of the palimpsest. Through this, the nuclear imaginary onto which *La*

[83] Croombs, '"La jetée" in historical time', p.33.
[84] Masco, *The Nuclear Borderlands*, p.10.
[85] Silverman, 'Latency in Lebanon, or Bringing Things (back) to Life', p.699.

Jetée is connected with the Algerian War also via the French atomic testing paying out in this period. It is worth stressing that those involved in the atomic experiments described by Masco were volunteers, who participated in the tests through free will, rather than coercion. In *La Jetée*, instead, a condition of captivity, as well as a legacy of colonial violence and subjugation pervade the camps, as evidenced by the film's visual reproduction of the crimes committed during the Algerian War and the aesthetic of torture haunting the film.

Before linking these two aspects together, however, some historical background is needed in order to contextualise some pivotal events related to French nuclear testing in the Algerian Sahara. A significant stage which led to the first wave of the peace agreements between France and Algeria, known as the Evian Accords, was motivated by "disagreement between France and Algeria about the future of nuclear test sites in the Sahara."[86] The French nuclear testing in Algeria lasted six years, from 1960 to 1966, and comprised of "17 nuclear tests near the towns of In Ekker and Reggane in the Algerian Sahara, four of them atmospheric detonations (near the oasis town of Reggane), and 13 underground (in Hoggar Massif near In Ekker)."[87] In their discussion around the role played by nuclear testing underpinning the processes of decolonisation in countries like Algeria and Kazakhstan, Hennaoui and Nurzhan observe how the Algerian journey towards decolonisation was strictly linked with "the French nuclear testing programme."[88] As Hennaoui and Nurzhan explain:

> In addition to delaying ceasefire negotiations, the atomic detonations in the Sahara caused widespread outrage (Cooper 2021) at many levels: at the domestic level in France; from the UN's Afro-Asian bloc at the intergovernmental level through the 1959 resolution's debate and adoption process of the 1959 resolution; at a regional level by the African nationalists through the Monrovia Conference of Independent African States; and at a transnational level, as Ghana provided a forum to meet and plan protests against French nuclear testing.[89]

The indignation prompted by the decision of using Algeria as the site of nuclear testing even before the beginning of the programme brought about the creation of a "transnational" anti-nuclear movement which, not only involved individuals coming from African countries, mostly from Ghana,

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[86] Austin R. Cooper, *French report grapples with nuclear fallout from Algerian War*, Bulletin of the Atomic Scientists, 4 March 2021 <https://thebulletin.org/2021/03/french-report-grapples-with-nuclear-fallout-from-algerian-war/> [Accessed 27 February 2024].
[87] Leila Hennaoui, and Marzhan Nurzhan, 'Dealing with a Nuclear Past: Revisiting the Cases of Algeria and Kazakhstan through a Decolonial Lens', The International Spectator, (2023), 91–109 <https://doi.org/10.1080/03932729.2023.2234817>. p.99.
[88] Hennaoui & Nurzhan, 'Dealing with a Nuclear Past', p.100
[89] Ibid., p.100.

but also from Nigeria and Lesotho,[90] but had an echo beyond the borders of the African continent, attracting "Several famous Western pacifists and influential radical black activists [who] travelled to Ghana to join the team."[91] This is to say that it is not unlikely that Marker was aware of the commotion created by this antinuclear movement due to his commitment to the representation of the horrors of the Algerian war in both *La Jetée* and in the documentary *Le Joli Mai*, in which he offered a critical and political insight into the indifference of the public opinion in France vis-à-vis the Algerian War. About *Le Joli Mai*, Ahmed Bedjaoui observes:

> Following the Evian agreements and even before the official announcement of independence, Chris Marker made a feature film called *Le Joli mai* [Merry May]. In this film, Chris Marker questions Parisians, more interested in enjoying this merry month of May, than of speaking about a war being prolonged by the actions of the OAS.[92]

There is no doubt that the workings of *La Jetée* intersected with *Le Joli Mai*. Alter, for example, observes that "While working on *Le Joli Mai*, Marker contemplated adapting one of his science fiction radio scripts to cinema."[93] There is, however, a further element that adds up to the layered scenes of torture central to *La Jetée*'s aesthetic and conceptual journey. Bedjaoui points out that the Evian agreements and the ultimate declaration of independence of Algeria had eclipsed some horrific details of the atomic experiments which, however, resurfaced later on, in the 1980s, through the 1985 documentary *Combien Je Vous Aime* [How Much I love you] directed by Azzedine Meddour. By editing archival footage, *Combien Je Vous Aime* retraces the French colonisation of Algeria. The film is formed by "television news programs, filmed between 1957 and October 1962, by the French television regional station in Algiers."[94] In addition to the newsreel archival material, *Combien Je Vous Aime* includes video footage from another documentary made in 1961, namely *Allons Enfants… Pour l'Algérie* [*Arise you Children… for Algeria*] by German documentarist Karl Gass, which features in the film in its last section, from minute [01:42:41].[95] The original documentary, and therefore the subsequent sequence extrapolated from it included in *Combien Je Vous Aime*, not only offers a visual testimony of the nuclear tests in the Algerian desert, but also unearths the horrors underlying the experiments involving human beings as test subjects. According to Bedjaoui, this particular section brought

[90] Hennaoui & Nurzhan, 'Dealing with a Nuclear Past', p.101.
[91] Ibid., p.101.
[92] Ibid., 113-114. The OAS was the *Organisation armée secrète*.
[93] Alter, *Chris Marker*, p.66.
[94] Ahmed Bedjaoui, *Cinema and the Algerian War of Independence: Culture, Politics and Society* (Cham: Palgrave Macmillan, 2020) p.154.
[95] Canal Algérie, *Combien Je Vous Aime* (1985) Documentaire d'Azzedine Meddour, online video recording, YouTube, 29 May 2020, <https://www.youtube.com/watch?v=hqh9T3AzNXo&t=6404s>. [accessed 27 February 2024]

about “a great stir during the distribution” of Meddour’s documentary due to detail of the inhumane and horrific treatment of Algerian prisoners – an aspect that, moreover, signals the centrality of cultural artefacts in raising awareness as well as reconfiguring historical memories otherwise rendered silent and invisible.[96] In this extract, a German legionnaire, Gunther Häns, states that 150 Algerian prisoners were tied to poles near Reggane while an atomic explosion was occurring. Häns claims that a soldier of a special unit had confided to him that the bomb had exploded approximately 2 km from where the prisoners were kept immobilised on stakes.[97] Quoting Saïd Mehdaoui’s documentary *Les Cinéastes de la Liberté*, Bedjaoui stresses that the purpose of these experiments was “to see the effects of the bomb on the human body.”[98] Bedjaoui further notices that:

> It was the affair of the Algerian prisoners, who were used in 1960 as guinea pigs during an atomic test near to Reggane, which provoked the most reaction. In fact, the sequence of the prisoners of the ALN attached to poles on the site of the firing was taken from German documents provided by Karl Gass [...] At the end of the film, a former German legionnaire declares having served in Reggane at the time the events took place. He confirms having seen 150 Algerian prisoners attached to poles.[99]

In her critical recount of the Leipzig documentary film festival from 1955 to 1990, Caroline Moine indicates how both Karl Gass and Chris Marker were two committed protagonists of this yearly event taking place in East Germany. According to Moine, Gass was involved in the workings of the festival as well as occupying central organisational positions through his role as artistic director for several editions. Moine identifies Gass as:

> A documentary director born in 1917 who in 1948 had opted for the Soviet zone of occupation in order to continue journalistic activities he had started after the war in Cologne. Gass entered the DEFA Studio for Newsreels and Documentary Films 11 as a screenwriter, author, and director in 1951; from 1954 to 1958, he was named artistic director and among the founders of the Leipzig Festival.[100]

Gass’s films and documentaries were also screened at the festival. His *Allons Enfants . . . Pour l’Algérie* was shown at the “the Second Leipzig International Documentary and Short Film Week”

[96] Bedjaoui, *Cinema and the Algerian War of Independence*, p.63.
[97] As recounted by Häns from minute [01:44:44] in *Combien Je Vous Aime*, dir. by Azzedine Meddour.
[98] Bedjaoui, *Cinema and the Algerian War of Independence*, p.63.
[99] Ibid., p.156.
[100] Caroline, Moine, *Screened Encounters: the Leipzig Documentary Film Festival, 1955-1990*, trans. by. Skyler J. Arndt-Briggs, and John Barrett, (New York; Oxford: Berghahn, 2018). p. 22. Ebook Central ebook.

which occurred from “from 11 to 19 November 1961.”[101] As regards Marker, Moine observes that the filmmaker, “then about thirty, swiftly attracted attention at Leipzig. He was among the first guests, attending the festival regularly from 1960 to 1968.”[102] This proves that Marker, as an enthusiastic participant in the festival since 1960, had come across Gass’s documentary, and heard the testimony of the German legionnaire describing the gruesome deployment of Algerian lives during the atomic tests in the Sahara Desert. It is, therefore, my opinion that the scenes of torture in *La Jetée* create a complex web of intertextual ramifications, for which the colonial set-up of Algeria and the war-time tortures overlap within the milieu of the French nuclear experiments. Crucially, Alter remarks that Marker “kept his project [*La Jetée*] secret”, and when asked about it at the Leipzig festival in 1961, “he responded enigmatically that he would like to make ‘a futuristic film.”[103]

Significantly, the detail of Gass’ documentary seemingly influencing Marker’s film brings us back to the theme of bodily detachment explored earlier in this section. In this case, this detachment assumes a twofold meaning: on the one hand, it signals the observational physical distance between the soldiers supervising the experiments and the sites of detonation. Bedjaoui points out that the soldiers supervising the experiment, including the German legionnaire recounting the fact, observed the experiments through “binoculars”, a statement which implies their ability to assess the spectacle of the explosion from a safe distance (without taking into consideration the life-threatening side-effects of radiation).[104] On the other hand, the inhumane treatment of war prisoners sits within the brutal reality underpinning nuclear experiments and their connection with war, and the normalisation of torture embedded within war processes.[105] Significantly, the conflation created by Marker in *La Jetée* via the aesthetic juxtaposition of the Nazi experiments within the set-up of the concentration camps, the practices of torture during the Algerian war could be seen as engendering relationality between these diverse events, rather than suppressing differences. In this sense, Marker’s only fictional and Sci-Fi film might address the absurdity of these events, and the indifference with which they were perceived and normalised by the wider public.

[101] Moine, *Screened Encounters*, p.59.
[102] Ibid., p.87.
[103] Alter, *Chris Marker*, p.66.
[104] Bedjaoui, *Cinema and the Algerian War of Independence*, p.63.
[105] As Croombs observes, for example, “Pierre Vidal-Naquet's *Torture: Cancer of Democracy* [...] analyzes how torture was normalized by an infrastructural machinery that assimilated the French police, the judicial system, and the popular press.” In Croombs, ‘"La jetée" in historical time’, p.27.

This complex relationship between touch (or lack thereof) and sight has been explored in relation to *Hiroshima Mon Amour*. Jennifer Barker argues that, in the film, the limits imposed by sight are counterbalanced by what Laura Marks has named "haptic visuality."[106] Barker explains the concept thus: "Marks defines haptic visuality as a kind of looking that lingers on the surface of the image rather than delving into depth and is more concerned with texture than with deep space."[107] The same Marks lists Resnais's *Hiroshima Mon Amour* as one of those films that "use both poetic and aggressive strategies to compel the viewer to consider the destructive effects of believing that one can know another culture or another time through visual information alone."[108] Resnais's and Duras's criticism of the spectacularisation of memory culture has been explored in both Chapter II and above in this chapter, also in terms of indifference, numbing, and splitting as affects which characterise nuclear traumatic subjectivities. However, in this context, the notion of the haptic is relevant insomuch as it prompts connections between diverse temporal spheres. If in both *Dark* and *La Jetée* the underground space, the bunker, is more or less explicitly evocative of the World War II and the Cold War, in *Hiroshima Mon Amour*, the cellar builds on an imaginary, whereby, as Kaplan suggests: "the implicit shadow catastrophe of the film is the Holocaust onto which the ruin of Hiroshima swirls in an infinite loop."[109] Further to this, there is an element of intertextuality, since the evocative nature of the cellar in *Hiroshima Mon Amour* manifests itself if the film is read alongside its companion piece, *Night and Fog*. *Night and Fog* is a documentary that Resnais realised from a screenplay written by Jean Cayrol, a former Mauthausen prisoner, as a commission to commemorate "the tenth anniversary of the liberation of the German concentration camps by the Allied forces."[110] In *Night and Fog*, the use of tracking shots "guide us through the camp" as well as creating a "disturbance of time, space and vision."[111] This "disturbance of time" translates into a subversion of chronology, wherein past and present coexist in terms of "superimposed layers",[112] which lead to "repetitions and similarities that cut across demarcated temporal, spatial and scopic regimes."[113]

[106] Laura U. Marks, *The Skin of the Film: Intercultural Cinema, Embodiment, and the Senses* (Durham, North Carolina: Duke University Press, 2000), p. xi. Ebook Central ebook.
[107] Jennifer M. Barker, *The Tactile Eye: Touch and the Cinematic Experience* (Berkeley: University of California Press, 2018), p.35. ACLS Humanities eBook ebook.
[108] Marks, *The Skin of the Film*, p.134.
[109] Kaplan, 'Too Painful to Forget', p.845.
[110] Wilson, *Alain Resnais*, p.24.
[111] Silverman, *Palimpsestic Memory*, p.42.
[112] Ibid., p.42.
[113] Ibid., p.43.

The predominance of sight in *Hiroshima Mon Amour* is heightened by some scenes in the film, such as those taking place in the cellar. As mentioned above in this section, the cellar stands as an analogy of imprisonment, whereby the female protagonist moves out of sight in a literal way, insofar as she is removed physically and progressively from the social space, the outside, the town, into a private place, the inside, the house; and again from her bedroom to the cellar. As Elle discloses to her lover her own story, a series of snippets from her past intercalate with the present in the form of flashbacks. One of these fragments in particular captures Elle in the act of scratching the walls with her fingernails until blood comes out, as she articulates: "Hands become useless inside the cellar. They scratch. They cling to the walls… until they bleed."[114] This image of bloody nails scratching on a wall, touching the interiors of the earth, can be interpreted through the lens of "haptic visuality". If Barker, via Marks, highlights the erotic interaction, which triggers a "relationship [...] of mutuality," instaurated between "the viewer and the work of art" via visually haptic images,[115] this scene enhances the sense of solitary desperation, of silence and blindness that haunts Elle. It is framed as a solution to the absence of any human contact, and as a way to break the cycle of "anaesthetised" physical and psychic emotions, in order to find back "a tactile experience of the world", to paraphrase Masco.[116] But these images are also a reminder of a section in *Night and Fog*. In the latter, as the narrator offers a tour of the concentration camp of Auschwitz-Birkenau, he lingers on specific rooms and spaces in order to highlight a series of horrific details linked to them. At minute [00:22:24] the camera moves across the interior of a gas chamber. Alongside the images, the commentary accompanies the viewer inside this environment cautiously, detailing each and every step of this journey, almost mapping it, thus: ""We close the doors. We contemplate."[117] At this point, the narrator focuses on the detail of the ceiling ("ce plafond") where a tracking shot follows a series of horizontal marks, explaining that the only sign left by the prisoners ("le seul signe") was that of their fingernails clawing, ploughing the walls ("labouré par les ongles") in the desperate final attempt to escape the room before being killed by the poisonous gas.[118]

Resnais, therefore, creates both intertextual and palimpsestic relationships which connect *Night and Fog* with *Hiroshima Mon Amour*, for which the aesthetic of his precedent documentary re-emerges, albeit unrelated, within the space of the cellar in which Elle is held captive. This process

[114] "Les mains deviennent inutiles dans les caves. Elles grattent. Elles s'accrochent aux murs… à se faire saigner…" Duras, *Hiroshima Mon Amour*, p.45. My translation.
[115] Barker, *The Tactile Eye*, p.35.
[116] Masco, *Nuclear Borderlands*, p.11.
[117] "On fermait les portes. On observait." In *Night and Fog*, dir. by Alain Resnais. My translation.
[118] Resnais, *Night and Fog*.

reproduces the dynamics behind screen memory, for which, as Silverman points out, "one memory is really a screen hiding another."[119]

Uncanny Domesticities: Silence as the Sonic Dimension of the Atomic Bomb

A tension emerges from these diverse ramifications of spatiality, which develop along the lines of the various facets characterising the uncanny. Originally a concept reliant upon the "bourgeois interior,"[120] Anthony Vidler in *The Architectural Uncanny* maintains that, following the outbreak of the two wars in Europe, and the rise of totalitarian regimes, "the site of the uncanny was no longer confined to the house or the city, but more properly extended to the no man's land between the trenches, or the field of ruins left after bombardment."[121] Vidler argues that the uncanny began being perceived as a transversal force, bursting through the enclosed boundaries of the home, evading societal conditions linked to class and status, "as epidemics and plagues."[122] Although not mentioned by Vidler, but still suitable to the comparison offered, the theory of the uncanny can be seen as an ominous, precise prediction of the invisible and yet pervasive presence of the atomic threat. The deadly effects of nuclear radiation were shown to be unstoppable in front of the safe space of the home, indifferent to borders, and even oblivious to the passing of time.

In the texts selected, these aspects of the uncanny emerge from the representation of interior spaces either linked to a domestic and yet traumatic and haunting past, namely the home, and in particular the bedroom in *Hiroshima Mon Amour*, *Dark*, and *La Jetée*, or to its specular reversal: the hotel room, the bar, and the cellar in *Hiroshima Mon Amour*, the bunker and the cave system in *Dark*, the underground Paris in *La Jetée*. Far from being definitive, the conceptual space separating the domestic locus and its opposite is translated into a wider threshold where a variety of stories occur as in a palimpsest, and in which the uncertain lines distinguishing memory from perception are superimposed by those delimiting life and death, past, present and future.

[119] Silverman, *Palimpsestic Memory,* p.15.
[120] Vidler, Anthony, *The Architectural Uncanny: Essays in the Modern Unhomely* (Cambridge, Mass ; London: M.I.T. Press, 1992) p.6.
[121] Vidler, *The Architectural Uncanny*, p.7.
[122] Ibid., p.6.

There is a further element which sets an overarching continuity between *Hiroshima Mon Amour*, *Dark* and *La Jetée*, and constitutes a fundamental quality of the uncanny, strengthened by the nuclear context within which these texts are explored. As suggested in my first chapter, the town in *Dark* is presented as a claustrophobic environment, situated within a sort of walled-in space, which dissuades its inhabitants from breaching its perimeter. Winden is, in fact, surrounded by a rich forest, the menacing presence of which is further reinforced by the nuclear power plant buildings that, confusing themselves among the surrounding natural environment, dominate and monitor every aspect of life. This compound of nature and technology conveys a sense of entrapment and inescapability, which adds up to the atmosphere of eeriness governing the series. Vidler notices that, when the uncanny escaped the bounds of the house to reach the broader metropolis, it gave rise to a series of symptoms and illnesses affecting those who populated the urban landscape. In Vidler's words:

> From the 1870s on, the metropolitan uncanny was increasingly conflated with metropolitan illness, a pathological condition that potentially afflicted the inhabitants of all great cities; a condition that had, through force of environment, escaped the overprotected domain of the short story. The uncanny here became identified with all the phobias associated with spatial fear, including "la peur des espaces" or agoraphobia, soon to be coupled with its obverse, claustrophobia.[123]

Following this observation, the focus on space is a constant of the material which deals with the nuclear theme and translates into a heightened awareness of enclosed or busy environments experienced by the characters. In both *La Jetée* and *Hiroshima Mon Amour*, the outdoors spaces, rather than being perceived as locations in which to dwell, are points of passage, to be walked by, skimmed in a disembodied fashion, not taken in. They also induce a perception of space informed by inescapability, whereby Hiroshima as much as Paris or Winden impose the characters to stay, without offering them the option to leave. As an example of this trend, in *Hiroshima Mon Amour* the female character repeats several times that she will be leaving Hiroshima,[124] or expresses her desire to go away,[125] but she is never shown in the active process of taking a train or a flight in order to abandon the city. In *La Jetée*, the jetty of Orly is not framed as a space of transition, which enables individuals to travel elsewhere. Rather it evokes a more passive and mundane divertissement linked to contemplation, a place that families visit to watch the planes come and go, thus replacing the actual function of a jetty, that of allowing individuals to move from a place to another physically.

[123] Vidler, *The Architectural Uncanny*, p.6.
[124] Duras, *Hiroshima Mon Amour*, p.31.
[125] Ibid., p.42.

These affects associated with the perception of the outdoors are also projected into the indoors in the stories narrated. In *Hiroshima Mon Amour* the cellar summons up both a sense of isolation, the confined solitude of intolerable grieving, and captivity. Drawing upon the aesthetic of the bunker, the cellar (*la cave*) is a sort of threshold in which Elle becomes invisible, as if dead, or buried alive, an aspect that is pointed out in the film by the same female protagonist when she says: "They make me pass for dead, dead far away from Nevers."[126] Freud indicates in his essay on the uncanny that the fear of being buried alive is considered by some as the example of the uncanny: "Some would award the crown of the uncanny to the idea of being buried alive, only apparently dead."[127] However, further to this aspect, and as mentioned in relation to the body of the German soldier, Elle, too, embodies a status of liminality, in which life and death are superimposed onto one another.

Therefore, the cellar is imbued with feelings of claustrophobia and fear, insofar as it is described as "small, very small,"[128] "cold,"[129] "old and damp,"[130] almost like a grave, or a crypt. According to Bachelard, the cellar is "first and foremost the dark entity of the house, the one that partakes of subterranean forces. When we dream there, we are in harmony with the irrationality of the depths."[131] Bachelard further defines the cellar as "buried madness, walled-in tragedy."[132] It is in the cellar that Elle can give way to her memories and madness without limits of decency. But it is also in this dark environment, surrounded by walls which "have the entire earth behind them,"[133] that sight assumes a renewed spectatorial function. From the inside of the cellar, life can be perceived as happening outside, without being observed back. As Elle points out: ""Society rolls over my head. Instead of the sky… necessarily… I see it walking before me, this society. Quickly during the week. Slowly on Sundays. They don't know that I am inside the cellar."[134] As a captive person, hidden by her parents, Elle gauges the rhythms and habits of the living society, and calls

[126] "On me fait passer pour morte, morte loin de Nevers." In *Duras, Hiroshima Mon Amour*, p.46. My translation.
[127] Freud, *The Uncanny*, p.89.
[128] "La cave est petite… très petite." [The cellar is small… so small.] In Duras, *Hiroshima Mon Amour*, p.45.
[129] Elle utters: "J'aurais eu froid. À Nevers les caves sont froides, eté comme hiver." [I was cold. In Nevers cellars are cold, as if it is winter.] In Duras, *Hiroshima Mon Amour*, p.44. My translation.
[130] "Très anciennes, très humides." [So old and humid]. In Duras, *Hiroshima Mon Amour*, p.48.
[131] Gaston Bachelard, *The Poetics of Space*, trans. by. M. Jolas (New York, New York: Penguin Books, 2014), p.59. Ebook Central ebook.
[132] Gaston Bachelard, *The Poetics of Space*, p.62.
[133] Bachelard, *The Poetic of Space*, p.61.
[134] "La société me roule sur la tête. Au lieu du ciel… forcément… Je la vois marcher, cette société. Rapidement pendant la semaine. Le dimanche lentement. Elle ne sait pas que je suis dans la cave". My translation. In Duras, *Hiroshima Mon Amour*, p.46.

attention to their indifference towards her condition. The cellar, therefore, appears as an empty space dominated by darkness, solitude and silence, from which society is perceived as deafening,[135] or distant. If in Hiroshima, the spoken word is an instrument employed to make sense of the past, "an act of reclaiming life and self" as explicated by Schwab and observed above in this chapter,[136] and thoughts are voiced almost uncontrollably,[137] the cellar is the locus of silence *par excellence*. These qualities of the cellar, which appear as inherently related to space, bring us back to the Freudian concept of the uncanny. In his study on the uncanny, Nicholas Royle indicates that the interconnection between the triad of "silence, solitude and darkness" is considered as "curiously entangled bed-fellows."[138] Despite the fact that sight acquires a pivotal role in the theorisation of the uncanny, Freud concludes his essay by hinting at the amabiguous status attached to this sense in a footnote.[139] According to this, sight is intertwined with other affects (solitude) and sensory experiences (silence.) As proposed by Royle:

> "The Uncanny" concludes not with any straightforward ocularcentrism (the uncanny as what comes to light, as what is to be seen, or as what represents a threat to vision), but with an eerily synaesthetic figure, a mixing of seeing and hearing, of a voice that lightens the dark ('if anyone speaks, it gets light.')[140]

Royle points out that one's sight engages in a synaesthetic relation with hearing, the stimulation of one prompting the rising of another, in a cycle of interconnected spheres of perception. Seemingly, this articulation of the uncanny through a series of communicating interdependence within the sensory realm, like the multiple paths that make up a labyrinth, could be seen as relevant within the context of the atomic phenomenon, as will be argued below in this chapter.

In order to explore the concept of silence, and how it is deployed in relation to sight and space not only in *Hiroshima Mon Amour* but also in *Dark* and *La Jetée*, it is worth returning to the analysis of the first section of *Hiroshima Mon Amour* as addressed above in this chapter. Here, people from Hiroshima are framed within the intimacy of a domestic environment, and present clear signs

[135] "'La Merseillaise' crosses over my head… It's… deafening…", "La Merseillaise passe au-dessus de ma tête… C'est… assourdissant…" [La Merseillaise' crosses over my head… It's… deafening…]. In Duras, *Hiroshima Mon Amour*, p.45.
[136] Schwab, *Haunting Legacies*, p.175.
[137] For example, at minute [1:00:33] Elle is involved in her story to the point that she expresses the grief she carries almost physically, losing control of her surroundings, and entering a sort of trance-like state - in order to bring her back, Lui slaps her around the face, prompting the secondary characters in the room to turn their faces to them, triggered by the intensity of the couple's exchange. In *Hiroshima Mon Amour*, dir. by Alain Resnais.
[138] Royle, *The Uncanny*, p.110.
[139] Ibid., p.110.
[140] Ibid., p.110.

of radiation disorders, including scalding, deformed limbs, physical loss of eyes and sight. As Schwab indicates, they are the embodied demonstration of how "this invisible warfare operates transgenerationally, potentially inflicting genetic damage on subsequent generations of children and victims and their children."[141] As regards the transgenerational breadth of nuclear damage upon individuals, different generations are displayed in this scene, including several young people who appear as vicarious victims of the bombing. In particular, the close-up of the face of a toddler, with a blind eye and a scar on his head,[142] is punctuated by Elle's commentary, who identifies them as: ""Those who were inside the wombs of the women of Hiroshima."[143]In this scene, as in most of the first nearly 16 minutes from the beginning of the film, Elle's voice over, as much as the musical soundtrack, are positioned within an extradiegetic dimension. The voices of the individuals who inhabit the scene described above in this section, as well as any other ambient sound are absent. Arguably, Elle's voice, by being situated outside the narrative context of the scene, creates the effect of bolstering the silence embedded into these images.

Michelle Royer contends that "it is not only through touch that the past of Hiroshima can be accessed, but it is also through the complex relation between sound and image and the impossibility of representing it in a coherent and logical manner that spectators are 'touched'."[144] More specifically, the individuals who constitute the focus of the analysis above appear to be engrossed in their own taciturnity. Aside from the murmured prayer told by a woman and a child, and the *koto* played by another young girl (the sound of which, nonetheless, is missing), those who populate these scenes are filmed while staring at the void, at the mirror, at the ground, their mouths speechless. The same technique is applied to the sections related to the past, which are either framed as flashbacks, and therefore they are presented as pure images deprived of sound, or as a corollary to Elle's narration. If it is true that "the documentary footage of survivors creates a separation between image and viewers,"[145] also, seemingly, as a political and ethical criticism of memory consumerist culture, the use of sound and voice in *Hiroshima Mon Amour* re-focuses the attention of viewers on the uncanny silence dominating this footage -- both the historical one, and that filmed by Resnais.

[141] Schwab, 'Transgenerational Nuclear Trauma', p.442.
[142] Resnais, *Hiroshima Mon Amour*, min. [00:10:08].
[143] "Ceux qui étaient dans les ventres de femmes de Hiroshima." Duras, *Hiroshima Mon Amour*, p.13.
[144] Michelle Royer, *The Cinema of Marguerite Duras: Multisensoriality and Female Subjectivity*, (Edinburgh, UK: Edinburgh University Press, 2019), p.45. DOAB Directory of Open Access Books ebook.
[145] Ibid., p.45.

This unequivocal, deafening silence, in turn, can be interpreted as an expression of the one noticed by the people of Hiroshima who testified to the dropping of the atom bomb. Discussing an article written by Georges Bataille in 1947, Didi-Huberman lingers on this sense of absolute light devoid of the rumble (*grondement*) of detonation characterising the nuclear explosion: "Ainsi, l'explosion, qui avait l'intensité visuelle du soleil, ne fut pas suivie de détonation: c'était comme une 'nappe de soleil', sans 'aucun grondement.'"[146] The alleged silence generated by the bomb,[147] alongside the extreme luminosity of artificial lighting (éclair) identifying the explosion, resonated with the quiet, astonished response of the witnesses, a nuance revealed by Resnais' shots: "En même temps, seul répondait au silence de l'éclair au silence des morts le silence des survivants."[148] Crucially, Didi-Huberman observes that the site of the bombing, Hiroshima, became at once "étouffement et brûlure en acte." In this instance, the noun *étouffement* connotes both the idea of suffocation triggered by the debris of shattering buildings, delivering a sense of darkness emerging from the extreme luminosity of the explosion, but also the sensory concealment (in its second meaning of hushing up) emerging from this blend of ashes, dust, and fire (*brûlure*). Burning (*brûlure*) and asphyxia (*étouffement*) result in an act of quiet concealment, which the place (lieu),[149] rather than its people, expressed at first, insomuch as the meaning delivered by the bomb via its exterior facets (the burning, the suffocation it engenders) lies outside of perception and knowledge (*hors de toute perception, hors de tout savoir*), and is construed as the ultimate spatial embodiment of the nuclear uncanny, as "un pur *sentir panique du lieu*" (a feeling of panic of the site itself).

Returning to what was observed earlier in this section in relation to the interconnection between silence (linked to the sense of hearing) and darkness (related to sight) as two constitutive parts

[146] [For instance, the explosion, which had the visual intensity of the sun, had not been followed by a roar: it was like a "sheet of sun" without "any rumbling."] In Georges Didi-Huberman, *Génie Du Non-Lieu.*, p.24.
[147] The emphasis of this sentence is on the adjective "alleged", since, as observed by Adrienne La France in *The Atlantic*, it was witnesses in Hersey's report who addressed the absence of sound following the explosion, and not a more scientifically reliable proof of the effective lack of noise of the detonation. However, some footage retrieved from nuclear testing experiments demonstrate that "The boom is more like a shotgun than a thunderclap, and it's followed by a sustained roar." The focus of this argument is, therefore, on how the bomb was *perceived* by survivors, rather than on the scientifically supported bases which identify the physical qualities of the bomb. In this case, the knowledge of the bomb stemming from perception linked to memory and testimony lay the groundwork for a crucial epistemological discussion linked to truth in relation to the nuclear bomb. In Adrienne LaFrance, 'The Sound of an Atomic Bomb', *The Atlantic*, 8 August 2017 <https://www.theatlantic.com/technology/archive/2017/08/what-does-an-atomic-bomb-sound-like-when-it-explodes/536283/> [Accessed 28 February 2024].
[148] [At the same time, the only one to respond to the silence of the flash, to the silence of the dead, was the silence of the survivors.] In Didi-Huberman, *Génie Du Non-Lieu*, p.25.
[149] The full quote is the following: "Un pur *sentir panique du lieu*, hors de toute perception, hors de tout savoir sur l'espace devenu étouffement et brûlure en acte" In Didi-Huberman, *Génie Du Non-Lieu*, p.25.

of the uncanny, in the context of the nuclear phenomenon in *Hiroshima Mon Amour*, two silences communicate with one another and are linked to sight: the silence of the bomb preceded by a flash of light, and that of the victims, trapped in the mute solitude of the conflagration's intolerable luminosity, stuck in the uncanny moment where the bombing occurred, still waiting for the rumble which succeeds the lighting to arrive. It is the silence of the bomb which reverberates into "la patience, l'innocence, la douceur apparente'' of the momentary survivors of Hiroshima.[150] The damaged eyes of these individuals are still haunted by the sight of the explosion, and thus this apparent patience noticed by Elle can be seen as the uncanny expectation for their hearing to be fulfilled with the sound of the bomb, which will pose an end to their immobile waiting. Significantly, within this atmosphere of silence, where timeless waiting feels like an eternity,[151] and is framed as a quality of space conveyed visually through the cellar, Elle echoes the sense of desperate dismay of the people of Hiroshima.

As much as in *Hiroshima Mon Amour*, in *La Jetée* the images displayed on screen are narrated by an omniscient voice-over, therefore creating a detachment and sense of distance between the spoken word and its visual counterpart. Unlike Resnais and Duras, whose use of the external commentary and extradiegetic musical soundtrack is prevalent within the first 16 minutes of *Hiroshima Mon Amour*, Marker emphasises the unbearable silence dominating the film by introducing occasional intradiegetic sounds and voices.[152] In the film, voices inhabit the present, whereas sounds characterise the past. However, these voices appear to be almost out of sync, aloof from the physical bodies occupying the camp. They emerge as a constitutive part of the haunted space of the underground, rather than to human beings framed in the act of speaking.

[150] Duras, *Hiroshima Mon Amour*, p.13.

[151] At the question: "Combien de temps?" posed by Lui in relation to the time spent by Elle in the cellar, she responds: "L'éternité."

[152] For example, in order: at the beginning of the film (from minute 00:02:13), an alert precedes the announcement of a flight. The superimposed whispers of the doctors speaking in German, measuring and gauging the health status of those chosen to undertake the time-travel experiment appear from minute: 00:08:35 to 00:09:32, and then, later on in the film from minute: 00:12:56 to 00:14:18, In their second appearance, they shift from the diegetic space of the underground city, to the images of the past as, seemingly, relieved through time-travelling, than back to the present, and once more to the past, to, finally, fade away progressively. This structure is repeated from minute [00:16:08-00:16:23], and from minute [00:18:00-00:18:44]. The tweeting of birds from minute [00:19:02-00:19:54], progressively more intense and aggressive, punctuate a series of images showing a woman asleep, up until the moment where she awakes. And, finally, the sound of aeroplanes's engines and, once more, the same announcement noticed at the beginning, in the last scene of the film, from minute [00:26:50-00:27:32], with the sound of engine growing progressively stronger towards the end (as in what described with the birds), until it is substituted by the extradiegetic musical soundtrack. The pulsating heart which underscores the film is a further crucial element, as its ambiguous status could be either related to the man, whose heartbeat can be thought of increasing during the time-travel experiment, but it also might be attached to the surrounding environment, namely the underground city, as alive, and palpitating with overlapping memories. In Marker, *La Jetée*.

This strategy, alongside the technique used by the director, whereby still images are edited together, heightens the various emotional states of the characters, without allowing them to express joy, anger, fear or longing, confusion and panic, other than through their motionless bodies and facial expressions, while a second-hand explanation delivered by an anonymous narrator mediates these affects. For example, we are told by the narrator that those who undertook the time-travel experiments as cavies were either dead or drawn to madness; meanwhile a close-up of a man (from minute 00:05:59) appears, his face lit in order to create a game of light and shadow and enhance his thin, lifeless contours, the eyes wide open in shock. The man is shot through various angles, and perspectives, and his image is interposed with that of a doctor, stones, and statues. His mouth, in particular, is ajar, but not to utter words or sounds; it is as if he is getting ready to give way to a scream that will be never heard. Seemingly, the same observations who Žižek dedicates to the suffocated howl in Edvard Munch's *The scream* can apply to this reading of *La Jetée*. According to Žižek:

> The crucial feature of the painting is the fact that the scream is not heard. The point here is not the obvious fact that "paintings do not speak"; indeed, there are paintings that are definitely resonant and call sounds to mind - the paintings of street scenes bursting with life, of dancing, of stormy nature, etc. It is rather that the very essence of this picture is that the scream we perceive is mute since the anxiety is too taut for it to find an outlet in vocalisation.[153]

The paint-like quality of these images is, to a certain degree, deceitful within the context of the film. Since the stylistic choice of the director is to edit together still shots, the characters are not supposed to be accompanied by any audible dialogue. However, a question emergers as to whether the muteness of the characters as well as the eerie quietness of this set-up are a necessary consequence stemming from the use of still images, or, rather, they are a quality of space. Ultimately, if characters could talk in *La Jetée*, would they? Seemingly, in the subterranean city, the characters' anxiety, just like that of the man in Munch's painting (or of the Japanese people on which the camera in *Hiroshima Mon Amour* lingers), is "too taut for it to find an outlet in vocalisation." Croombs observes similarly, in relation to the torture-stricken realm of the underground camps, that Marker "makes the spectator imagine screams that cannot be heard and the pain of the man's stretched and contorted muscles."[154]

[153] Slavoj Žižek, *Enjoy Your Symptom!: Jacques Lacan in Hollywood and Out*, 2nd ed. (New York; London: Routledge, 1992), pp.116-117.
[154] Croombs, ‘"La Jetée" in Historical Time', p.31.

As well as summoning up the perceptual uncanniness of the underground spaces in both films, the attention paid to their acoustic quality refers back to the discourse linked to sight, and explored in this chapter, as well as in the second chapter. The manipulation of the diegesis of both films results in hindering their sonic dimension, whereby the visuality of the images proposed assumes a predominant position vis-à-vis the other senses, insofar as its meaning lies beyond a pure stylistic choice. The atomic bomb, as mentioned above in this section, was experienced as absolute, mute visuality (the explosion devoid of noise), unprecedented and unexpected also because perceived as incomplete, like a lightning not succeeded by a thunder. The atom bomb appeared unintelligible because it stood outside of the lived experience of the individuals, and therefore it caused a death whose effects in the immediate as well as in the long term were different from those caused by other bombs which characterised World War II.

Chapter IV: "Remembering to Forget"?

Burying Nuclear Remnants in *Into Eternity* and *Burial*

As argued so far in this thesis, the narratives of *Hiroshima Mon Amour*, *La Jetée*, and *Dark* are built upon a tension between memory and forgetting. This traction is expressed through the impossibility of witnessing in *La Jetée*, "the creation and undoing of memory"[1] in *Hiroshima Mon Amour*, and the antithetical relationship between memory and oblivion in *Dark*. The latter leads the protagonists, Martha and Jonas, to travel through time, and change the past, therefore erasing a present (and future) which allows them to exist. As explored in the first chapter, by representing an "undoing" of the past, the series prompts a reflection on deadly inventions, and tackles the possibility of "unlearning" knowledge and, therefore, "uninventing" dangerous technologies. In all these texts, knowledge is framed as a complex process, entangled with illusion and strangeness, in which forgetting is not only a dialectically necessary quality of remembering, but is also embedded in the same spaces which should house and preserve memory. Emma Wilson applies this quality of oblivion to the city of Hiroshima, creating a striking contrast between what Hiroshima represents in terms of "global memory culture,"[2] and the role that forgetting plays within the film. Wilson observes:

> The woman holds the memory and life of the dead lover inside herself until she reaches Hiroshima some fourteen years later. Her Japanese lover discovers that she has spoken to no one of Nevers until their encounter. Hiroshima is the place where she can tell this story; what is disturbing, for the woman, for the viewer, is that Hiroshima by this token becomes a place, not of remembering, but of forgetting.[3]

However, "disturbing" the narrative that equates Hiroshima with forgetting might appear at first sight, as pointed out by Wilson, the film renders visible an aspect of Hiroshima which has been discussed by different scholars and commentators. By focusing on the Peace Memorial Museum as the locus in which knowledge is limited and misleading (as Lui says, "Non, tu ne connais pas l'oubli. [...] Non, tu n'es pas douée de mémoire"),[4] Resnais and Duras shed light on what is missing from the past and present discourse on peace and memory conveyed by the museum. In *Hiroshima: The Origins of Global Memory Culture*, Ran Zwigenberg addresses the "serenity and

[1] Wilson, *Alain Resnais*, p.60.
[2] Ran Zwigenberg, *Hiroshima: The Origins of Global Memory Culture* (Cambridge: Cambridge University Press, 2014) VLeBooks ebook.
[3] Wilson, *Alain Resnais*, p.56.
[4] Duras, *Hiroshima Mon Amour.*

passivity"[5] of the complex which includes the memorial, the museum and the park in Hiroshima. Particularly in relation to the explanatory video positioned at the entrance of Hiroshima Peace Memorial Museum, he maintains:

> There is no mentioning or way of knowing who dropped the bomb or what had led to the event. These words[6] embody in them the entirety of the message of the memorial: Hiroshima is presented like the scene of a natural disaster, separated from any historical chain of events. Carol Gluck called this kind of narrative, "history in the passive voice." In a world that still has over 20,000 nuclear weapons, such serenity in the face of past and (possible) future horror is extremely troubling.[7]

Zwigenberg highlights the persistence of a global memory discourse lacking connections with "any historical chain of events". In this instance, omission and oblivion are constitutive of the politics of meaning-making related to the bombing of Hiroshima as a past act of violence and destruction.

The theme of forgetting is relevant to the diverse representations of the nuclear. However, it assumes a different meaning depending on the perspective, context, and technology utilised, on whether it is referred to the atomic bomb, a nuclear power plant, or nuclear waste produced following energy production processes (as will be discussed later in this section). In relation to Hiroshima, the principle of forgetting offers a critical overview of how the historical instance of the city's bombing loses its centrality within the rituals and ceremonies associated with it. Arguably, ceremonies and discourses around Hiroshima were framed as "future-oriented," whereby past annihilation has been substituted by tropes of reconstruction and modernity, while historical memory, potential reparations, and survivors' stories and rights have been overlooked or ignored.[8] According to Zwigenberg:

> In both Japanese and American narratives, the destruction brought about a better city and ushered in a bright modern future [...] As David Serlin points out, talking about modern architecture and the future-oriented city[9] was also a way of not talking about the survivors. While the city was rebuilding, well into the 1960s, many *hibakusha* still lived in the A-bomb slum (*genbaku suramu*) opposite the Peace Park. This glaring contrast between the "peace" park and the "A-bomb" slum symbolised the contradictions inherent in Hiroshima's

[5] Zwigenberg, *Hiroshima*, p.1.
[6] The words identified by Zwigenberg are: "On the sixth of August, 1945, a nuclear bomb *was dropped* on Hiroshima. [...]" in Ibid., p.1.
[7] Ibid., p.1-2.
[8] Ibid., p.65.
[9] It is not by chance that Lui in *Hiroshima Mon Amour* is an architect, and he cannot claim the status of survivor, since he was not in Hiroshima when the bomb was dropped.

> modernisation project. While the city looked into the future, the *hibakusha*, in whose name peace was proclaimed, were left behind with the bomb that had destroyed their bodies, killed their families and taken their livelihoods.[10]

Both Resnais and Marker engage in the politics of memory and forgetting, tackling the degree to which forgetting is an unavoidable and at times necessary component of remembering, and expressing what Jacques Derrida identifies as non-memory, which takes the shape of "cinders or ashes". According to Derrida, "cinders" (*cendre*) are traces. However, despite representing and symbolising something, they do so in the absence of the thing they stand for; they are testimony to something which has disappeared, and therefore is impossible to retrieve, identify, or reconstruct as the entity, material or immaterial, that it once was. In the words of Derrida, the cinder is:

> Something that remains without remaining, which is neither present nor absent, which destroys itself, which is totally consumed, which is a remainder without remainder. That is, something which is not. [...] The cinder is not: This means that it testifies without testifying. It testifies to the disappearance of the witness, if one can say that. It testifies to the disappearance of memory.[11] (Derrida, Weber 1995:209)

The limits of witnessing, if not its impossibility, have been the subject of the second chapter in relation to *La Jetée*. As with the concept of cinders, the protagonist experiences a sort of "loss of memory,"[12] which is so definitive that not even the action of re-experiencing the past enables the lost memory to resurface in its original form, if only for a brief moment preceding death. This momentary recovery of memory, a flash of lucidity before oblivion, "testifies for the disappearance of the witness", to use Derrida's explanation, attesting to the impossible task to reconnect and repossess what is vanished forever.

Both Resnais and Marker recognise the value of mourning, as the expressive quality of loss, of what is forgotten, but also as an affect projected into the future. Mark Dooley articulates the role of mourning as inseparable from memory in the work of Derrida, suggesting that: "If memory testifies to the fact that we can never fully recollect the past, then mourning affirms that we are never finished with the past: that the task of comprehending the past always lies ahead of us."[13]

[10] Zwigenberg, *Hiroshima*, p.65.
[11] Derrida, *Points*, p.209.
[12] Ibid., p.207.
[13] Dooley, and Kavanagh, *The Philosophy of Derrida*, p.8.

In the context of these films, Derrida's cinders represent a trace whose contours are invisible, insofar as they have been erased - like a city or a past love, for example, their memory an indiscernible trace, the hidden layer of the palimpsest. *Dark*, by the same token, upholds this same status of forgetfulness. In the series, the past is viewed as a "somewhen" which can be destroyed and overwritten. If even a trace remains from what existed but has been cancelled (Hannah is pregnant with a child whose name will be Jonas, the evocative yellow raincoat is a remainder of a past which does not exist in the present of the story, but still haunts it.), this will take the shape of a hypothetical past to mourn, as melancholia, rather than nostalgia. The trope of ashes is also recreated visually in the series: as much as with the ashes covering the bodies of the two lovers in the initial scene of *Hiroshima Mon Amour* (ashes of Hiroshima, cinders of Auschwitz), in *Dark* the characters progressively disappear, their bodies dissolving into stardust.

Derrida points out that this non-memory expressed by the material marker of the cinder is both "catastrophe" and "benediction": "The experience of cinders is the experience not only of forgetting, but of the forgetting of forgetting, of the forgetting of which nothing remains. This, then, is the worst and, at the same time, it is a benediction. Both at once."[14]

Into Eternity: Speculating on the Catastrophic Benediction of Forgetting

While exploring the thematic strand of forgetting as both "catastrophe" and "benediction,"[15] the Danish documentary, *Into Eternity - A Film for the Future* confronts the issue of the future of nuclear waste. The documentary follows the stages preceding the construction of a deep geological repository whose function is to house nuclear waste, namely the Onkalo spent nuclear fuel facility in Finland. As the documentarist Michael Madsen states at the beginning of the film [min. 00:03:03], the term Onkalo means "hiding place."[16] The documentary starts with a still image of an overground landscape, in which rocks, trees, and, in the background, the blurred outline of pylons fill the frame. Following this first set up, a tracking shot captures a turn in a paved road going downhill, progressively uncovering the entrance of what looks like a tunnel. The bucolic still frame anticipating this camera movement is in stark contrast with the landscape of cement characterising the entrance to the facility, if not for the pylons giving continuity to the two scenes,

[14] Derrida, *Points*, p.207.
[15] Ibid., p.207.
[16] Madsen, *Into Eternity*.

while a soundtrack made out of the sound of percussion punctuates the shift from the first to the second shot. As the camera slowly enters the premises, a male voice offers some background information on what is on display. This is framed as something between an explanation and a warning, a message for a hypothetical human being of the future to create awareness of what this facility stands for. The voice-over utters the following words:

> I would say that you are now in a place where we have buried something from you to protect you,[17] and we have taken great pain to be sure that you are protected. We also need you to know that this place should not be disturbed. And we want you to know that this is not a place for you to live in. You should stay away from this place, and then you will be safe.[18]

From the first stages in the film, it appears clear that the framework of *hiding* and *forgetting* is portrayed as a "benediction." In general terms, the documentary is constructed as a conversation between the present and the future, between the scientists planning and overlooking the various stages of Onkalo's construction, and a future and hypothetical human being. Michael Madsen, the authorial voice of the documentary, functions as a mediator between these two parties, while also threading together the different sections, or chapters of the film by narrating the creation of Onkalo as a fable and characterising the repository as a "burial chamber".

The documentary maps out the construction of this deep geological repository, but also poses ethical questions of responsibility and accountability towards a human being not yet born, and the future of humanity and the planet. According to scientists, Onkalo should be created to rest undisturbed for at least 100,000 years, a period for which the radioactive potential of the nuclear spent fuel could still have negative consequences on human health.[19] The documentary discusses the different challenges underlying the construction and maintenance of the repository in a way that it can outlast the present civilization. Various scientists and experts questioned by Madsen discuss the likelihood of a knowledgeable civilization in the future who will realise that human intrusion shall not be allowed, since Onkalo is not safe, and gauge the predicament of transferring knowledge into future generations. In doing so, they list a series of possible visual

[17] In his work on the architectural uncanny, Vidler talks about Pompeii in terms of a place that should have remained hidden, as follows: "[...] Pompeii evidently qualified as a textbook example of the uncanny on every level, from the implicit horror of the domestic to the revelations of mysteries, religious and otherwise, that, in Schelling's view, might better have remained unrevealed." In Vidler, *The Architectural Uncanny*, p.48.

[18] Madsen, *Into Eternity*.

[19] As an expert in the documentary remarks: "We are dealing with very, very long-time frames. Meaning that this repository should last at least 100 000 years." *Into Eternity*, dir. by Michael Madsen, min. [00:18:41].

markers, which should deter individuals from exploring Onkalo. They also initiate a conversation on the durability of cultural and societal structures which should characterise these loci of warning and safety, facilitating the transferring of knowledge into the future. These structures are expressed by the languages used and known, which might or might not be passed on to and spoken by future generations [00:42:19], as well as scientific and symbolic knowledge, including nuclear waste information contained in a not-yet existent archive [00:53:59].[20] However, Madsen challenges the reliability of these kinds of knowledge depositories, linking them to the precariousness of processes punctuating and rendering unstable human history (such as wars)[21], as well as likening them to the ephemeral thinking behind the construction of nuclear waste "interim storages" [00:54:28]. He notices [00:54:00]:

> We have no archives with information on nuclear waste yet. If we build archives every future society and every future generation must maintain the information and update the language for you to understand. Can we count on continuation for thousands of generations into the future? What if people starve and suffer? What if there are wars or floods or fires? The archives have the same requirements as our interim storages. Requirements we cannot guarantee. After all, this is why we are building Onkalo.[22]

At minute [00:46:56], during a conversation with Juhani Vira, Senior Vice President of the Research Department of Onkalo, forgetting is put forward as an alternative to more explicit visual markers addressing the presence of the nuclear waste repository.[23] Vira expounds the theory of forgetting thus [00:46:42]: "Then there is the philosophical point that some people think that it would be better to forget. [...] There are two schools here: those who think that you have to leave markers [...] on the ground; and those people who say it would be better to walk away, and forget about the site."[24] Expanding on this idea, Madsen further explores the issue asking Timo Seppälä, a Senior Communications Manager at Onkalo [00:47:54]: "How is it possible to create oblivion and forgetting? How is it possible to make a facility like Onkalo disappear?"[25] At this point, the image of a female moose appears on screen; her brown, thick coat emerges distinctly from a white, still blanket of snow, and she is caught in the act of defecating. This shot lasts just a few seconds and covers the time for the questions to be conveyed, as well as connecting as well as suturing together the overground natural world with discursive speculations linked to the

[20] Ibid.
[21] For example, at minute [00:13:51] Timo Seppala, a Communications Senior Manager at Onkalo, states: "There have been two world wars during the last 100 years. The world above ground is unstable." In Madsen, *Into Eternity*.
[22] Ibid.
[23] Ibid.
[24] Ibid.
[25] Ibid.

anthropogenic space represented by the nuclear waste repository. This “connector” puts the two spheres, the human and the non-human, into communication on a visual level, but it also signals a dialectical distance between them, insofar as it addresses the different power dynamics at play between non-human life and humans.

The figure of the moose is employed already in the first stages of the film (at minute 00:06:32),[26] as a metaphor for the vulnerability and fragility of ecosystems in front of the predatory tendencies of human activity and technology. Here, the mammal is semi-hidden behind a wintery forest of silver birches, duplicating the same composition noticed at minute [00:47:00], but also functioning as a direct expression of the words voiced by the director. Madsen observes:

> We already have enormous amounts of nuclear waste all over the world. If this waste spills out into nature it will cause death and destruction. Large areas will become uninhabitable for a long, long time. Did that happen? Are there forbidden zones with no life in your time?[27]

Framed through a static medium shot, the moose moves slightly from her initial position, where her body is semi-visible through the trees, to disappear completely from sight. Through this movement, she ends up hiding behind the thin trunk of one of the two birch trees positioned in the foreground of the composition, while the director wonders: “Did that happen? Are there forbidden zones with no life in your time?” In this scene, the point of view is positioned beyond the trees in the foreground, at a distance which enables the viewer and the camera to be invisible to the moose. The latter appears to be unaware of a human and technological presence in the vicinity, and she moves unperturbed and indifferent across the winter landscape. This scene stands out as a metaphor of the predatory relationship which humans establish with the natural world and mentioned above in this section. The visible body of the animal and the invisible owner of the point of view are configured as prey and hunter, as the latter seems to study the movements of the former in order to identify the exact moment in which to attack - even though this moment is in a future which we, as spectators, are not allowed to witness. This game of hide and seek, visible prey and invisible predator echo the dynamics between radioactivity and its victims. As Gabriele Schwab argues:

> While the materiality of radioactivity is literally invisible, those affected by it, and especially those who die from it, experience it as deadly vibrant matter. Moreover, the scale of possible nuclear destruction and the half-- life of nuclear waste are

[26] Madsen, *Into Eternity*.
[27] Ibid.

> so magnanimous that they transcend the very boundaries of human time and imagination.[28]

These connecting scenes, therefore, assume a fundamental role within the narrative, since they allow the director to express his anxieties as regards the invisible yet extensive dangers of radioactivity, as well as identifying the unequal power relations that humans generate with their environments, and the deadly consequences of their rapacious behaviour. This kind of visual language strategy indirectly suggests that not only are nuclear waste and radioactivity a product of a hyper-industrialised civilisation, but, as an issue, they reflect a human and technological discourse whose effects and consequences impinge on both human and non-human life. Schwab further investigates this interchange and interdependence between material world(s) in terms of the formation of nuclear subjectivities, and which involves "subjects", "nature", and "technoscientific objects", thus:

> The material world, including nature as well as technoscientific objects, can no longer be seen as an outside to this subject--formation. Rather, the boundaries between the subject and the material and immaterial forces that it encounters are continually renegotiated in processes of dynamic exchange.[29]

Within this constant renegotiation, to use Schawb's expression, the ambiguous bond linking radioactivity and ecosystems provides a stimulus through which interpret *Into Eternity*'s contemplation of both the persistence and ubiquity of the nuclear complex on the one hand, and its discursive and aesthetic invisibility, expressed in terms of oblivion and forgetting, on the other. According to some interpretations, in the aftermath of nuclear disasters, the advent of radioactivity can be seen as both "catastrophe" and "benediction", to re-propose the distinction pointed out by Derrida in relation to non-memory. As argued so far in this text, the extreme effects of radioactivity might create the circumstances whereby disease and, ultimately, "death and destruction", as Madsen observes, could yield an inhospitable environment for all forms of life, either human or non-human. Non-human life might hail the human uninhabitability of large spaces of land, and the subsequent lack of anthropogenic intervention and activity, as a way to repopulate, undisturbed, a radioactive "reserve".[30] However, this is a false equation, since nature thrives in the absence of people, not in the presence of radiation.

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[28] Schwab, *Radioactive Ghosts*, p.40.

[29] Schwab, *Radioactive Ghosts*, p.40.

[30] For example, Mary Mycyo terms the exclusion zone "Europe's largest nature sanctuary. She claims: "Contrary to the myths and imagery, Chernobyl's land had become a unique, new ecosystem. Defying the gloomiest predictions, it had come back to life as Europe's largest nature sanctuary, teeming with wildlife. Like the forests, fields, and swamps of their unexpectedly inviting habitat, the animals are all radioactive. To the astonishment of just about everyone, they are also thriving." Mary Mycio, *Wormwood Forest: a Natural History of Chernobyl* (Washington, District of Columbia: Joseph Henry Press, 2005), pp.1-2. Ebook Central ebook. p.1-2.

Schwab observes that this idealised attraction with contaminated areas is the result of a rhetorical framing of "nuclear attacks or disasters" as inevitable, which, in turn, she connects with the Derridean "apocalyptic fantasies"[31] discussed in Chapter I in relation to *Dark*. These fantasies of total and unavoidable destruction are imbued with nuclear sublime connotations, thus rendering the sites of nuclear disasters more likely to be commodified by "astounding waves of disaster tourism," as well as being employed for "films, novels, and an apocalyptic imaginary."[32] Schwab further notices that:

> On the one hand, there is the voyeuristic fascination with emergent forms of life in Pripyat's postnuclear zone of exclusion, with the ruins of a repopulated nuclear ghost town, and even with the mutant bodies of humans and animals. On the other hand, there are survivors - often - the poorest of the poor -- who return to Pripyat with a pervasive desire to recast the disaster zone as an idyll of freedom, survivors who refashion and reappropriate the zone of exclusion outside the law on their own terms, generating a new conviviality with other species and a flourishing of new life philosophies. Francesco Cataluccio speaks of a "postnuclear optimism," expressed in assertions that, around Chernobyl, plant life seems to thrive, the fields are planted again, and people have moved back to the contaminated areas.[33]

The Chernobyl Exclusion Zone, for example, is a contaminated area surrounding the former nuclear power plant in Pripyat and has been inaccessible since 1986 for its high rates of radioactivity. This idea of "postnuclear optimism" which Schwab borrows from Francesco Cataluccio, alongside the voyeuristic and sublime attraction for disaster zones as ultimate catalysts of "apocalyptic fantasies" are strictly linked with the fact that, when human activity is absent as a consequence of nuclear energy disasters, nature thrives undisturbed.[34] The 2015 documentary film *The Babushkas of Chernobyl* draws on this "desire to recast the disaster zone as an idyll of freedom."[35] The film follows the daily life of a group of elderly women who have

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[31] Schwab, *Radioactive Ghosts*, p.46.
[32] Ibid., p.46.
[33] Schwab, *Radioactive Ghosts*, p.46.
[34] For example, in this article of *National Geographic*, it is claimed that: "Research on these areas, including a recent study on Fukushima, shows that the mere presence of humans may be the most important factor limiting the local abundance of wildlife. Studies suggest that animals have multiplied in regions now abandoned by humans, despite impacts such as nuclear fallout that have driven people out." In Douglas Main, 'Wildlife abounds in these places abandoned years before coronavirus', *National Geographic*, 4 May 2020 <https://www.nationalgeographic.co.uk/animals/2020/05/wildlife-abounds-these-places-abandoned-years-coronavirus> [Accessed 27 February 2024]
[35] Holly Morris and Anne Bogart, *The Babushkas of Chernobyl*, (Journeyman Pictures, 2015) <https://www.amazon.co.uk/Babushkas-Chernobyl-Anne-Bogart/dp/B073ZHMNKW> [Accessed 27 February 2024]. Min [00:01:53]

returned illegally to their original homes within the boundaries of the exclusion zone.[36] One of the "babushkas" comments [00:01:53]: "Here in the Exclusion Zone life never stopped, nature just took over. The river flows just like before, the fish live here just like before."[37]

However, non-human animals inhabit a liminal space, whereby radiation damages their DNA, causing mutations, or lead to the development of tumours, sight impairments, particularly observed in birds, and other related diseases, as suggested by Mousseau and Møller.[38] Plants are also vulnerable to the negative effects of radiation. In particularly radioactive environments such as Chernobyl and Fukushima, scientists have observed "higher incidences of abnormalities"[39] which could lead to a decrease in plants' reproductive capacity.[40] Since plants and animals are part of a shared ecosystem, wherein the life of one depends on the other, if the reproductive life of the former is curtailed by external agents, herbivorous animals who feed on the surrounding vegetation are also affected by these changes. According to Mousseau and Møller: "Plants interact with herbivores, parasites, decomposers and pollinators. Hence changes in the abundance and the diversity of plant species and their growth and life history may be partially affected by these different taxa."[41] One of the animals who might be paying the consequences of this reduction in quantity and "diversity in plant species" is the moose,[42] widespread in the Chernobyl area, and featured in *Into Eternity*. However, in the concluding remarks, Mousseau and Møller maintain that: "[the] level of ionising radiation reduces the abundance of some, but not of other species of trees. While the abundance of certain tree species has increased, the abundance of flowering plants has decreased considerably."[43]

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[36] The exclusion zone comprehends a vast territory of Northern Ukraine. According to Yankovska and Hannam: "The exclusion zone extends approximately 30 km in radius from the Chernobyl nuclear reactor and covers around 2600 km2 of the Ukrainian mainland. It includes the most visited tourist places of Chernobyl city, the town of Pripyat and roughly 180 villages that were evacuated and placed under the military control due to the disaster." Ganna Yankovska, and Kevin Hannam, 'Dark and Toxic Tourism in the Chernobyl Exclusion Zone', *Current Issues in Tourism*, 17.10 (2014), 929–39 (p.930) <https://doi.org/10.1080/13683500.2013.820260>.

[37] Morris and Bogart, *The Babushkas of Chernobyl*. This is echoed by the horror film *The Chernobyl Diaries*, in which a group of tourists illegally visit the Chernobyl Exclusion Zone. Here, Uri, the local tour guide, claims: "Nature has reclaimed its rightful home." Brad Parker, Chernobyl Diaries, , (Warner Bros. Pictures, 2012) <https://www.amazon.co.uk/Chernobyl-Diaries-Jesse-McCartney/dp/B00ESQ82AC> [Accessed 27 February 2024]. Min. [00:11:03].

[38] Timothy A. Mousseau, and Anders Pape Møller, 'Plants in the Light of Ionizing Radiation: What Have We Learned from Chernobyl, Fukushima, and Other "Hot" Places?', *Frontiers in Plant Science*, 11 (2020), 552–552 (p.4) <doi: 10.3389/fpls.2020.00552>

[39] Mousseau Møller, 'Plants in the Light of Ionizing Radiation, p.4.

[40] Ibid., p.6.

[41] Ibid., p.6.

[42] Ibid., p.6.

[43] Ibid., p.7.

If the results of scientific studies demonstrate that there is still uncertainty about the long-term consequences of radioactivity within non-human ecosystems, these large areas abandoned by humans have created the circumstances for an unusual natural reserve, in which, using the *babushkas*'s words "nature just took over." Non-human life is viewed as more resilient to radioactivity and able to adapt to a changing environment more flexibly than humans (in spite of the health consequences they might experience). Crucially, two extreme propositions are at play within this context, which also discursively link Hiroshima with other post-nuclear landscapes. On one side, there is the romanticised, amnesic idea of reconstruction, which occurs as a project of architectural renaissance of the city separated from its recent past, as mentioned above. In this instance Hiroshima is viewed as a sort of mythological phoenix regenerating from the ashes of non-memory which leave nothing of what was there before the bomb, as well as identifying the bomb as coming from nowhere. This modus operandi engenders a process of (re)construction of the city through forgetting. On the other hand, within the post-apocalyptic ecosystems poisoned by radioactivity, as viewed above in this section, some commentators suggest that nature re-appropriates those areas abandoned by humanity, reclaiming its space and regaining its dignity.

Despite the fact that the (un)natural reserves resurface from the radioactive ruins of human technological shortcomings, the insistence on the fact that "nature has reclaimed its rightful home" is part of a process of mythmaking. In this sense, as much as with a discourse attached to Hiroshima, the past is obscured and deleted, instead of being understood critically. The truth is exchanged for a more reassuring tale, whereby the nuclear disaster, and the resulting radioactivity poisoning come across as a sort of "benediction" for those ecosystems otherwise threatened and subjugated by human and technological dominance. This narrative might be used as a justification for not exploring in depth, and understanding the causes lying behind, such disasters and dangers. Arguably, these ambivalent processes producing contradicting "truths" might be assimilated to what Rob Nixon in *Slow Violence* names "the contested science of damage."[44] In relation to the Chernobyl accident, and comparing it with the Bhopal chemical spillage, Nixon argues:

> The contested science of damage further compounds the challenge, as varied scientific methodologies may be mobilised to demonstrate or discount etiologies, creating rival regimes of truth, manipulable by political and economic interests.[45]

[44] Nixon, *Slow Violence*, p.47.
[45] Ibid, p.47.

These “rival regimes of truth”, as argued above in this section, view the dangers associated with nuclear radioactivity in two distinctive ways. Establishing whether radioactivity has negative or positive effects for ecosystems further distances the issue from the more pressing problem of finding a solution for the storage of nuclear waste, and less potentially perilous alternatives to nuclear energy. Despite these competing views, non-human entities have been and will be casualties of the slow nuclear violence caused by radioactivity. Because of this, Madsen points out that remembering and forgetting are essential to the future existence of both fellow humans, but also life in general. In the story-telling style which characterises and punctuates the documentary, Madsen sums up the issue as follows:

> When the burial chamber was complete, man laid his new fire to rest, and tried to forget about it, for he knew that only through oblivion would he be free from it. But then he started to worry that his children might find the burial chamber and awaken the fire from his sleep. So, he bade his children to tell their children, and their children’s children too to remember forever to forget to consign the burial chamber to oblivion. To remember forever to forget.[46]

Crucially *Into Eternity* explores the potential and productive tension between remembering and forgetting. Unlike Derrida’s notion of *cinders*, which underlines the progressive but inevitable reduction and destruction of memory, namely “forgetting of forgetting, of the forgetting of which nothing remains”, Madsen invites both present and future audiences to cherish and preserve a transgenerational memory of forgetting, in order to “remember forever to forget” where the nuclear waste is buried. Forgetting and remembering are linked inextricably to the notion and deed of burial. The film draws explicit discursive connections between the buried nuclear waste, and more ancient forms of burial, which might trigger the curiosity of future generations who would, in turn, regard the hidden radioactive material as “something religious. A burial ground, or a treasure”, as one of the experts maintains [00:32:20].[47] Within this context, another interviewee [00:32:29] questioned by Madsen observes more extensively:

> If we look at the pyramids, we cannot really say that we understand everything about the significance of their erection. But we can assume that this could be the same for our repository. It will be interpreted the same way as we interpret the pyramids.[48]

[46] Madsen, *Into Eternity*, min. [00:28:15 - 00:28:27].
[47] Ibid.
[48] Ibid.

According to the latter observation, by shedding light on humanity's past experience with the interpretation and study of widely obscure archaeological findings, such as the pyramids, it is fair to assume that the same will occur in the future with the discovery and unearthing of Onkalo, whereby "it is quite possible that we will not be understood by the future." [00:33:05][49] As articulated in Chapter III of this thesis in relation to the architectural and archaeological value of the bunker, in *Bunker Archaeology* Paul Virilio associates these defensive fortifications with "a complete series of cultural memories [...] the Egyptian mastabas, the Etruscan tombs, the Aztec structures.'[50] A structure like Onkalo is a distant relative to the bunker via the unstable link of an (un)common nuclear genealogical tree, whereby if the bunker is a hiding place from warfare, Onkalo, as the same name recalls, should be a hidden place. According to this, the same rationale underlying a variety of structures concealed from sight (tombs, bunkers, and deep geological repositories, for example) can characterise the underground as a place where the sacred and the occult, as hidden and invisible to sight, conflate.

In this sense, the nuclear waste further nuances the theme of the nuclear uncanny explored in the previous chapters. By framing the deep geological repository as a "burial chamber", the documentary associates it with discourses linked to religion and sacredness, as well as the occult and the arcane, connecting human-as-animate and nonhuman-as-inanimate through the ritual of burial. Hence Madsen proposes an operation of anthropomorphisation of the nuclear refuse, framing it as a subjectivised nuclear "body". This b(od)y-product of nuclear technology is destined to be buried while still warm and breathing, alive with radioactivity.

Burial: (Dis)membering Nuclear Archaeologies

This same language is echoed by Emilija Škarnulytė's art film *Burial* (2022). The film is based on the phasing out of the Ignalina nuclear power plant in Lithuania. A twin nuclear power plant to Chernobyl [00:15:54], the decommissioning of Ignalina was a condition of Lithuania entering the European Union, as outlined by the titles at minute [00:16:16].[51] Linara Dovydaitytė explains that the plant holds a complex heritage: "as a colonial Soviet project to provide electricity for the

[49] Ibid.
[50] Virilio, *Bunker Archaeology*, p.11.
[51] Škarnulytė, *Burial*.

Western part of the Soviet Union,"[52] its construction and decommissioning signals the transition of Lithuania from Soviet hegemony to independence, up until its European Union membership, which dictates its final closure. Dovydaitytė observes that:

> Today the Ignalina NPP represents various things, from the nuclear legacy of the modern era to a remnant of the unwanted Soviet past. In addition, the plant represents a precedent for the future through the scientific and technological challenge of dismantling this type of reactor for the first time in history (not including the disastrous Chernobyl reactor). In the social imaginary in Lithuania, however, this power plant is no longer associated with nuclear energy and its possibilities and risks, but with the seemingly banal process of its decommissioning.[53]

The plant is, therefore, framed as a significant nonhuman witness to the past, present and future of the country, whose history, moreover, signals the journey undertaken by nuclear technology. Despite its proximity with the Chernobyl reactor, as Dovydaitytė points out, people do not perceive the plant as a potential safety threat. It is in this space left empty by public indifference that Dovydaitytė places the strategic role played by "artists, cultural activists, and researchers whose creative practice returns the nuclear topic to the public sphere."[54] This is the context in which *Burial* is positioned. Through this film Škarnulytė shows some of the phases leading to the shutting down of the plant, deconstructing and restructuring "the seemingly banal process of its decommissioning" into a complex network in which "different strata", namely "galaxies, astronomy, historical/cultural layers, deep time, and underwater" are read one against the other, enabling a process through which she tries "to see the invisible", as she explains.[55]

As the parts constitutive of the structure are progressively taken down, the director punctuates these movements by putting them in dialogue with past history, time, and by initiating a critical reflection on technology.

Unlike *Into Eternity*, *Burial* does not feature interviews with experts, and is devoid of uttered explanations or voice over. Instead, it is made out of a poetic montage of audio and visual footage material and original content assembled by the director, alongside real and surreal images,

[52] Linara Dovydaitytė, '(Re)Imagining the Nuclear in Lithuania Following the Shutdown of the Ignalina Nuclear Power Plant', *Journal of Baltic Studies*, 53.3 (2022), 415–36 (p.416) <https://doi.org/10.1080/01629778.2022.2072919>.
[53] Dovydaitytė, '(Re)Imagining the Nuclear in Lithuania Following the Shutdown of the Ignalina Nuclear Power Plant', p.416.
[54] Dovydaitytė, '(Re)Imagining the Nuclear in Lithuania Following the Shutdown of the Ignalina Nuclear Power Plant', p.416.
[55] NY Baltic Film Festival, *Burial Film Talk.*

through which the author maps out the different stages of the plant's slow and patient deconstruction, as well as framing some problematic aspects linked to the maintenance of nuclear waste. As mentioned above in this chapter, *Into Eternity* is about *re*-membering the journey of nuclear waste, visually conveyed by the long process leading to the construction of Onkalo. *Burial*, instead, is focused on *dis*-membering the nuclear power plant down to its imperishable core, the nuclear waste, as well as to its past legacy of nuclear missile bases, or ancient underground necropolis. By employing two diverse discursive and visual narratives, both documentaries nuance and problematise nuclear technology, while creating an aesthetic which draws upon ceremonies and rites commonly dedicated to the deceased. By doing so, they associate the deed of burial of the nuclear waste with those rituals underpinning human societies. This process occurs both on a linguistic and visual level. As noticed above in this chapter, the deep geological repository built to house the nuclear waste in Finland discussed in *Into Eternity* is identified as a burial chamber, and hypothetically related to "something religious, a burial ground, or a treasure."[56] By the same token, the title of the film created by Emilija Škarnulytė, *Burial*, puts an emphasis on the religious aspect of inhumation, which she edits side by side with scientific and mechanical practices aimed at decommissioning the nuclear power plant and manage nuclear waste in structures that might or might not withstand external agents, and persist into the future.

At minute [00:27:47],[57] a blue sliding door opens revealing four cylindrical, orange-tinted silos. A human figure dressed in protective gear is framed measuring the radiation levels of the room. The superimposed title at the centre of the frame knits together this image with another structure, palimpsestically evoked by the silos, thus: "In July 2019 Chernobyl's destroyed reactor no. 4 was encased in a massive steel "sarcophagus" that will last only 100 years." As an online encyclopaedic entry in National Geographic stresses:

> A sarcophagus is a stone coffin or a container to hold a coffin. Although early sarcophagi were made to hold coffins within, the term has come to refer to any stone coffin that is placed above ground. The earliest stone sarcophagi were used by Egyptian pharaohs of the 3rd dynasty, which reigned from about 2686 to 2613 B.C.E.[58]

Two elements are relevant in relation to what has been discussed so far in this section. First of all, the sarcophagus, as suggested by the description above, identifies a "stone coffin," whose

[56] Madsen, *Into Eternity*.
[57] Škarnulytė, *Burial*.
[58] National Geographic, *Encyclopedic Entry: Sarcophagi*, <https://education.nationalgeographic.org/resource/sarcophagi/> [Accessed 27 February 2024].

original function was to hold a dead body, and which was part of the ritual of burying the deceased shared by a variety of cultures, including "ancient Egypt, ancient Rome and Greece".[59] Once more, the disposal of the nuclear waste is described using a term borrowed from the funerary dictionary. Secondly, the term "sarcophagus" is not accidental in this context, since it indicates a burial structure commonly positioned over ground. The chasm between overground and underground has been discussed broadly within this thesis; however, in this instance, it connotes the momentary essence of the management of radioactive contamination, since the "sarcophagus", despite being "massive" and made out of "steel", will only last 100 years – also considering that its function is for cooling or isolation, so necessarily temporary.[60] Furthermore, the ephemeral nature of this steel structure, and its position over ground can be linked to the suggestion put forward by *Into Eternity*, according to which, "The world above ground is unstable."[61]

Škarnulytė pushes the funerary narrative even further, insofar as she brings together a series of images of an overground facility containing numerous storage ponds, wherein the spent fuel rods are submerged in water, to keep radiation at bay, since the water provides shielding [min. 00:29:33] – another technical device which is a transient solution to nuclear disposal.[62] Towards the end of this sequence, a tilting shot reveals a series of small square-shaped plots of cement showcasing the radiation warning symbol, the trefoil. The slow movement of the camera from the plots upwards unveils a grey wide chamber, a structure resembling the architectural niche used to house dead bodies, also known as loculi. As the sequence of shots related to the overground nuclear storage facilities unfolds, the narrative jumps into modern burial compartments, including urns for ashes, some of which are a kitsch replica of the Egyptian canopic jars in a set of four items. In ancient Egypt, these urns were meant to house the organs of dead individuals during the process of mummification, and displayed a lid shaped as the head of the divinity whose role was to protect the various organs.[63] Within this frame, through a close shot, the row of jars appears in focus, while, on one side, a blurred sign in the foreground offers information about Wi-Fi in the facility. Being out of focus, the description printed on the sign is unintelligible, aside from the initials "Wi-Fi" in capital letters. The juxtaposition of these two diverse layers of signification

[59] National Geographic, *Encyclopedic Entry: Sarcophagi*.
[60] Škarnulytė, *Burial*, min. [00:27:51].
[61] Madsen, *Into Eternity*, min. [00:14:01].
[62] Škarnulytė, *Burial*.
[63] Met Museum, *Canopic Jar*, <https://www.metmuseum.org/art/collection/search/550773#:~:text=Canopic%20jars%20were%20made%20to,%2C%20and%20Qebehsenuef%20> [Accessed 27 February 2024]

signals the conflation between the “exotic past”[64] evoked by the jars, reclaimed not as souvenirs, but as contemporary funerary items, and the present embodied by the Wi-Fi sign. Within the economy of the film, this melange between a kitsch reproduction of ancient artefacts and the present communication technologies is a subtle and playful anticipation of the montage displayed later on in the film. Here [00:43:39] a shot of the Soviet-era nuclear missile base in Lithuania, the Plokštinė missile base, now turned into a Cold War Museum and located in the Samogitia National Park is edited alongside the Etruscan necropolis of Cerveteri, an overground and underground tombal system in Latium, the Piscina Mirabilis, an Ancient Roman cistern, and the “Parco sommerso'' of Baia, an underwater archaeological park both in the Gulf of Naples.[65] The nonlinear and a-temporal association of these diverse archaeologies and the natural environments by which they are half-hidden generates a game of mirrors whereby the modern sites and their ancient doubles are engaged in an enigmatic dialogue transcending past and present. The aesthetic discourse connecting these diverse loci creates uncanny evocations, bringing together funerary visual practices across time and space, and connecting the world of the dead with the (un)dead technological nuclearscape, alongside the dismembering and burial rituals underlying it.

The funerary theme, as well as its uncanny implications, is further explored in the film via other visual suggestions. Through a variety of movements and camera angles, the artist sews together four paintings from the series *Funeral Symphony* by Lithuanian artist Mikalojus Konstantinas Čiurlionis [min. 00:33:09].[66] Originally composed of 7 canvases, the selected paintings featured in the film depict the various stages of a funeral procession. At first a black coffin is carried by a large group of people setting off from a golden gate (*Funeral Symphony I*), then walking along a road surrounded by cypresses (*Funeral Symphony IV*), while the director lingers on the detail of the sun setting between a composition of four human figures holding the coffin on their shoulders (*Funeral Symphony II*). Finally, the procession enters a serpentine route leading to a cave carved in the mountain (*Funeral Symphony VI*).[67] It is night time at this stage, and the cave and the procession are illuminated brightly by the flickering light of candles. Within the context of a nuclear discourse, alongside the theme of burial in which the filmmaker engages through a juxtaposition of ancient and contemporary funerary aesthetics, and the role that time plays within them, the painting *Symphony II* is pregnant with meaning. The structure that the human figures holding the coffin shape is reminiscent of a trilithon, such as those characterising the ancient site of

[64] Ludwig Giesz, ‘Kitsch-Man as Tourist’, in *Kitsch; the World of Bad Taste*, ed. by. Dorfles, Gillo and others (New York: Universe Books, 1969), p.170.
[65] Škarnulytė, *Burial*.
[66] Ibid.
[67] Ibid.

Stonehenge, or a dolmen, namely a Megalithic tomb. Both the trilithon and the dolmen are structures consisting of two vertical stones supporting a large horizontal capstone. The site where Stonehenge had been erected was a burial ground,[68] while the stone formation "has long been thought to incorporate some kind of calendar, although its specific purpose and exactly how it worked remain far from clear."[69] Darvill expands on his theory regarding Stonehenge as a "time-reckoning system"[70] linked to the movement of the sun as follows:

> At Stonehenge, the emphasis on the solstices embedded into the architecture in the form of the principal axis and its orientation strongly suggests a solar-based system. The period between the recurrence of either one of these solstitial events is, in practical terms, a tropical year of 365.25 solar days.[71] (Darvill 2022:326)

Despite having an uncertain origin and function,[72] Darvill believes that this "solar-based" calendar had the objective of "providing a secure cosmologically referenced framework for the observance of festivals, ceremonies and rituals that were the reason for the monument's construction."[73] These observations related to Stonehenge can be applied to Čiurlionis's painting, *Funeral Symphony II*, on which Škarnulytė's camera lingers. In the painting the sun is captured in the act of setting, framed within the square created by the top of the coffin-cum-capstone, and the vertical figures holding it in place. This image is redolent of how the tallest trilithon of Stonehenge would have framed the sun setting during the winter solstice. While summoning up the techniques through which ancient people would determine the passing of time and the seasons, this image also elicits clear atomic implications. In fact, this powerfully luminous sun, whose rays cover the entire surface of the canvas, recalls the icon of the atom bomb, exploding in the horizon "brighter than a thousand suns".[74] Towards the end of the film from minute [00:52:38] Škarnulytė edits together a series of atomic explosions filmed during nuclear experiments, creating an ideal connection between the atomic icon in its various mediated forms, while also shifting from the uncanny atmospheres of the

[68] John Noble Wilford, 'Stonehenge Used as Cemetery from the Beginning', *The New York Times*, 30 May 2008 <https://www.nytimes.com/2008/05/30/science/30stonehenge.html#:~:text=New%20radiocarbon%20dates%20from%20human,B.C.%2C%20British%20archaeologists%20reported%20Thursday> [Accessed 27 February 2024]
[69] Timothy Darvill, 'Keeping Time at Stonehenge', *Antiquity*, 96.386 (2022), 319–35 (p.319) <DOI: https://doi.org/10.15184/aqy.2022.5>
[70] Darvil, 'Keeping Time at Stonehenge', p.320.
[71] Ibid., p.326.
[72] Darvil, 'Keeping Time at Stonehenge', p.319.
[73] Ibid., p.332.
[74] Horn, *The Future of Catastrophe*, p.42.

funeral procession, alongside its multi-layered influences, and the sublime visual grandiosity of the nuclear detonations.[75]

This is yet another game of mirrors on which the film builds its narrative, whereby texts, symbols or material entities (the paintings, the funeral facilities, the ancient necropolis, for example) while not identifying explicit nuclear content, represent the hidden trace of the nuclear palimpsest, and, as such puts forward an idea of a nonlinear arrangement of time, in which fragments of distant past intersect with contemporary symbols of war and destruction. Via Čiurlionis's *Funeral Symphony II*, Škarnulytė attempts an implicit dialogue between ancient and contemporary conceptions of time, via the rituals and ceremonies that this time-system regulates and brings together by juxtaposing old and new technologies, with the (atomic)sun measuring and weighing in these two extremes. The associations created by the communicating parts of the palimpsest inform a notion of time for which the hidden trace of the past informs the recent past, while also moving on into the present, overlooking the unstable future of nuclear disposal.

Following the montage of Čiurlionis' paintings, an interceding shot, whose composition is imbued with unintelligible shadows and moving anamorphic shapes precedes a tracking shot displaying the top part of a tunnel, where visibility is impaired by the lighting of the underground space.[76] Another title at minute [00:36:36] clarifies that this is a French underground laboratory, namely the CIGÉO (Centre Industriel de stockage Géologique) Project in Bure, "located 500 metres deep into the earth", whose purpose is to "study[...] the specific geological formation" of the site in order to gauge "its capacity for the deep burial of high-level and long-lived radioactive waste."[77] As in Onkalo, the symbolic journey evoked by Škarnulytė follows a serpentine route leading to the entrance of a laboratory. In *Into Eternity* the image of the road leading to the entrance of the underground laboratory is foregone only by an establishing shot of the overground forest where Onkalo is located, therefore showing that the ultimate focus of the documentary lies in the underground facility, and the relationship that it establishes with the natural world above ground. Conversely, Škarnulytė moulds a symbolic and conceptual path which, starting from the underground and addressing the temporary storages for the nuclear waste, delves into the guts of the earth, in order to uncover the site where the remains of the nuclear body will rest.

[75] Škarnulytė, *Burial*.
[76] Ibid.
[77] Ibid.

At this stage, it is worth taking a step back before weaving into the complex and multi-layered significance that this underground facility holds within the economy of an anti-nuclear technology discourse. Before entering the overground facility displaying the cylindrical containers functioning as interim storage of nuclear waste, the director displays the Ignalina control room simulator [00:23:38].[78] Through a detail shot, the middle section of the body of a python is displayed while slowly crawling on the operational desk, surrounded by a variety of buttons. The smooth silhouette of the reptile touches the structure in its entirety, twisting and turning on the surface of the control panel. At minute [00:24:44], the head of the python enters the shot. In this instance, the python is shown while inhabiting the technological milieu around it, measuring it with its body, up until a medium wide shot of the control room displays the full length of the serpent crawling on the operational desk, stretching over it, as the camera includes within the frame a honeycomb shaped mosaic of buttons positioned on the top side of the wall above it.[79] The soundscape of this sequence is characterised by intermittent mechanical noises, which enhance the sound produced by the body of the snake as it hisses and slithers on the surface of the desk. Towards the end of the scene, the python finds an escape route in a hole on the right side of the operational desk. At this stage, the scene cuts to black for a few seconds, as the sound of a security alarm precedes the opening of the blue sliding door mentioned above in this section, which reveals the storage facility with the cylindrical containers with nuclear waste.

The python, therefore, initiates the journey throughout the nuclear facility. However, there is a conceptual distance between the Ignalina control room, and the rest of the images featuring spaces utilised to store nuclear waste shown by the director in the subsequent scenes. As much as the urns for ashes resembling ancient Egyptian canopic jars displayed at minute [00:32:43] are a kitsch reproduction of the original containers, the control room proposed in *Burial* is a replica of the original facility.[80] It is also open to the public. The website of the structure advertises it in connection with the HBO series *Chernobyl* (“As seen in the HBO "Chernobyl" TV series”), and offers group “educational excursion[s]” starting from the price of €7.[81] As explored in the third chapter of this thesis in relation to the myriad of objects and replicas reproducing iconic buildings in Hiroshima linked to the atomic destruction of the city in *Hiroshima Mon Amour*, and sold as souvenirs, this simulator is a reminder of an ever-growing market drawing upon dark tourism. The

[78] Litwildtravel, *Tour to IAE Control Room’s Simulator*, 2022 <https://litwildtravel.com/iae-simulator> [Accessed 27 February 2024].
[79] Škarnulytė, *Burial*.
[80] Ibid.
[81] Litwildtravel, *Tour to IAE Control Room’s Simulator.*

tourist, therefore, as "a conscious and systematic seeker of experience",[82] is invited to step away from the comfort of the sofa and seek the opportunity to gain some real-life knowledge of the technology underpinning a historic Nuclear Power Plant, beyond the storytelling created by fictional narrative (whether it be a TV series like *Chernobyl*, or a more experiential video-game like *S.T.A.L.K.E.R.*). However, unlike the disaster tours taking place in abandoned areas still polluted by radioactivity, such as Chernobyl or Fukushima, the Ignalina control room simulator represents an opportunity to experience first-hand how a control room functions. Marketed as "educational", and therefore open to school-age children and adults alike, this simulator fulfils the wish to explore not the physical location of the real power plant accident, but to discover the workings of its technology. In *Hiroshima Mon Amour* Elle's initial desire is to "understand" what happened in Hiroshima, and in order to do so she visits the museum, as well as acting in a film in Hiroshima about the aftermath of the bombing of the city. Yet, unlike the depiction of Hiroshima as a site of consumerist culture, the simulator is not a tourist replica, but a training model. As such, it is part of the nuclear site and its history, and, therefore, its aim is to explain the technology behind the Chernobyl disaster, as well as recounting the moments preceding the event via a more concrete perspective.

Furthermore, as much as tourists, as Debbie Lisle observes "are never completely governed: they produce 'and' resist the divisions of safety and danger that the tourist gaze imposes",[83] so the use of the control room simulator signals a further level of interpretation, particularly if put in relation to the dismantling of the Ignalina Power Plant. In this sense, the simulator is a trace which resists the progressive disappearance of the nuclear material, visible referent, namely the power plant, and its long-lasting product, the nuclear waste. I will return to this crucial aspect further in the conclusion, also in relation to the role which nuclear heritage culture plays within the preservation of nuclear history and memory. For now, it is significant to point out how the film reflects on the implications of decommissioning as an event that "cannot be contained as discrete industrial or military clean-up operations". In this regard, Carpenter remarks that:

> Today, nuclear technologies are most visible when they wear out or fail. The decommissioning of power stations and submarines, the stockpiles of waste, the ongoing catastrophe of the Fukushima NPP meltdown: these processes and

[82] Zygmunt Bauman, 'From Pilgrim to Tourist – or a Short History of Identity', in *Questions of Cultural Identity* (London: SAGE Publications Ltd, 2011) <1446221903 DOI: 10.4135/9781446221907.n2> p.29.
[83] Debbie Lisle, 'Consuming Danger: Reimagining the War/Tourism Divide', *Alternatives: Global, Local, Political*, 25.1 (2000), 91–116 <DOI: 10.1177/030437540002500106>

> events cannot be contained as discrete industrial or military clean-up operations and instead spill into the public realm.[84]

Despite all the efforts to take more explicitly discernible components of the nuclear cycle out of sight as part of the phasing out process, nuclear waste cannot be disposed employing virtuous environmental practices based on recycling in full,[85] and therefore radioactive substances will not disappear completely, but, rather, they will have to be concealed. As argued above in this chapter as well as in previous chapters, at the time of the invention of the atomic bomb, the nuclear explosion was identified as the symbol of visibility par excellence, namely "a visual icon so unprecedented that, for a moment at least, it lay outside the webs of signification that comprised a watching culture."[86] Škarnulytė uses the icon of the mushroom cloud to address the discrepancy between the spectacular showcase accompanying the presentation of the nuclear invention to a "watching culture", and how the materiality of the nuclear artefact has been fading away progressively until reaching an apparent state of invisibility. As observed by Sven Lütticken the theme of invisibility related to the nuclear issue is stratified, and involves different realms, from the aesthetic to the social, and the political.[87] As opposed to this seeming invisibility, Lütticken maintains that, should the nuclear industry cease to exist completely in the future, nuclear waste would persist over time, creating the conditions for an unresolvable nuclear issue. According to Lütticken:

> The literal invisibility of harmful ionising radiation is coated in political invisibility that is broken only intermittently, at moments of spectacular disaster. The problem, as aesthetic as it is social, remains, and would remain even after an improbable global abandonment of nuclear technology in the form of vast quantities of radioactive waste.[88]

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[84] Carpenter, Ele, 'Shifting the Nuclear Imaginary: Art and the Flight from Nuclear Modernity', in *Cold War Legacies: Systems, Theory, Aesthetics* ed. by John Beck and Ryan Bishop (Edinburgh: Edinburgh University Press, 2016), pp. 116-133. Ebook Central ebook p.129.

[85] For example, Greenpeace France has denounced French nuclear companies of "cutlivat[ing] the myth of 'recycling", therefore giving the false impression that uranium can be recycled and reused. Greenpeace has put together several reports pointing out that France sends reprocessed uranium to be "converted and enriched" in order to be reused to Russia, where there is the only facility in the world able to undertake this costly process. In Greenpeace, *French nuclear waste: a one-way ticket to Siberia*, 2021 <https://cdn.greenpeace.fr/site/uploads/2021/10/French-nuclear-waste-_-a-one-way-ticket-to-Siberia-_-Briefing-Greenpeace-France-Embargo-12-10-2021.pdf > [Accessed 27 February 2024].
This has continued despite the war in Ukraine, see Greenpeace, *[INVESTIGATION] Le nucléaire français sous emprise russe*, 2023 <https://www.greenpeace.fr/espace-presse/investigation-le-nucleaire-francais-sous-emprise-russe/> [Accessed 27 February 2024]. Crucially, the documentary links together French underground nuclear laboratories with the former Soviet Union nuclear heritage.

[86] Hales, 'The Atomic Sublime', p.5.

[87] Sven Lütticken, 'Shattered Matter, Transformed Forms: Notes on Nuclear Aesthetics, Part 1', *e-flux Journal*, 94 (2018), 1-9 <https://www.e-flux.com/journal/94/221035/shattered-matter-transformed-forms-notes-on-nuclea
r-aesthetics-part-1/>.

[88] Lütticken, 'Shattered Matter', p.1-2.

Alongside this multilayered (in)visibility, which to a certain degree qualifies the aesthetic discourse put forward by Škarnulytė, the film attests to the absence of another physical protagonist of the nuclear cycle. As discussed in relation to the shots suturing together the natural world with technological underground nuclearscape embodied by Onkalo in *Into Eternity*, these scenes featuring the python in the control room, rather than creating a (dis)connection between the human and the non-human world, address the conceptual and literal disappearance of humanity from this technological milieu. It is only the non-human animal and the replica of the dismissed and disused machine which emerge in dialogue with one another, while the original nuclear structure, as much as in other moments of the film its byproduct, the nuclear waste, are indicated as having a life of their own outside of human control and dominion. Talking about Škarnulytė's 2017 film, *Energy Island*, also focussing on the decommissioning of the Ignalina nuclear power plant, Dovydaityte observes in relation to the exclusion of human characters from her films:

> As in her other films, created in closed nuclear reactors, submarine bases, and mines, Škarnulytė explores the very materiality of industrial systems and contaminated spaces as leftovers of human activity that will eventually become part of the planet's geological structure.[89]

The archival sound footage placed at the beginning of the film constitutes the only human component actively discussing nuclear topics, which, nonetheless, can also be viewed as "leftovers of human activity." In *Into Eternity*, the voices present in the documentary belong to experts interviewed by the director, while also being contemporaneous to the making of the film. The voices present in *Burial* come from the past, they are answering questions which are not included in the montage, and they are not attached to a bodily counterpart. In general, human beings feature in the film, but only in the form of workers of the nuclear facilities, occupied in the dismantling of the power plant, or supervising the stages underlying the nuclear waste disposal. But their faces and bodies are hidden by their work gear, and they do not contribute actively to the nuclear discourse covered throughout the film. In this audio-footage, which the final credits of the film indicate as being retrieved from the 1984 documentary *Laikas neskyla į atomus*[90] directed by Lithuanian director Gediminas Skvarnavičius about the history of the production of electricity in Lithuania,[91] the human presence takes the contours of spectral voices punctuating the story of the Ignalina Power Plant. At first a reassuring male voice describes the stages leading to the

[89] Dovydaitytė, '(Re)Imagining the Nuclear in Lithuania Following the Shutdown of the Ignalina Nuclear Power Plant', p.430.
[90] The title can be translated from Lithuanian as *Time does not split into atoms*.
[91] Gediminas Skvarnavičius, *Laikas neskyla į atomus*, (1984) <https://www.lrt.lt/mediateka/irasas/8942/dokumentinis-filmas-laikas-neskyla-i-atomus> [Accessed 27 February 2024].

construction of the power plant in Lithuanian, the engineers involved in it, highlighting the family history behind this "nuclear giant" [00:09:57].[92] The protagonists of this story are a father, first responsible for the construction of a hydroelectric power station positioned in the vicinity of Lake Drūkšiai, and his son, in charge of the construction of the new nuclear site. Rather than being accompanied by the original footage of the documentary, the images underpinning the voice over are those of a replica model of the Ignalina Nuclear Power Plant. Through some tracking shots, the camera moves around the different parts of the structure, capturing details, shifting from one side to the other of the plastic reproduction alongside the audiocomment. Before the camera focuses on the model, the director exhibits the real Ignalina power plant, in a scene showcasing the river around the station, some electricity pylons, for finally framing the nuclear reactor from a variety of points of view. This technique has been observed many times within this chapter, and it is a recurrent strategy of the stylistic grammar employed by Škarnulytė. By editing together original nuclear structures with their replicas, she draws associations and creates a narrative continuity between fiction and reality, as well as between what is in the process of being dismantled and rendered invisible, and the objects that, in its place, remain.

Following this brief archival description of the nuclear power plant, the tone of the narrative changes, as it gives space to testimonies of members of the public who share their hopes and concerns about the structure. For example, a woman claims: "Well, of course it would be nice if the plant ran only for peaceful purposes, only made us the electricity and didn't bring us any misfortunes." After this, the film moves onto other opinions, evidencing less positive attitudes linked to the erection of the power plant, pointing out the technological links which connect nuclear energy and the atomic bomb. In so doing a male voice claims [min. 00:11:02]:

> We fear for nuclear plants because nuclear plants were born after nuclear bombs. At first, people found out about nuclear bombs, this awful tragedy of the world, and only later they got familiar with the peaceful work of the atom. Maybe, I can say this as a joke, we would be afraid of the axe, if the guillotine was invented first and the axe would only come out after.[93]

Via this segment, Škarnulytė conveys concerns linked to nuclear power plants, as they are associated with the invention of the atomic bomb. More subtly, *Into Eternity* tackles issues underlying the production of nuclear energy with wars in general, and nuclear bombs in particular. If the world is identified as "unstable" in the words of the experts interviewed by Madsen, also

[92] Škarnulytė, *Burial*.
[93] Ibid.

considering the occurrence of “two World Wars in the last 100 years” [00:14:04],[94] the virtuous cycle which leads to the re-employment of uranium by “reprocessing spent fuel” is met with caution, since “the plutonium, which is extracted in the reprocessing process could escape, and be used for fabricating bombs” [01:02:50].[95] Škarnulytė addresses these issues by eliminating human protagonists from the film, extracting testimonies as audio footage, and superimposing these materials on images of a replica model of the Ignalina Power Plant. In this way, the nuclear element, meant as residue and power plant, undergoes a process of symbolic anthropomorphisation, as suggested above in this chapter, visually replacing humans, both in its original form and through its replica. By operating this substitution, it also occupies a liminal space between life and death, as it is framed as both living presence and corpse, as well as between human and non-human, animate and inanimate, subject and object. The parallels drawn by association between the living world (the snake, the natural environment and its sounds), and the animate/inanimate (the power plant, the nuclear waste), and, in turn, the realm of the deceased alongside the rituals underpinning it, prompt a complex, circular structure which unites past and present, organic and inorganic life, as well as functioning as a warning for the future.

Reptiles and the Aesthetics of Anti-Nuclear Resistance

At this stage it is worth returning to the figure of the python punctuating some pivotal moments of the narrative structure in *Burial*. Crucially, the replica control room is not the first environment in which a reptile takes to the stage in the film. At the beginning of the film [min. 00:06:57] footage of an anaconda encountered by a diver in a Brazilian river[96] is edited straight after a series of images of the uranium mine of Kowary in Poland. As with many of the sites featured in the film, this mine has become a destination for alternative tourism.[97] The flooded area of the mine can be visited as part of diving tours, and the tour has several stops characterised by underwater and underground exhibitions and displays. These images of the mine are segments of two videos filmed by divers in the facility and uploaded on YouTube.[98] At minute [00:04:27] a title

[94] Madsen, *Into Eternity*.
[95] Ibid.
[96] This information is clear from the closing credits of the film, where the title of the video appears as follows: *Diver has incredible face to face encounter with giant anaconda in Brazilian river*. In *Burial*, dir. by Emilija Škarnulytė.
[97] See for example this article in the online magazine *Scuba Diving*, which recounts the history and present function of the mine. Martin Strmiska, ‘Afterglow in the Underworld’, *Scuba Diving*, 18 March 2019 <https://www.scubadiving.com/diving-abandoned-uranium-mine-poland> [Accessed 27 February].
[98] In the closing titles of the film, they are listed as *Kowary Mine Movie,* by Jacek Majek, and *Kowary uranium mine*, by Witold Hoffmann. In *Burial*, dir. by Emilija Škarnulytė.

superimposed on an underwater shot summarises the violent history of the mine, thus: “The Soviet Union extracted uranium ore from mines in Kowary, Poland from 1951 to 1963. Sworn to secrecy and heavily guarded, many miners died from exposure to the radioactive pitchblende.”[99] The leisurely activity of diving jars with the memory of exploitation and death for which the mine represents a material trace, alongside the history of “secrecy” underlying uranium mining in the thrall of the Soviet Union. But the underwater journey of the divers also unearths the aesthetic, political, social trend of invisibility mapping out the evolution of the nuclear discourse, as observed above in this chapter. This segment introduces the next section of the film, with the audio footage edited in parallel with the Ignalina Power Plant miniature replica model, and they are both suffused with fears and concerns evoked by the past of nuclear energy, and how these brutal legacies are projected into the present and the future. In a way, the reptile, as both an earth and water creature, is in charge of navigating the various expressions of the nuclear universe, as well as being elevated to a witness whose function is to capture and preserve a memory of it, sending it back to the viewer.

The film, therefore, follows the trajectory initiated by the anaconda underwater. Hereafter the narrative moves on to some environments of the Ignalina Nuclear Power Plant, the interiors of the reactor, where workers are shown in the process of dismantling the structure. After this section, as mentioned above in this chapter, a living python slithers and hisses inside the replica control room. The images subsequent to the scene set in the simulator room display non-fictional facilities with nuclear waste, as well as material signifiers evocative of contemporary funeral rites, such as objects (urns, clothes), and settings (crypts, chapels and funeral halls). Following the virtual route traced by the anaconda first, and the python subsequently, the narrative of the documentary generates an intermittent structure, through which fictional sections are situated side by side with real locations. As reiterated above in this chapter, this employment of the montage creates an ideal continuity between the journey of the python inside the fake nuclear power plant, and continues through real overground structures housing nuclear waste, to a tunnel underground, via the fictional and real world of the dead. In the series of paintings present in the film from [min. 00:33:09],[100] a coffin is carried and accompanied by a cortege to a resting place, namely a cave inscribed into the mountain. The route followed by the procession takes the shape of a winding line, a sort of serpentine path which follows the natural sinuosity of the mountain. In the final painting displayed by the director, it is nighttime, and, despite the darkness, the composition within the scene is discernible by the presence of candles held by the members of

[99] Škarnulytė, *Burial*.
[100] Ibid.

the funeral-march. The brighter spots of the candles instigated by lighter strokes of paint, and juxtaposed with dark, abstract features resemble the pattern on the coat of the python. This effect is replicated later on in the film at min. [00:46:10],[101] where segments of video footage of the anaconda are edited alongside scenes from the subaquatic park of Baia. In this instance, the anaconda is crawling on a riverbed, as the rays of the sun pierce through the dark environment of the river, reaching the snake and creating luminescent spots on its skin. This snake-like line continues, as the camera shifts locations, passing into the labyrinthine and obscure space of the overground tunnel, that is part of the French laboratory built to explore the suitability of the rock to become a deep geological repository, and house nuclear waste in the future. In this way, the motif first encountered in Čiurlionis's funeral march is reiterated through the skin of the snake, and, after that, through the shape of the tunnel, producing an uncanny pattern of repetition and mirroring, confounding the boundaries between sameness and difference, technology and nature, as well as between fiction and reality.

The Ouroboros, "Original Sin", and Derrida's Snake

Crucially, the figure of the snake has been encountered previously in the series *Dark*. Here it appears in its symbolic configuration, through the emblem of the ouroboros.[102] As mentioned in Chapter I, a ring-like figure of a serpent eating its own tail, the symbol belongs to a variety of ancient cultures and traditions, and was diffused in ancient Egypt, Greece, and Rome.[103] The ouroboros was connected to alchemy, and referred to the cyclic structure "of that which it symbolised."[104]As pointed out by H.J. Sheppard:

> In its various manifestations the Ouroboros emphasised the cyclic nature of that which it symbolised: the idea of a growth, or regeneration, ending in a reversion to the primary state. In the illustrations from Hellenistic alchemy this was qualified by the inscriptions confirming and stressing the rise of multiplicity from the undifferentiated, followed by the return of the diverse forms into the One.[105]

[101] Škarnulytė, *Burial*.
[102] *Dark 1*, episodes 4, 6 & 8.
[103] H. J Sheppard, 'The Ouroboros and the Unity of Matter in Alchemy: A Study in Origins', *Ambix*, 10.2 (1962), 83–96, p.83.
[104] Sheppard, 'The Ouroboros and the Unity of Matter in Alchemy', p.94.
[105] Ibid., p.94.

As regards *Dark*, in Chapter I of this thesis repetition emerged as a fundamental element of the filmic grammar through which the series approached, and confronted the topic of time, and its relation with (nuclear) technology. Ultimately, *Dark* concludes with a "reversion to the primary state", namely a timeframe before the invention of the time-machine. In the series, the technology of the time-machine triggers the creation of various time-dimensions and can be seen as an allegory of the nuclear universe. As Sheppard suggests in relation to the ouroboros and its both mystic and proto-scientific framing, *Dark* operates a process whereby "multiplicity [rises] from the undifferentiated, followed by the return of the diverse forms into the One." As the symbol of the ouroboros punctuates some episodes of season one, in the third series two factions emerge, each headed by Eve (originally Martha), and Adam (Jonas). The religious archetype of Adam and Eve, and its connection with original sin is, therefore, employed in the series. However, the serpent, rather than being subjugated by these biblical undertones and dynamics, is identified metaphorically through the cyclical notion of time dominating the show, as well as the labyrinthine structure of the cave system on which the town of Winden is erected, which the protagonists severe through their death. In *Burial* the snake, far from appearing through the ancient symbol of the ouroboros, is framed as a living being, who moves across a variety of sites, challenging the same notion of cyclicality otherwise created by the repetition of spaces, objects, and structures in the documentary. As such, the meaning of this figure within the film is elusive and complex and can be read via the environments which it both crosses and embodies.

Beyond the Judaeo-Christian allegorical conceptualisations, the snake has acquired a different role in more modern philosophical contexts. In the ninth session of *The Beast and the Sovereign, Volume I*, Jacques Derrida discusses the ethics of responsibility via the figure of the serpent "not only because of original sin."[106] Taking as baseline for his argument D.H. Lawrence's poem, *Snake*, Derrida delves into the conceptual framework employed by Levinas to determine responsibility towards another human being, whereby the "ethical dimension" of responsibility is linked to the fact that the human other has a face. As Michael L. Morgan remarks:

> The first things to remember about the face-to-face encounter between the self and the other person are that it is concrete and particular. It is not an idea or concept, not a type of action or event. It is a concrete reality, an event; it occurs. Furthermore, it occurs as utterly particular: the self is a particular person, and the face-of-the-other is a particular revelation of a particular person.[107]

[106] Jacques Derrida, Michel. Lisse, Marie-Louise. Mallet, Ginette Michaud, and Geoffrey. Bennington, *The Beast & the Sovereign. Vol. 1* (Chicago, Ill.; London: University of Chicago Press, 2009) p.237.
[107] Michael L. Morgan, *The Cambridge Introduction to Emmanuel Levinas* (Cambridge: Cambridge University Press, 2011) p.59.

In its materiality and specificity, Levinas believes that this physiological feature, the face, engenders the "face-to-face" encounter with the other. The relatedness produced by this visceral encounter, and the proximity involved in the exchange that follows identify responsibility as a concrete part of the self. The face is, therefore, according to Levinas, a fundamental component of the notion of responsibility towards the human other. In this context Derrida explores the question as to whether non-human animals have a face, and, as such, they can be included in this relationship and exchange, if the proximity of the encounter and the responsibility and hospitality underpinning the ethics of human relationships are also valid for non-human others. As for the concrete element of the "face", Derrida explains that not only does Levinas identify "what is seen or what sees, but also what speaks, what hears speech, and therefore it's to a face that our ethical responsibility is addressed, it's from a face that it receives [...] something from the other, that I receive the imperative: "Thou shalt not kill," which, for Levinas, is the first commandment."[108] Hence the snake is a fundamental cog leading to the construction of the relationship between human and non-human animals, for which hospitality and respect for the " first comer", for the one who "is there before me" is at the base of hospitality while also contributing to reciprocal survival.[109]

This articulation of the notion of responsibility was suggested by *Into Eternity*. Madsen, in fact, poses questions about the ethical dimension underlying the construction of Onkalo, manifesting doubts and potential solutions to how to manage the deep geological repository into the future. Through visual rhetorical strategies, the documentary draws connections between the human and non-human world, employing segments displaying non-human animals within their natural habitat, therefore putting an emphasis on their vulnerability and innocence vis-a-vis potentially dangerous nuclear storage solutions. Madsen further emphasises this aspect, by stating [00:06:39]: "If this waste spills out into nature it will cause death and destruction. Large areas will become uninhabitable for a long, long time."[110]

Unlike *Into Eternity*, *Burial* challenges these ethical considerations in a radical way. For Derrida "the snake is a reptile, the low, an animal of the earth, of humus (humility, *humus*), and that is why he keeps emphasising the earth. The motif is that of the earth."[111] This observation might be

[108] Derrida, *The Beast & the Sovereign*, p.237.
[109] Ibid., p.240.
[110] Madsen, *Into Eternity*.
[111] Derrida, *The Beast & the Sovereign*, p.240.

applied, to the casual eye, to Škarnulytė's documentary. The shape of the python, for example, is reproduced through the sites encountered in the documentary, namely the funeral procession which enters a cave inscribed in a mountain, and finally a tunnel dug inside the earth, underground. However, the snake is also identified with the anaconda,[112] which, despite crawling in the depths of the river, as close as possible to its floor, is an aquatic creature, and as such dominates both earth and water. To reiterate Derrida's articulation of the ethics of responsibility and hospitality towards a non-human other, the snake is a "first comer", its dwelling was the depth of the water and the "lowest" (Derrida) place on earth before the scar left from the techno-nuclear complex had crossed its path. The water snake also assumes a significant position in Egyptian ancient culture, and the cyclicality underpinning the rituals and beliefs connected to cosmogony. According to Assmann, the ancient Egyptians believed that:

> the journey of the sun in its continuously renewing state of circulation was incessantly threatened by a counteracting force, a gravitation towards chaos, standstill, and termination, which was symbolically embodied in the figure of a giant water snake.[113]

Assmann points out that this snake, threatening to swallow the water of the ocean on which the sun would travel, had to be overcome repeatedly, and the Egyptians would support this cyclical rising of the sun, which they did not take for granted, "both ritually and symbolically."[114]

Returning to the anti-war message of the documentary mentioned above in this chapter, as the camera moves across the tunnels of the underground laboratory facilities in France, the voice of Ele Carpenter, who also appears in the credits of the documentary in quality of Nuclear Culture Research Consultant, starts singing *You can't kill the spirit*.[115] Written by North American Indian musician Naomi Littlebear Morena, the song was borrowed by the anti-war feminist network Greenham Common Peace Camp during their non-violent protest on the outskirts of the Greenham Common military base in Berkshire, England.[116] As Veronica Fiorato explains:

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[112] To return to the symbolism of the reptiles in Egyptian ancient culture and comparing it with the meaning assumed by the ouroboros, the Egyptians believed that "the journey of the sun in its continuously renewing state of circulation was incessantly threatened by a counteracting force, a gravitation towards chaos, standstill, and termination, which was symbolically embodied in the figure of a giant water snake." In Jan Assmann, 'Ouroboros: The Ancient Egyptian Myth of the Journey of the Sun', Aegyptiaca. Journal of the History of Reception of Ancient Egypt, 4 (2019), 19-32 (p.21) <https://doi.org/10.11588/aegyp.2019.4.66091>.

[113] Assmann, 'Ouroboros', p.21.

[114] Ibid., p.20-21.

[115] Škarnulytė, *Burial*, min. [00:38:15-00:40:30].

[116] Welch, 'The Spirituality of, and at, Greenham Common Peace Camp', p.234.

> During the military occupation of the base during the 1980s and early 1990s, a series of women's peace camps was established at Greenham Common. The first camp was established in September 1981 after a group of women marched from their homes in South Wales to protest against plans to station cruise missiles at the airbase. [...] The Greenham Women's nonviolent protest, in opposition to the occupancy of the base by the US military and the presence of cruise, resulted in worldwide publicity and led to Greenham Common becoming a focus for the peace movement.[117]

In describing the archaeological remains of both the military base, and the temporary camps occupied by the women protesters, Fiorato points out that while Greenham Common was considered "as the archetypal Cold War site,"[118] with a structure preserved despite the passing of time ,[119] the space occupied by the members of the peace movement has left a small amount of material traces of their passage, "reflecting the temporary and phased occupation of the camp sites."[120] However, some "features" of the camp remain intact,[121] and among those Fiorato lists a post on which the female symbol and a snake had been painted, since "The use of the female symbol and the snake was common."[122] This element is linked to Naomi Littlebear Morena's song featured in *Burial*, since, as Welsch observes:

> Interestingly, archived diary entries from Yellow Gate women indicate that both Aboriginal Australian and North American Indian spirituality infomed the protest. The Rainbow Serpent myth appeared as an article in an undated Greenham Common newsletter. Linking both Aboriginal Australian and North American Indian spirituality, the article emphasised the Rainbow Serpent as a 'universally-respected divinity', a guardian of humanity, and a metaphor for menstrual cycles, and as such an important symbol for Greenham Common Peace Camp women. [123]

It is not surprising, therefore, that the figure of the serpent has such a prominent position within the film. As a symbol of oppression and rebirth, this non-human protagonist alongside the repetitive verses of *You can't kill the spirit*, evoke, ambiguously, the perdurance of the nuclear waste, but also the persistence of various forms of nonviolent protests against nuclear destruction, that, as in a palimpsest, from the past move onto the present. In this sense, the voice of Carpenter is a ghostly, disembodied interference from a past informed of anti-nuclear feminist protests. As such, it pierces the present of the documentary, disrupting the journey of the camera inside the

[117] Fiorato, Veronica, 'Greenham Common: The conservation and management of a Cold War archetype' in *A Fearsome Heritage: Diverse Legacies of the Cold War* ed. by Wayne Cocroft, and A. J. Schofield, (London: Routledge, 2016) pp.129-154. Ebook Central ebook pp.142-143.
[118] Fiorate, 'Greenham Common', p.129.
[119] Ibid., p.134.
[120] Ibid., p.144.
[121] Ibid., p.134.
[122] Ibid, p.145.
[123] Welch, 'The Spirituality of, and at, Greenham Common Peace Camp',, p.234.

deep geological repository in France as a living memory of the past, thus connecting diverse histories of resistance, and implying that these histories are not over yet, because "you can't kill the spirit."

Cyclicality, Repetition, and Becoming in *Burial*

As suggested over the course of this chapter, in *Burial* the idea of cyclicality, the underlying temporal repetition of frames and structures, and the reflection on time and death are revealed through associations of multiple and diverse realities, historical periods, and traditions. After the underground French laboratory, with its complex, labyrinthine, technological and sanitised structure, imbued with the noises of drilling and building processes, the montage leads the narrative to a quiet and still space occupied by a tombal system. A series of static shots build a trajectory from inside the burial chambers, to the outside, on to the natural environment surrounding an ancient structure. In the natural setting, the figure of the serpent is displayed once more [min. 00:42:45].[124] In this instance, it is situated on a rock covered by moss, its face staring right at the camera for a few seconds (gazing at the camera, and therefore situating its *face* in proximity to the audience)before crawling away from the frame.[125] At minute [00:43:24],[126] it is clear that the location shot is the Etruscan necropolis of Cerveteri, in Italy. A static medium shot showcases a mound emerging overground, with a unique entrance at the front. As Juha Tuppi explains: "The burial mound can be seen as symbolising the three-fold Etruscan *axis mundi*, as defined by Edlund-Berry: the upper sphere (the heavens), middle sphere (the earth) and lower sphere (the underworld.)"[127] The top of the dome is covered by vegetation, and all around it, not

[124] Škarnulytė, *Burial*.
[125] Škarnulytė, *Burial*. This also happens at minute [00:48:22] of *Into Eternity*, where two Finnish Forest Reindeer aesthetically conclude a series of shots edited together. Here the montage puts together the direction and path of the sound caused by a detonation taking place inside Onkalo, and which travels in the underground tunnels until it joins the overground forest, where the reindeer are grazing. As the vibration of the explosion reaches the animals, the reindeer in the foreground of the frame lifts its face from the snow, to stare directly at the camera. In Madsen, *Into Eternity*.
[126] Škarnulytė, *Burial*.
[127] Juha Tuppi, 'A Walk Through the Valley of death: The Evolution of the Etruscan Concept of the Afterlife', in *Archaeology of Social Relations: Ten Case Studies by Finnish Archaeologists* ed. by. Anna-Kaisa Salmi, Tiina Äikäs, Sanna Lipkin, 12 Studia Humaniora Ouluensia (Oulu, Finland: University of Oulu, 2012), 133-145 (p.136) <https://oulurepo.oulu.fi/bitstream/handle/10024/34743/isbn978-951-42-9528-7.pdf?sequence=1&isAllowed=y#page=136> [accessed 28 February 2024].

in focus, there are trees and grass.[128] The diegetic soundscape is characterised by the sounds of nature - grasshoppers, birds, dominated by the humming of the wind. The sound of the wind also connects this scene with the ensuing image, where another static shot frames a different environment [00:43:46].[129] It is the Plokštinė missile base in Lithuania, an underground nuclear military facility designed to house nuclear missiles during the Soviet Union, and now converted into a museum. The use of the montage evokes associations between the two settings. On a structural level, the two buildings develop underground, while being characterised by an overground mound visible on the surface, as well as being designed to be hidden from sight. The single tombs punctuating the necropolis are covered by a mound, a sort of artificial hill covered in soil, and this natural feature conceals the interior of an environment organised and decorated as a domestic space. By the same token, the missile base develops underground, while being surrounded by the natural park of Žemaitija,[130] whose opposite sublimities stand in striking contrast. This juxtaposition is in line with the narrative developed by the director, who puts in parallel modern and ancient funerary traditions, in order to generate a discursive proximity between the burial of nuclear waste and the rites underpinning the inhumation of the dead across diverse timeframes, and cultures.

At minute [00:46:56] a static drone shot of the Parco Sommerso of Baia (the Underwater Archaeological Park of Baia) displays a mermaid wearing a black rubber wetsuit swimming across the sea.[131] The journey of the mythological creature starts at minute [00:44:04] of the documentary, at the Piscina Mirabilis of Bacoli, only an hour's walk away from Baia, in the Gulf of Naples.[132] As the mermaid progressively moves to one side of the frame, the drowned silhouette of a circular building emerges more clearly from the shot, alongside the various ruins of an ancient Roman town sunk underwater. The image that follows at minute [00:47:18] returns to the Etruscan necropolis of Cerveteri through another bird's eye view shot. The domes of two overground buildings, which function as entrances to the underground burial ground, are covered in

[128] As pointed out by Tuppi: "In the end of 8th/beginning of the 7th century BC the elite were buried in chamber tombs, covered by a burial mound that monumentalised the final resting place of the deceased." In Tuppi, 'A Walk Through the Valley of death', p.148.
[129] Škarnulytė, *Burial*.
[130] As John Schofield, Wayne Cocroft, and Marina Dobronovskaya remark: "At Plokštinė, within the Zemaitija National Park (Lithuania), for example, a partly dismantled Soviet SS-4 medium range missile base has been opened to tourists." John Schofield, Wayne Cocroft, and Marina Dobronovskaya, 'Cold War: a Transnational Approach to a Global Heritage', *Post-Medieval Archaeology*, 55.1 (2021), 39–58 (p.41) <https://doi.org/10.1080/00794236.2021.1896211>.
[131] Škarnulytė, *Burial*.
[132] Ibid.

vegetation, as suggested above in this section.[133] The circular outer edge of the submersed Roman building is superimposed, ideally, onto the dome of the Etruscan tombal system, in a repetition of shapes, forms, and processes that shed light on how nature has formed a symbiotic relationship with the material referents of ancient civilisations, preserving them while taking over, and hiding them, rendering them progressively invisible. As this montage of images proceeds, a further aerial shot displays the domes composing the necropolis from a distance, with the rocky surfaces characterising the composition creating a sort of mountain chain made out of cylindrical shapes, like a grey scar of limestone traversing a green forest. While the drone descends closer and closer to one of these cylindrical structures, the montage shifts to another bird's eye view of two modern circular buildings. As the camera keeps approaching a metal and concrete structure [at minute 00:49:41], creating a linear narrative with the previous image of the Etruscan necropolis in terms of camera movement, it opens the view to the detail of the inside of the construction, revealing a system of scaffolding surrounding its shell (which might suggest the process of dismantling), while a flock of birds fly around it, filling the shot and inhabiting this technological environment.[134] The image that follows depicts more clearly a nuclear cooling tower, as the camera moves away from the hyperboloid structure to include in the shot the surrounding landscape. The absence of details in this shot does not allow the viewer to understand whether this is the Ignalina power plant, or Chernobyl. Here, the use of black and white creates an aesthetic coherence between the trees and green spaces surrounding the cooling tower, and the internal environment of the structure, where a water pond is discernible in its deep bottom, surrounded by various layers of scaffolding. Because of the high vantage point of this aerial shot, and the homogeneous colour of the photography, the separation between inside and outside is only offered by the clear circular borders of the tower.

This juxtaposition of images of round edifices which differ between one another in space and in time informs an aesthetic according to which planetary natural occurrences (such as seismic movements as well as, simply, the passing of time) are put into dialogue with the processes underpinning man-made technological endeavours - for example, the decommissioning of a power plant. This aspect reiterates Dovydaityte's idea proposed above in this chapter, according to which: "Škarnulytė explores the very materiality of industrial systems and contaminated spaces as leftovers of human activity that will eventually become part of the planet's geological

[133] Škarnulytė, *Burial*.
[134] Ibid.

structure."[135] In both cases, nature re-appropriates environments once utilised for rituals, ceremonies, and technological undertakings through which the living (via metropoleis) and the dead (resting in necropoleis) have left a material, albeit ephemeral trace of their passage on earth.

In this context, the (a-temporal) proximity of these archaeological monumental remains, here including the technological archaeologies,[136] enables a dialogic relationship between diverse stages of the past, while addressing a nonlinear cycle of repetition whereby nature might be seen as reclaiming its space. As indicated above in this chapter, according to some theories nuclear disasters allow nature to thrive far away from the destructive potential of human activity. Conversely, Škarnulytė's poetic argument suggests that the archaeological traces left by ancient societies offer a glimpse into the future of the planet and show the unstable terrain on to which the final stages of the nuclear cycle, namely the disposal of its remains, take place. For example, the Parco Sommerso is an example of how coastal movements triggered by seismic and volcanic activity caused once inhabited areas to sink. By the same token the growth of vegetation on ancient buildings, such as in the Etruscan necropolis of Cerveteri, progressively leads them to become hidden from sight.

Alongside the natural and anthropogenic evolution of the planetary landscape, which evokes indirectly some side effects engendered by climate change, and more evident over the first decades of the 21st century, *Burial* engages in a discourse of memory, and non-memory. To the same degree as with Onkalo, this archaeological debris shows that the action of time operates a constant work of removal of material memory, for which everything that once existed is destined to be transformed by the incessant work of time, until it becomes dust, or ashes.

In this way, it is worth returning to what Derrida says about ashes as the most evident proof of the decadence of memory, and of its ultimate dissipation:

> Cinders is the destruction of memory itself; it is an absolutely radical forgetting, not only forgetting in the sense of the philosophy of consciousness, or a psychology of consciousness; it is even forgetting in the economy of the unconscious by repression. Repression keeps the memory. Cinders, however,

[135] Dovydaitytė, '(Re)Imagining the Nuclear in Lithuania Following the Shutdown of the Ignalina Nuclear Power Plant', p.430.
[136] This is also true in light of the fact that the cistern identified as the Piscina Mirabilis is a product of human-made technology.

> is an absolute non-memory, so to speak. [...] to say that there are cinders there [*il y a là cendre*], that there is some cinder there, is to say that in every trace, in every writing, and consequently in every experience (for me every experience is, in a certain way, an experience of trace and writing), in every experience there is this incineration, this experience of incineration which is experience itself.[137]

According to Derrida, every "experience of trace" is imbued with "cinders", with the process of "incineration", which is "experience itself", and, as such "absolute non-memory." In *Burial* this process of (ideal) incineration has a double meaning. On the one hand, it brings forth the assumption that forgetting can be retraced concretely, by capturing, if only for a moment, the fading traces of the past. It is the documentary itself that becomes a witness which attests to this non-memory, to the disappearance of memory, and that, by the same token, speculates about where this (non)memory is heading. By doing so, it poses the question as to whether or not the full nuclear cycle will terminate in the total dissipation of radioactivity or will remain a hidden trace inside the eviscerated earth - which is a discursive point in common between *Burial* and *Into Eternity*. On the other hand, *Burial* initiates a reflection on time, and the relationship that the latter establishes with the material world. The disposal of nuclear waste represents an opportunity to ponder upon the future of the planet beyond human exceptionalism, and speculate on a world where human beings, as well as what they have created, will disappear. This idea of non-memory as cinders is embedded into *things*, insomuch as it represents the eternal future of things, the unavoidable repetition of what things become. As such, non-memory represents a glimpse into the future of the planet, in terms of what will occur when humanity will be extinct. Renegotiating technology between memory and non-memory, therefore, Škarnulytė positions herself, as Dovydaityte suggests, as "a future Archaeologist" through which "to view industrial materials."[138] But non-memory also offers a cue to reason about the notion of time.

In *The Order of Time*, in a chapter titled *The World is Made of Events, Not Things* Italian physicist Carlo Rovelli maintains that "The world is not a collection of things, it is a collection of events."[139] As such, time is determined by change, movement, by incessant "becoming" (Rovelli rather than static "being." [140]As Rovelli explains:

[137] Derrida, *Points*, p.209.
[138] Dovydaityte, '(Re)Imagining the Nuclear in Lithuania Following the Shutdown of the Ignalina Nuclear Power Plant', p.430.
[139] Rovelli, *The Order of Time*, p.87.
[140] Ibid., p.86.

> We can think of the world as made up of *things*. Of *substances*. Of *entities*. Of something that *is*. Or we can think of it as made up of *events*. Of *happenings*. Of *processes*. Of something that *occurs*. Something that does not last, and that undergoes continual transformation, that is not permanent in time. The destruction of the notion of time in fundamental physics is the crumbling of the first of these two perspectives, not of the second. It is the realisation of the ubiquity of impermanence, not of stasis in a motionless time.[141]

Crucially, as observed in the first chapter of this thesis, *Dark* plays with this ambition of destroying the very notion of time. It is the concrete deed of stopping a clockmaker, Tannhaus, from inventing a time-machine which allows the protagonist to put an end to the cyclical repetition of the apocalypse from occurring. By avoiding the circumstances that lead to its creation, Martha and Jonas effectively destroy the time-machine, and re-establish a natural order of time. *Into Eternity* is also concerned with time, as it confronts the diverse perceptions of geological time and human time that the deep time of nuclear waste forces humanity to consider. For example, if the "years the waste remains hazardous to life" are "at least 100,000" [00:10:11], the "Finnish bedrock", with an estimate age of "1.8 billion years", is believed to represent the ideal material in which to protect the nuclear waste from change, since it "is the medium that we can predict far into the future.[142] At least 100,000 years ahead" [00:19:42], and "the condition down in the rock will be stable." [00:20:07][143] This chasm between overground and underground time-perception viewed through the conception of change is further articulated in the documentary, as it is claimed that "At the surface the clock runs very fast. While in the rock it goes very, very slowly." [00:20:22] This idea resonates with the contribution of Sami Savonrinne, which the title at minute [00:15:53] introduces as a blaster at Onkalo, who describes the site as a "time capsule":

> This tunnel feels like a time capsule sometimes. When you arrive in the morning it may be sunny, almost like summer outside. When you come out again at the end of the day, it may have snowed like hell. The weather will have changed completely, and you think: 'How long did I actually spend in the tunnel?' And likewise: you go to work and it's dark, and when you come back after work it is dark. And it feels like time has stopped.[144]

As in the "time capsule" subterranean atmosphere created in Onkalo, in *Burial* the material world made out of buildings and sites presented also seem to be trapped in time. However, the montage forces the viewer to focus on the changes which might have occurred within these sites: the vegetation growing on the domes in the necropolis, as much as the sea water corroding the

[141] Rovelli, *The Order of Time*, p.86-87.
[142] Madsen, *Into Eternity*.
[143] Ibid.
[144] Ibid.

coastal line following earthquakes in Baia, or the flooded area of the Korway uranium mine, are all testimonies of the inevitable passing of time, which characterise the surface of the earth where "the clock runs very fast." In this way the director addresses the transformations underlying these concrete signifiers, rather than presenting "*things*" existing in a "motionless time." As the metamorphic dynamics behind these sites are brought into communication, they sever a notion of linear time. The events that happen to these sites can be identified as the growth of vegetation on the domes, the slow erosion of the coastal line, and the decommissioning of a nuclear power plant. These events are concomitant as the sustained action of events in constant becoming. To some degree, this could explain why, rather than lingering on the cyclicality of events represented by the ouroboros, Škarnulytė's documentary is about interrupting the idea of the cycle, by considering events in their evolution, and through change. In *Burial* the figure of the serpent slithers through the nuclear power plant control room simulator, but his tangible body appears and disappears along the route it traces. Instead of keeping the serpent in the documentary, the director renders it invisible by transforming his same material presence into the space he embodies - namely a procession of people in a painting, a tunnel.

Later in the documentary, the serpent re-appears, this time inhabiting another space, the natural environment surrounding the Etruscan necropolis. Finally, it occupies the last image of the film before the final credits, where black and white footage of a python is shown while changing its own skin. In a conclusory instance, Škarnulytė offers a symbol of change, for which the skin of the python echoes the ruins of ancient and modern archaeologies. The uranium mine pits in the first part of the documentary, which evoke, visually, the Etruscan necropolis and the nuclear power plant cooling tower, in an infinite cycle of resemblances and associations, represent what has been discarded, the ultimate waste, the by-product of (non)human existence, which still resists the test of time, and perpetuates a cycle of self-destruction and rebirth. As much as the serpent sheds its skin, the decommissioned nuclear power plant is peeled off of its outer layers bit by bit. However, out of this dismembering, its imperishable core is destined to live on, and to return to the bottom of the earth as an uncanny, unrecognisable double of the uranium that was mined also through the sacrifice of unaware workers[145] before being modified and disposed.

Significantly, the trend of death and rebirth and of ritualistic regeneration, evoked by the figure of the ouroboros discussed in Chapter I and above in this chapter, resonate with how the nuclear

[145] As epitomised by the Kawary uranium mine.

complex is presented in *Burial* through the repetitive cycle of deconstruction (of the nuclear power plant), construction (of the deep geological repository) and preservation (of nuclear waste) underpinning nuclear processes. However, the serpent in *Burial* is emancipated from the conventions of the ancient symbol of the ouroboros and, rather than standing for the cyclicality of rituals, it indicates a sense of becoming, transformation, and difference which characterises the deep time of planetary processes and the stratigraphic layers of the earth.

The journey of the serpent within the film challenges the idea of repetition associated with the rituals and ceremonies punctuating the documentary, which conceptually links the religious cult of the dead with the act of burying nuclear waste and decommissioning the nuclear power plant. As a humble yet disruptive force, the serpent, on the one hand, sheds light on the cycle of construction, deconstruction and concealment of the nuclear complex, shifting the perception of it from invisibility to visibility. On the other hand, by creating palimpsestuous connections between apparently distant events, histories and spaces, it embodies the idea of becoming, re-appropriating a notion of time as evolution and change.

Returning to the idea of the loop characterising ancient cultures outlined in Chapter I, Pape, drawing on Assmann, observes that in the ancient Egyptian myth of cosmogony the rise of the sun was informed by a structure of cyclicality whereby each cycle, rather than being put into communication with the successive and the precedent, was disconnected from them. According to this process, therefore, "the world's successive cycles do not produce or feed into each other. Each cycle constitutes a new cosmic beginning."[146] By the same token, using Mircea Eliade's division of temporality in ancient societies into "profane time" and "mythical time",[147] Pape points out that cyclical time is determined by an "implicit suspension or denial of history,"[148]and by a suspension of duration.[149] Eliade explains this notion as follows:

> Insofar as an act (or an object) acquires a certain reality through the repetition of certain paradigmatic gestures, and acquires it through that alone, there is an implicit abolition of profane time, of duration of "history"; and he who reproduces the exemplary gesture thus finds himself transported into the mythical epoch in which its revelation took place. The abolition of profane time and the individual's projection into mythical time do not occur, of course, except at essential periods - those, that is, when the individual is truly himself: on the occasion of rituals or

[146] Pape, '#Cycles: On circularity and recursivity in media culture', p.7.
[147] Eliade, *The Myth of the Eternal Return*, p.35.
[148] Pape, '#Cycles: On circularity and recursivity in media culture', p.7.
[149] Eliade, *The Myth of the Eternal Return*, p.36.

> of important acts [...]. The rest of his life is passed in profane time, which is without meaning: in the state of "becoming".[150]

Substituting the mythical figure of the ouroboros, which in ancient cultures is imbued with ritualistic significance of repetition and discontinuity, with a living serpent, *Burial* aims at severing the cyclicality underpinning the "mythical epoch" of nuclear processes in order to reconnect with the "profane time" of history, informed by an incessant "state of becoming." In this sense, the serpent, rather than conjuring up an idea of cyclicality informed by interruption, for which, as Pape observes, "each cycle constitutes a new cosmic beginning,"[151] connects temporally and spatially distant histories within a continuous and fluid sense of becoming. Škarnulytė re-positions the nuclear cycle and its material referents inside of history, de-mythicising their perception and, thus, "return[ing] the nuclear topic to the public sphere."[152]

Paraphrasing Rovelli's words and applying them to *Burial*, the serpent, therefore, connotes time in terms of relations between events. Unlike the cyclical time of myth, Rovelli further clarifies this concept of time at the end of the chapter as follows:

> We understand the world in its becoming, not in its being. 'Things' in themselves are only events that for a while are monotonous. But only before returning to dust. Because sooner or later, obviously, everything returns to dust.[153]

The notion of time in quantum physics offered by Rovelli can be put in relation to Derrida's idea of ashes as non-memory. To a certain degree, the memory of all *things* is made out of dust, of ashes, which signal the unavoidable future of the material world. From her position as an "archaeologist of the future," Škarnulytė testifies to the disappearance of things in the deep time of geological processes. For Derrida the conception of "historical memory" attributed to "the philosophical tradition" is delineated through "the safe enclosure of a circle."[154] Dooley and Kavanagh point out that "if historical memory follows the movement of a circle, then the catastrophe of memory testifies to the fact that the circle can never be complete."[155] In this sense, just like the ouroboros standing for the infinite repetition of a cyclical time, the circular motion in which history, memory and identity are safely encapsulated is disrupted by the idea of memory

[150] Ibid., p.35.
[151] Pape, '#Cycles: On circularity and recursivity in media culture', p.7.
[152] Dovydaityte, '(Re)Imagining the Nuclear in Lithuania Following the Shutdown of the Ignalina Nuclear Power Plant', p.416.
[153] Rovelli, *The Order of Time*, p.92.
[154] Dooley, and Kavanagh, *The Philosophy of Derrida*, p.6.
[155] Ibid., p.6.

as cinders, which testifies to the dislocation of all human beings from their own past. *Burial* alludes to the fact that all natural and human processes are contaminated by cinders through the passing of time. Just like the underwater city in the Gulf of Naples, the Etruscan necropolis gradually reclaimed by nature, as well as the slow and complex decay of radioactive isotopes, or the decomposition of the human body, "everything returns to dust". However, as *Burial* suggests, the role of the artist is to preserve some of these memories from destruction. While showing the spectator the future of things, Škarnulytė further dislocates historical memory bringing it out from "the safe enclosure of the circle" and documenting, instead, a convoluted network of nuclear archaeologies. By spotting light on inconspicuous and creative connections between diverse temporal and spatial strata, also drawing associations with topics apparently unrelated to the nuclear issue, she positions this film in a space between testimony and nuclear resistance.

Within this context, on the one hand, Škarnulytė frames archaeological sites as witnesses to their own gradual extinction and to the planetary changes, articulating a visual narrative in which the multiple perspectives of non-human life and inanimate actors participate in documenting their own story. As Domanska observes:

> No longer are archaeological artefacts seen as petrified products of past communities or as reified, alienated objects of the "analytical murder" committed by the scholar. Rather, they are perceived as agents (or "subjects") having their own lives, albeit lacking intentionality; active participants in "Being-in-the-world", integral elements of interpersonal relations which enable us to enter into complex relations with the world.[156]

As much as the nuclear power plant in *Dark* was framed as an additional character contributing to the telling of its own story, *Burial*'s archaeological sites are "active participants" which "enable us to enter into complex relations with the world." On the other hand, this non-human narrative displays the "complex relations" between diverse stories, histories and aesthetics in an interconnected and continuous design, namely a palimpsest, through which humans are invited to claim back responsibility for the production of nuclear waste and reflect on the dysfunctional history of nuclear technologies. Škarnulytė puts forward an idea of the palimpsest that entails a sense of continuity between past, present and future through the poetics of cinders, rather than the discontinuity engendered by loop-like, repetitive and cyclical structures. Therein lies also the need for responsible choices when it comes to how nuclear technologies are addressed in *Burial*. As Ele Carpenter observes in response to a question about the categorisation and coinage of

[156] Domanska, 'Toward the Archaeontology of the Dead Body', p.394.

new geological eras: “These time frames, or rather framings of time, create neat academic research packages, but negate continuity.”[157] This continuity, in fact, determines what Carpenter calls “the temporality of responsibility”,[158] through which she invites to explore solutions for nuclear waste storage and disposal, as well as signalling the role of creative practices in individuating this responsibility and rekindle the public interest in nuclear issues. In this sense, the historical, geological and cosmic layers and strata into which Škarnulytė delves with her camera echo the “multifarious layers of cultural responsibility that we need to explore today, rather than tomorrow” discussed by Carpenter.[159]

Finally, like *Dark*, *Burial* returns to an idea of human responsibility which serves to challenge the cyclical and uncanny repetition of ritualistic conceptions of time and reality for which one cycle is disconnected from another. Rather, Škarnulytė builds a palimpsest in which diverse histories link the past with the present of the planet and humanity via the privileged and creative viewpoint of the future. The discontinuous cyclicality underlying the capitalistic myth of nuclear technologies is counterbalanced by the continuity signalled by nuclear resistance, conveyed through the lines of the song *You can’t kill the spirit*. In *Burial*, this song crosses time and space to reach the underground facility where the nuclear geological repository is in process of being built. Ele Carpenter explains that “This song is chanted throughout the women’s peace movement, a refrain to keep steadfast in protest, walking, dancing, singing. A voice which connects generations of women within a cycle of time.”[160] The idea of cyclicality to which Carpenter refers opposes the disconnection underscoring the loop-like quasi-religious structure of nuclear technologies. The song is utilised to connect generations of women protesting for peace, creating a time continuum, but it also radiates spatially, reaching distinct histories of resistance. By doing so, it contrasts the mythicisation of the nuclear complex, bringing it back to public attention. As Ele Carpenter further suggests:

> Collective responsibility for dealing with the nuclear must include the gathering and maintenance of archives of tacit as well as explicit knowledge, including how culture maintains a living record of material, aesthetic and social legacies of contamination and waste.[161]

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[157] Maarten Vanden Eynde, ‘Nuclear Waste Culture: Projecting the Past into the Invisible Deep Future. A Conversation with Ele Carpenter’, *Commodity Frontiers*, 4.4 (2022), pp.36-44 (p.38) <DOI:10.26300/mxma-s927>.
[158] Vanden Eynde, ‘Nuclear Waste Culture’, p.38.
[159] Ibid., p.38.
[160] Ele Carpenter, and Umeå universitet. Bildmuseet, host institution, *The Nuclear Culture Source Book* (London: Black Dog Publishing, 2016) p.206.
[161] Carpenter, ‘Shifting the Nuclear Imaginary’, p.129.

Burial embraces the invitation to contribute to this “living record of material, aesthetic and social legacies of contamination and waste”, not only rendering visible the Lithuanian nuclear heritage, but creating a palimpsest of the “overlooked” histories of the nuclear age.

Conclusion

The aim of this thesis was to bring together a variety of films, TV series and a documentary which confronted nuclear issues through the aesthetic lens of visibility and invisibility. Starting and concluding with texts created in the second decade of the twenty-first century and placing them in dynamic conversation with two post-war films, this non-chronological structure allowed me to address the complexity through which nuclear technologies are perceived in cultural representation across time and space. But it also enabled me to trace the multiple influences, memories and histories which inform, interlace within and resurface from their depiction.

In this conclusion, I would like to return to some key-terminology emerging from this thesis and bring together some crucial aspects of both the works analysed and the themes and theories explored, while offering some elements to move forwards the aesthetic discourse on the representation of the effects of nuclear technologies.

Discussing the role of memory studies within a global context, Max Silverman indicates the "global and the local" not as two separate, contrasting entities, but rather as interconnected and complementary realms which should lead us to reconfigure memory beyond the notion of "uniqueness". As Silverman points out:

> If one views singularity and generality, and local and global not as binary opposites but as part of an ambivalent space of 'relationality' between sameness and difference, then the terms of the debate are not so clear-cut. [...] It is not simply a question of how memory becomes pluralized, transformed or homogenised in a supranational space of accelerated information flows; it is also a question of rethinking the notion of the uniqueness, autonomy and homogeneity of individual and collective memory at a local level.[1]

According to Silverman, reassessing memory in terms of relationality could challenge a static construction of cultural memory as uniquely determined by local forces, in the way that, for example, Maurice Halbwachs and Pierre Nora conceive it.[2] In its place, he proposes a notion of cultural memory as "inevitably channelled through symbolic structures (that is, through structures that contain the traces of numerous elsewheres)."[3] Over the course of Chapters II, III and IV of

[1] Silverman, *Palimpsestic Memory,* p.176.
[2] Silverman, *Palimpsestic Memory,* p.176.
[3] Ibid., p.176.

this thesis, I argued that the present of nuclear technologies emerging from the texts establishes interactive connections with their past and future, as well as "numerous elsewheres". This relational reading has allowed me to retrace the evolution and effects of the nuclear-industrial-military-complex beyond national borders, while also offering the contextual background on to which these memories were renegotiated transnationally. In this way, I focused on films, an art film, a TV series and a documentary from the present and the past which challenge the progressive aesthetic and discursive disappearance and fragmentation of the nuclear-industrial-military-complex within an elaborate and dense media landscape, in which memory appears as a transnational force. These audio-visual productions engage in a critical discussion of nuclear technologies and their consequences by putting the nuclear threat in communication with other past and contemporaneous histories of violence, while also contrasting its invisibility by performing various forms of anti-nuclear resistance.

Background Explosions and Foregrounded Tactility: Breaching through the Atomic Sublime and the Nuclear Uncanny through Haptic Visuality

In this thesis I explored how multiple aesthetics from the past re-emerge simultaneously within the present of *Hiroshima Mon Amour* and *La Jetée*. This allowed me to draw associations between diverse timeframes, creating a narrative continuum in which the history of World War II interlaced with the atomic bombing of Hiroshima, the Algerian War, as well as aesthetic evocations of the nuclear experiments taking place in the Sahara Desert. Both films include a subtle network of stories of nuclear resistance, drawing intertextual connections with other texts, which otherwise would have been lost and unacknowledged. In Chapter III, I speculated that *La Jetée* addresses implicitly Karl Gass's documentary from 1961 *Allons Enfants . . . Pour l'Algérie*. Gass's documentary includes a testimony of a German legionnaire who recounts how he was told by a French soldier that 150 Algerian prisoners had been used as guinea pigs to test the effects of the atomic explosions during experiments undertaken by the French government in the Sahara Desert from 1960 onwards.

Furthermore, in Chapters II and III, I discussed that in the opening section of *Hiroshima Mon Amour*, Resnais edits together segments from three Japanese fiction and non-fiction films, including the Japanese documentary *The Effects of the Atomic Bomb on Hiroshima and Nagasaki*, produced by the documentary company Nichi-ei, namely "Nippon Eiga-sha, meaning

Nippon Film Company."[4] Yūko Shibata observes that this documentary had been considered as "a ghost film" until this point,[5] since it was seized by the American Army upon completion, *de facto* disappearing from circulation without ever being screened. Kyoko Hirano recalls the complex history of repression and censorship underlying the documentary, and how, after a copy of the film was given back to the company in 1952 once the U.S. occupation of Japan had terminated, the original footage was still not shown to the public, except for the reconstituted Nichi-ei company (now Nichi-ei Shin-sha) allowing for its dismemberment into "sections to be used in other newsreel and films."[6] Hirano further maintains that, eventually, a part of the footage was acquired by a Japanese group from the U.S. National Archives, and made into two different documentaries in the 1980s. This was due to the fact that, once the government of the United States gave the documentary back to Japan in 1967, the ministry of education still prevented its screening. As Hirano explains:

> The Ministry of Education, which has been keeping it, has refused to show it in its complete form, despite protests from the filmmakers, from survivors who appeared in the film and from the general public. In the early 1980s a Japanese group raised 130 million yen in contributions to purchase 930,000 feet of atomic bomb footage from the U.S. National Archives. This footage was subsequently edited into two films by Susumu Hard, which were released in both countries in 1982.[7]

Resnais, therefore, uses *Hiroshima Mon Amour* as a conduit for these otherwise "invisible" traces of nuclear violence to be exhibited to an international audience. By capturing the aftermath of the atomic bombing of Hiroshima, this "ghost film" creates a testimony of the devastating effects of the city's bombing, defeating the ban imposed by the U.S. censorship first, and later through the Japanese government's refusal to display the original footage material. As stated in Chapter II, censorship in Japan meant that people were prohibited from taking pictures in Hiroshima and Nagasaki during the Allied Occupation.[8] However, these restrictions did not include the documentation on behalf of the Allies of the breadth of destruction affecting Japanese cities from a distance. In relation to this aspect, Azoulay notices:

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[4] Kyoko Hirano, 'Depiction of the Atomic Bombings in Japanese Cinema During the U.S. Occupation Period', in Hibakusha *Cinema: Hiroshima, Nagasaki and the Nuclear Image in Japanese Film* ed. by Mick Broderick, (London: Kegan Paul International, 1996) pp.127-168 (p.114). iPad Bookstore ebooks.
[5] As Abé Mark Nornes points out, the documentary "for decades [...] was known as the *maboroshi* atomic bomb film in Japan. *Maboroshi* loosely translates 'phantom' and is used for objects whose existence is known but whose location remains a mystery." In Nornes, 'The Body at The Center', p.129.
[6] Hirano, 'Depiction of the Atomic Bombings in Japanese Cinema During the U.S. Occupation Period', p.116.
[7] Ibid., p.117.
[8] Azoulay, *Potential History*, p.180.

> Destruction and violence at this scale were not concealed, only reconfigured. Visual records of the erasure of Japanese cities and their populations were featured in *Life* magazine. The destruction of a city and its habitants was not censored. Photos of cities "before" and "after" their devastation were classified as visual markers of a mission accomplished, with articles given such titles as "The War Ends: Burst of Atomic Bomb Brings Swift Surrender of Japanese."[9]

The "devastation" of Japanese cities displayed in American magazines resonates with the "distant sublime spectacle"[10] represented by depictions of atomic bombs discussed in Chapter I, and germane to the notion of the atomic sublime articulated by Hales. This is the context in which Resnais and Duras situate *Hiroshima Mon Amour*: resisting the sublime detachment engendered by the nuclear spectacle, in the film all distances are replaced by an absolute proximity, which challenges the reconfiguration of "destruction and violence" conveyed through the "visual records" managed by the Allies.

If these films represent ghost traces in both films, Resnais builds *Hiroshima Mon Amour* on an additional game of visibility and invisibility involving the representation of the atomic bomb from *Hiroshima Mon Amour*. Crucially, I chose two texts from the period following World War II in which an explicit representation of nuclear explosions is absent. By the same token, the nuclear theme, at first glance, appears less preponderant vis-à-vis other topics explored within these films, and in which personal stories are positioned in the foreground, while the bomb constitutes the backdrop against which other stories are told. John Beck and Ryan Bishop observe that this stylistic detail of erasing the bomb from the film frames *Hiroshima Mon Amour* as a "prescient media object of the Cold War."[11] They state: "The bomb as an absent object fills the entire film. It is the reason for the film but is never present."[12] By the same token, in *La Jetée*, the bomb is seen only through its effects: it is visually addressed through the invisibility of nuclear radiation which forces people to leave underground, and, even more indirectly, is channelled via scenes of torture in which a complex net of imaginaries of violence conflates.

As argued in Chapter II, Resnais chose to situate the atomic bomb "in the background, behind the characters, as a sort of landscape."[13] The link between post-nuclear Hiroshima and what brought about its destruction materially, namely the bomb, is no longer visually detectable in the

[9] Ibid., p.180.
[10] Carpenter, 'Shifting the Nuclear Imaginary', p.9.
[11] Beck and Bishop, 'Introduction', p.25.
[12] Ibid., p.25.
[13] Guzmán, *Alain Resnais Interview 2*, min. [00:08:44-00:08:54].

film. This shifted focus from the iconography of the bomb to the aftermath of destruction enables the viewer to reflect on the long-term effects of the nuclear explosion on individuals and the city, and to go beyond the immediacy of the event. The relationship between the background, where the bomb is placed, and its effects sheds light on the connection between atomic explosions and radiation. The visual absence of the bomb, in fact, invites the spectator to focus on what is left following the atomic bombing, namely radioactivity and its effects on the local population of Hiroshima, which in the film appear through a montage of footage from the Japanese films *The Effects of the Atomic Bomb on Hiroshima and Nagasaki* (1946), *Hiroshima* (1953) and *Still it's good to live* (1956). However, while this positioning of the bomb might be seen as addressing indirectly the story of the *hibakusha* since, as much as with the representation of the bomb, they also occupy a peripheral position in the story, *Hiroshima Mon Amour* operates a renegotiation between the background and the foreground in the film vis-a-vis the atomic explosion and the effects of radioactivity on the victims.

To continue to explore the conceptual role of the background throughout this thesis, I argued that the visual depiction of the bomb elicits a sense of physical and psychological distance informed by the notion of the atomic sublime. In Chapter I in relation to *Dark*, I discussed how, according to Hales, the reproduction of the atomic mushroom cloud in magazines after the atomic bombing of Hiroshima and Nagasaki created a dissociation between the peril that the bomb represented and its aesthetic qualities. The bomb was perceived as an awe-inspiring phenomenon, magnificent and innocuous at once. I also discussed that in some of the films analysed in this thesis, including the series *Dark*, the atomic sublime and the nuclear uncanny exist within the same perceptual and physical space, as they are connected to one another both aesthetically and narratively.

Exploring the co-presence of both the atomic sublime and the nuclear uncanny, in Chapter II and Chapter III, I argued how senses participate in the construction of the nuclear uncanny. I analysed how the sensory experience linked to sight and hearing, which inform the Freudian notion of the uncanny via the fear of blindness and the uncanniness of silence, also contribute to the characterisation of the nuclear uncanny. In this context, I addressed the fact that the perceptual experience of the atomic bomb as recounted by some Hiroshima survivors was described as pure light without sound. Didi-Huberman, in his analysis of an article written by Georges Bataille on the victims' testimonies, comments that the atomic bomb, that had “the visual intensity of the sun,”

had been framed as “a “sheet of sun” without “any rumbling.”[14] It is, therefore, in the exact time of the explosion that the distance between the nuclear sublime and the uncanny collapses: the perception of the bomb as pure visuality and its association with the “visual intensity of the sun” (the opposite of darkness which, according to Royle, is germane to the phenomenology of the uncanny) generates a response of a multi-layered network of silence: of the bomb, of the victims and of the site itself.[15] In fact, as Didi-Huberman further evokes the spatial embodiment of the bomb through silence as “a feeling of panic of the site itself,”[16] defining, therefore, silence as both a quality of the object (the bomb), the subject (the victim) and the site (Hiroshima.)

In Chapter III I argued that Resnais' re-presentation of the images of the *hibakusha* extracted from the Japanese films deprives the victims of their voice, reproducing, therefore, the same silence perceived following the explosion. In this sense, the *hibakusha* in *Hiroshima Mon Amour* are depicted as frozen in the moment following the conflagration, and in which the luminosity of the bomb was not followed by its sound. By the same token, I argued that in *La Jetée* the underground prisoners are also framed in a complete state of silence, enhanced by the use that Marker makes of still frames and the use of voice-over in the film. Silence is, therefore, a quality of the nuclear uncanny, which serves to address the invisible and yet physically perceivable presence of the bomb through its embodiment of the space, as a “feeling of panic of the site itself,” connecting, therefore, the bomb as an affect which can be sensed within the site and beyond the human.

In the introduction to this thesis as well as in Chapter III, I also explored the notion of haptic visuality which, alongside silence, invites a perceptual response to the bomb. As maintained in Chapter III, haptic visuality, seemingly, does not fit into the conceptualisation of the nuclear uncanny. As for its relationship with the atomic sublime, haptic visuality goes beyond pure visuality by establishing a relationship between viewer and image informed by the sense of touch. In the *Nuclear Borderlands* Masco suggests that during the first atomic experiment at Los Alamos, the weapons scientists involved in the project renegotiated the notion of the nuclear sublime via “an internal negotiation of the meaning of the technology,” thus perceiving it, rather than through the Kantian categories of “terror/pleasure”, as an “eminently political thing.”[17] As Masco explains:

[14] Didi-Huberman, *Génie Du Non-Lieu*, p.24.
[15] Ibid, p.25.
[16] Ibid, p.25.
[17] Masco, *The Nuclear Borderlands*, p.57.

> By historicising expressions of the nuclear sublime within the Los Alamos weapons science community, we can see how the shifting experimental regimes open to weapons research since 1945 have worked to strip the exploding bomb of its visceral threat to the body of the scientist. The result has been a diminished access to the nuclear sublime, allowing the bomb to be experienced not through a circuit of terror/pleasure within the laboratory, but increasingly as simply an aesthetic-intellectual form.[18]

Masco further argues that the scientists in charge of the first atomic experiment in 1945 did not provide a response to the bomb which was purely aesthetic and intellectual. The process of witnessing the explosion, rather, was embraced as "an overwhelming physical event."[19] Returning to the notion of haptic visuality in this conclusion, therefore, is a way to overcome the distance created by observational practices through which the bomb is framed as a spectacle trapped between "terror/pleasure", whose danger is not, therefore, identified as dangerous. In this way, the representation of the bodily effects of the bomb and nuclear experiments through haptic visuality enables to re-frame the nuclear discourse in terms of the invisible, but yet embodied experience of radiation. As Ele Carpenter suggests: "In the early twenty-first century, nuclear aesthetics are shifting from the distant sublime atomic spectacle to a lived experience of the uncanny nature of radiation."[20] This quote expresses affinity with Škarnulytė's employment of haptic visuality and connects this aesthetic thematic exploration to *Burial*.

In the last sequence of *Burial*, four atomic test explosions (examples of the sublime) starting from min. [00:52:38] and filmed from different perspectives (extreme wide shot and bird's eye view) are followed by shots of a natural park in Lithuania, the Paddock of Pašiliai and a reserve for endangered bison. The "sustained roar"[21] of the atomic explosions (as explored on page 190 of this thesis) jars against the twitter of birds and the wind blowing between trees in the park. At min. [00:55:40] an altered image showing bison grazing grass in the park appears; since in this scene the bison are not in focus, they come across as shadows, ghostly figures, rather than concrete, corporeal entities. As the narrative progresses, the images become clearer, but never completely in focus, until the montage returns to the figure of the python, after a brief interceding scene displaying grass. As observed in Chapter IV, the serpent in *Burial* is a symbol intersecting a variety of themes and meanings. On the one hand, it stands for the decommissioning of the Ignalina

[18] Ibid, p.57.
[19] Ibid, p.57.
[20] Carpenter, *The Nuclear Culture Source Book*, p.9.
[21] Adrienne LaFrance, 'The Sound of an Atomic Bomb', *The Atlantic*, 8 August 2017 <https://www.theatlantic.com/technology/archive/2017/08/what-does-an-atomic-bomb-sound-like-when-it-explodes/536283/> [Accessed 28 February 2024].

nuclear power plant. Like the serpent shedding its skin, the power plant is stripped off of its layers progressively and it is materially deconstructed into its parts. On the other hand, I argued that the serpent, addressing the cycle of nuclear production, also intimates its symbolic disruption.

The images displaying the atomic bomb explosions edited together with the natural reserve with bison – of which I will discuss further later in this conclusion – and the python at the end of the film indicate the collapsing distance between the atomic sublime and the nuclear uncanny which the bomb engenders. They do so by suggesting, on an aesthetic level, a connection of cause and effect between the content of these shots. As indicated in the introduction to this thesis and further argued in Chapter IV, *Burial*'s nuclear universe is almost totally deprived of humanity. The presence of the snake in the Ignalina control room simulator, as well as its evocation in spaces within which humans are not allowed or are absent, points to the presence of radioactivity contaminating these environments. Returning to the image of the snake at the end of *Burial*, which is strategically located after the atomic explosions, Škarnulytė draws out an implicit set of associations between the background radiation caused by atomic testing and the contamination of nonhuman life, lands and animals.[22] The artist creates this effect by collapsing the distances between the nuclear sublime and the nuclear uncanny: the exploding bomb, which is positioned at a safe distance from the point of view of the camera (and therefore the observes of the explosion), in the background, is counteracted by the visceral proximity through which the snake shedding its skin is portrayed. As claimed above in this section, in this scene the camera moves from a close-up of a meadow to a close-up of the python shedding its skin, which becomes progressively more extreme and intimate as this ritual progresses. Škarnulytė, therefore, employed the techniques of haptic visuality to address the connection between the background (where the bomb is placed) and the extreme foreground (inhabited by the serpent and radioactivity.)

[22] As Shahbazi-Gahrouei et al. observe: "Humans are always exposed to a background radiation spread of radioactive nuclei in the air, soil, rock, water, and building materials." (p.5) Radioactivity can be naturally occurring or a product of human activity. As they further maintain: "All building materials contain various amounts of radioactivity. For example, materials derived from rock and soil contains natural radionuclides of the uranium and thorium series and the radioactive isotope of potassium. Artificial radionuclides can also be present, such as cesium (137Cs), resulting from the fallout from weapons testing and the Chernobyl accident. All these can be sources of both internal and external radiation exposures." In Daryoush Shahbazi-Gahrouei, Mehrdad Gholami, and Samaneh Setayandeh, 'A Review on Natural Background Radiation', *Advanced Biomedical Research*, 2.1 (2013), 65–65 (p.2) < DOI: 10.4103/2277-9175.115821>.
Therefore, *Burial* plays aesthetically with the combination of the nuclear fallout coming from the nuclear testing showed in the images before returning to the natural park, and therefore the idea of natural background radiation.

Marks argues that some films use the strategy of haptic visuality as part of a process of knowledge and discovery of the image, as she claims: “Haptic images can give the impression of seeing for the first time, gradually discovering what is in the image rather than coming to the image already knowing what it is.”[23] However, Škarnulytė reveals the various incarnations of the serpent half-way through the beginning of the film and closes it with the visually haptic images of the snake shedding its skin. The intimate extreme close-us of the reptile’s tessellated skin – reminiscent of the tessellation of hexagons in the Ignalina control room simulator. Therefore, the artist reverses the process of knowledge at the heart of haptic visually, thus bringing back the attention of the spectator to the nuclear-military-industrial complex.

Burial is not the only film explored in this thesis that employs the techniques of haptic visuality. As addressed in the introduction of this thesis, the images of the two interlaced lovers at the beginning of *Hiroshima Mon Amour*, whose skin is shot through extreme close-ups, offer a sense of texture and touch, fulfilling Marks’ claim according to which “haptic images refuse visual plenitude.”[24] Furthermore, as Jennifer Barker articulates, the sense of touch elicited by these interlacing corporalities, is bolstered “by the way the surfaces of these bodies are coated with layers of what may be perspiration or rain, then snow or mud or ash. These textures are incomprehensible as narrative fact (is it snow or is it ash?) but exquisitely sensible as texture.”[25] In comparison to the extracts from the Japanese films included in Resnais’ film, therefore, which, as Barker further observes, elicit almost “clinical” distance between the viewers and the scenes displayed,[26] these initial images in their ambiguity induce a sense of contact and touch, and involve directly the viewer in their enigmatic sensuousness. By addressing the work of Trinh T. Minh-ha and her “critique of ethnographic visuality”, Marks argues that like Resnais in *Hiroshima Mon Amour*, the filmmaker employs “both poetic and aggressive strategies to compel the viewer to consider the destructive effects of believing that one can know another culture or another time through visual information alone.”[27] In Chapter II and Chapter III, I argued that Resnais frames critically the expectation of understanding the suffering of the people of Hiroshima affected by the bomb through sight, and challenges the same ability of his film to encapsulate the tragedy of Hiroshima.

[23] Marks, *The Skin of the Film*, p.178.
[24] Ibid., p.177.
[25] Barker, The Tactile Eye, p.60.
[26] Ibid., p.58.
[27] Marks, *The Skin of the Film*, p.134.

However, through the foregrounded images of the two bodies framed in an ambiguous embrace, both evoking life and death, Resnais uses haptic visuality to render perceptible, rather than purely visual, the bomb. The director, in fact, avoids the visual representation of the bomb substituting it, instead, with the corporeal expression of its effects, channelled by the textile and physical perception of the ashes depositing on the bodies of the two lovers. Škarnulytė renders radiation both visible and sensible to touch. In Chapter IV, I analysed the scene in the film in which the python is in the Ignalina control room simulator. Here, the serpent moves across the control room, the contact of its skin with the surface of the operational desk, its body touching the buttons and tracing the width of this technological milieu and the sound that this encounter produces, elicit a tactile response which goes beyond the purely visual, offering to the spectator a multi-layered sensory experience involving sight, sound and touch. As Marks observe in relation to the stimulation of other senses in the construction of haptic visuality:

> Haptic images may also encourage a more embodied and multisensory relationship to the image in films that use haptic imagery in combination with sound, camera movement, and montage to achieve sensuous effects.[28]

If the serpent symbolises the absence of humanity and the presence of radiation, then the movement of the serpent and the sound that it produces, by prompted a "multisensory relationship to the image", amplifies the sense of physical touch evoked by its body and its corporeal connection with the cold surface of the control room. This visceral proximity of the python with the environment, therefore, renders radiation almost perceptible. In synthesis, the serpent elicits a tactile experience of the site and, through its domination of the scene, foregrounds and renders tactile the presence of radiation, not by substituting this connection, but magnifying it and rendering detectable. The viscerality of these images hinders the distancing and spectacularisation produced by the nuclear uncanny, reconnecting the atomic bomb to the order of the body and affecting the body and psyche, rather than a spectacle "outside the webs of signification that comprised a watching culture."[29]

[28] Marks, *The Skin of the Film*, p.172.
[29] Hales, 'The Atomic Sublime', p.5.

Foreground and Background: Indexicality, Markers, Memory, Forgetting and the Deep Geological Repository as Cinder in *Into Eternity*

As argued in this conclusion, the python in *Burial* renders radioactivity visible by visually haptic images, which return the invisible to the order not of the visible, but of the perceptible via tactility. In other words, radiation is also the invisible and uncanny indexical sign of the atomic bomb, since, by pointing to the presence of the bomb, it can be defined as a "physical symptom" of the occurred explosion.[30] In this sense, the conceptualisation of the background is informed by the indexical signifier of background radiation, which creates a correlation between the phenomenon (radiation) and space (the background).

Indexicality in this thesis emerged in Chapter II, where I discussed the role of photography in *Hiroshima Mon Amour* in creating uncanny indexical links between past and present in the film. However, indexicality also plays a central role in *Into Eternity*. Here, Madsen discusses the need to indexically link Onkalo, the deep geological repository where the nuclear waste is housed, to the overground site through markers.

As an expert explains at minute [00:40:54]: "[A marker] is an idea which has been thought over. An area where disposal has been made could be marked using markers."[31] In the section *Warning the Future*, from minute [00:40:05]. Madsen explores this issue through a series of questions asked to the experts interviewed in the film, as they discuss the unpredictability of "human behaviour" and the likelihood of rock being drilled down beyond 500 metres, thus causing Onkalo to be discovered.[32] Madsen asks the experts what can be put in place to prevent future visitors from entering Onkalo;[33] whether the lack of knowledge about the site would be a reason for people to explore it and, therefore, find Onkalo;[34] and, finally, what effect a clearer signage would produce in the visitors: "What if there was a sign that said 'Don't drill here'?"[35] At this point, the experts list a variety of strategies developed over the course of the years which, through the planning and

[30] As Albert Atkin explains: "Those signs displaying all of the features, natural signs, physical symptoms, pointing fingers and so on, count as indices." In Atkin, 'Peirce on the Index and Indexical Reference', p.171.
[31] Madsen, *Into Eternity*, min. [00:40:54].
[32] Ibid, min. [00:40:16].
[33] Ibid, min. [00:40:27].
[34] Ibid, min. [00:40:30].
[35] Ibid, min. [00:40:40].

design of markers to cover the site, have the purpose to keep away potential visitors in the future and deter them from excavating the rock where Onkalo is situated. The solutions brought into the conversation include: a rune stone, addressed as "a typical marker where you see messages repeated in different United Nation languages."[36] This would be part of an articulate system with more detailed information about the site, including a "message kiosk [...] it is a more detailed message than the one on the monolith."[37] Attached to this structure, which offers progressively more in depth and accurate details on the site, there could also be "a small library in carved rock, perhaps underground."[38] At this stage, Madsen asks sort of message these markers would contain, the answer of which is: "To say that this is not an important place; it is a place of danger. Stay away from the site and not disturbing the site."[39]

As discussed in Chapter IV, written and articulate communication such as the kind suggested in *Into Eternity* implies the fact that languages will be maintained known by future generations. Because of that, the interviewees in the film put forward the idea of a series of signs which might be able to "give you a feeling rather than giving you a detailed message" since, as the expert explains, "intuitively you would expect people to react to something frightening better than to a detailed message."[40] These signs include "forbidding blocks, "Landscape of Thorn", landscapes that would get you feel that this is something wrong."[41] Another idea emerging from this discussion is that of using *The Scream* by Edvard Munch as evoking a universalising sense of fear, which could survive time and space.[42] Vincent Ialenti observes that these ideas were developed between the 1980s and the 1990s by the US Department of Energy, to create warning signs to build nearby the WIPP (Waste Isolation Pilot Plant) repository in New Mexico.[43] With reference to *Into Eternity* and the discussion of these indexical signs to identify Onkalo, Ialenti says: "it is unsurprising that Madsen took a lengthy detour in his film about Finland's Olkiluoto repository project to discuss the United States' Yucca Mountain and WIPP repository projects' warning monument ideas."[44]

[36] Ibid, min. [00:41:46].
[37] Ibid, min. [00:41:50].
[38] Ibid, min. [00:41:56].
[39] Ibid, min. [00:42:15].
[40] Ibid, min. [00:43:17].
[41] Ibid, min. [00:43:30].
[42] Ibid, min. [00:44:13].
[43] Vincent Ialenti, *Deep Time Reckoning: How Future Thinking Can Help Earth Now* (Cambridge, Massachusetts: The MIT Press, 2020) (p.23) <https://doi-org.sheffield.idm.oclc.org/10.7551/mitpress/12372.001.0001>.
[44] Ialenti, *Deep Time Recknoning*, p. 24.

However, all the solutions suggested above are met with doubt, as the idea underlying the conversation is that knowledge and events change, showing the vulnerability of a system which has not reckoned with the passing of time from an extremely long-term perspective. Towards the end of the section, Madsen observes that "it has been discussed to let the facility be forgotten" [00:46:57], an idea which is supported by two experts, who both believe that this would be the most effective solution, allowing Onkalo not to be uncovered and create, therefore, a potential danger for future generations. This aspect has been discussed in Chapter IV, also in relation to Derrida's notion of non-memory as the inevitable reduction and destruction of memory, from which nothing is left.

As a conclusory note to this thesis, I will point out how Madsen's proposal lies in the threshold between memory and forgetting, repositioning the deep geological repository-as-cinder as a sort of repressed memory which should be preserved in the unconscious of the future humanity and, as such, should be passed from generation to generation. In Madsen's words, the present generation, responsible for the construction of Onkalo, is also in charge to bequeath this complex legacy of knowledge and forgetting to future people. He envisions this process of passing on information in order to "tell their children, and their children's children too, to remember forever to forget to consign the burial chamber to oblivion. To remember forever to forget." In this way, *Into Eternity* creates connections between a hypothetical present and future human being in the attempt to warn the latter of the dangers of Onkalo through the construction of a fable or a myth. It also addresses non-human animals as potential victims of the reckless predatory instincts of humanity.

Madsen's address implies two postulations at play. Firstly, he assumes the possibility of a transgenerational trauma connected to the buried nuclear material and, in order to render more bearable, the potential consequences of this burdensome legacy, he proposes storytelling as a conduit of intergenerational knowledge transfer, whose purpose is to reach people into the future. Secondly, he invites people to forget the nuclear waste, "to consign the burial chamber to oblivion," and this should happen through the act of storytelling, positioning these two aspects, namely forgetting and storytelling, in apparent contradiction.

Madsen's lines lead us back to the Derridean notion of cinders, on the one hand, and to the Freudian ideas of memory and forgetting, on the other. As observed throughout this thesis, Derrida's concept of cinders refers to the utter erasure of memory, from which nothing remains, if not a trace which is non-memory itself. Within the context of nuclear waste addressed by Madsen, the deep geological repository is created to achieve final disposal of high-level radioactive waste (HLW), and therefore non-memory, rather than creating a retrievable storage in the short and long term. As explained on the website of the World Nuclear Association:

> Used fuel that is not intended for direct disposal may instead be reprocessed in order to recycle the uranium and plutonium it contains. Some separated liquid HLW arises during reprocessing; this is vitrified in glass and stored pending final disposal.[45]

Before being disposed of, therefore, the HLW is vitrified into a black glass. Despite not eliciting in its texture Derrida's image of cinders, the eternal, unretrievable disposal of high level radioactive waste in deep geological repositories like Onkalo complies with Derrida's concept of non-memory, whose aim is to induce "an absolutely radical forgetting" of both the facility and the waste.[46] Above in this conclusion, I pointed out that, in the documentary, Madsen entertains the idea of using markers to indexically link Onkalo with a series of explanatory material. However, the destruction of memory of which Madsen speculates considers a generational distance between now and the future in which communication and language might have modified.

As stated in Chapter IV, the creation of an archive with information about nuclear waste in relation to the facility relies on the assumption that language will be maintained for and spoken by generations to come. In this sense, for example, the project for "the Preservation of Records, Knowledge and Memory (RK&M) Across Generations (RK&M Initiative)" ideated by the NEA Radioactive Waste Management Committee (RWMC), which is not directly addressed by Madsen since this initiative started in 2011,[47] is significant for the near future and will enable "to reduce the likelihood of inadvertent human intrusion and to support the capacities of future members of society to make their own informed decisions regarding a radioactive waste repository after closure," as stated on the website of the project. However, as Madsen observes, the construction

[45] World Nuclear Association, 'Storage and Disposal of Radioactive Waste', *World Nuclear Association*, 2024 <https://world-nuclear.org/information-library/nuclear-fuel-cycle/nuclear-waste/storage-and-disposal-of-radioactive-waste> [accessed 6 July 2024].
[46] Derrida, *Points*, p.208.
[47] Nuclear Energy Agency, 'Preservation of Records, Knowledge and Memory (RK&M) across Generations', *Nuclear Energy Agency*, 2020 <https://www.oecd-nea.org/rwm/rkm/> [accessed 6 July 2024]

of an archive should be met with a series of questions regarding the future of humanity, rather than being framed as a definitive solution to the issue of nuclear waste. As he states:

> If we build archives every future society and every future generation must maintain the information and update the language for you to understand. Can we count on continuation for thousands of generations into the future? What if people starve and suffer? What if there are wars or floods or fires?[48]

In this sense, Madsen speculates on the complete destruction of memory, both in terms of the archive and in addressing the vitrified high level radioactive waste. There are, therefore, two aspects involved in the conceptions of total erasure, and they are both linked to the possibility of survival. In case of the complete oblivion of the facility housing the nuclear waste, the gathering and conservation of knowledge can be deemed irrelevant for the future. On the other hand, the survival of the human species might rely on this kind of information, since the awareness of where nuclear waste is located will enable "future societies to make informed decisions about the repository."[49]

However, Madsen's line of reasoning goes beyond the notion of non-memory, to return to the workings of memory and forgetting indicated in the introduction to this thesis. According to Freud, in fact, memory and forgetting are strictly interlaced, and imply a certain degree of ambiguity for which forgetting is a way of preserving memory, while the psychoanalytic process of retrieving memory can lead to a final erasure. As Adam Phillips explains in *On Filtration*: "On the one hand, Freud says, forgetting, like burial, is a preservative; a kind of storage."[50] In short, forgetting enables the preservation of memory. As such, by keeping memory buried in the unconscious, forgetting allows for memory to be protected from its complete annihilation. If interpreted through this angle, Onkalo, which Madsen significantly addresses as a burial chamber, not only is the material repository in which nuclear waste is housed, but its same structure reproduces the dynamics of memory and forgetting and should be used by the collective unconscious of future generations to protect the memory of an unspecified memory of danger from disappearing. Philips further clarifies the act of remembering thus:

> On the other hand, remembering, like excavation, does something paradoxical: by linking the fragments – whether it be of the patient's story, or the shards of the city – it makes possible imaginative reconstruction; and yet this very

[48] Madsen, *Into Eternity*, min. [00:54:00].
[49] Nuclear Energy Agency, 'Preservation of Records, Knowledge and Memory (RK&M) across Generations.'
[50] Philips, *On Flirtation*, p.53.

> reconstruction contributes, or even causes, the final destruction and disappearance of the material.[51]

Onkalo is built to be a material, long-term storage for the nuclear waste and its function is to protect and preserve humanity from its deadly effects. As argued above in this conclusion, its function is to engender a destruction of memory, to be "a remainder without remainder," thus creating non-memory. Conversely, it is the act of remembering, as Philips points out, that enables the process of erasing memories and can bring about "the final destruction and disappearance of the material."[52] Following these observations, Madsen's suggestions for future generations, "to remember forever to forget" can be interpreted, perhaps more acutely than any of the other texts explored over the course of this thesis, as enacting the dynamics between remembering and forgetting, while also renegotiating the notion of non-memory not as excluding the Freudian concepts: through the process of remembering, future generations are invited to destruct the memory of the hidden nuclear waste, which, nonetheless, will be preserved into the future by its repository. This process functions with methodological similarity to memories when they are stored in the unconscious through forgetting. However, the last passage, namely the preservation of the nuclear waste through its repository functions as a testimony to "the disappearance of the witness."[53] Insofar as its location will not be signalled by site markers, the destiny of the repository is to undergone absolute forgetting.

Palimpsestuous Solidarities and Connections Between Primary Materials

In the context of this thesis, *Hiroshima Mon Amour* and *La Jetée* were significant insofar as their depiction of the aftermath of nuclear destruction was an anticipation of the overwhelming and invisible presence of radioactivity reconfiguring the nuclear threat, and, as such, they have been interpreted through the lens of the nuclear uncanny. These films, in fact, are not as much about the causes leading to potential or effective nuclear destruction, nor do they re-imagine the exact moments in which the explosion takes place or speculate about the immediate threat. Instead, they capture the implications and the "slow radiological" violence of the nuclear bombing, both attempting a representation of the direct victims of its lethality, namely the *hibakusha* (as in *Hiroshima Mon Amour*), and the long-term psychic effects of those experiencing the atomic bomb from a distance. In Chapter II, I argued that these reactions are filtered by Elle, the protagonist of

[51] Ibid., p.53.
[52] Ibid., p.53.
[53] Derrida, *Points*, p.209.

Hiroshima Mon Amour, through the affect of indifference, which I complemented employing Gabrielle Schwab's notions of "splitting" and "numbing" within the milieu of nuclear-related affective responses. According to Schwab, splitting and numbing contribute to the formation of the nuclear unconscious and are constitutive of widespread, intersecting ecologies of "trauma fatigue".[54] If indifference was framed as a more general state encompassing and responding to a variety of themes emerging from the texts (for example, the Algerian War), as well as drawing on Malabou,[55] "splitting, numbing, and denial" were identified as specific reactions to the overwhelming presence of the atomic threat and its consequences.[56]

I linked the indifference denounced by some intellectuals during the Algerian War with Resnais's and Marker's films, conceptually creating affective correspondences between different, and yet interlacing, events. In this sense, World War II and the horrific experience of the concentration camps interlace with the scenes of torture taking place during the Algerian War, which, alongside a further layer of meaning and representation related to nuclear experiments.[57] In *La Jetée*, for example, these events are placed in dialogue with a present, namely the 1960s, dominated by consumerist culture, and in which the "processes of modernization, such as the shift to mass consumption"[58] jar against and are aesthetically continuous with what Carpenter, elsewhere, addresses as "the ways in which nuclear modernity leads to a slow radiological conflict."[59] The "slow radiological conflict" in *La Jetée* is identified through the underground camps, which at once evoke the concentration camps and draw on the aesthetic of the bunker. It is in the indifference and apathy enabled by consumerist culture that the horrors of the Algerian War can take root and thrive – a topic which Marker will further expand on in his subsequent film, *Le Joli Mai*,[60] and had already confronted, alongside Resnais, in *Night and Fog*.[61]

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[54] Schwab, *Radioactive Ghosts*, p.9.
[55] Malabou, *Ontology of the Accident*, p.24.
[56] Schwab, 'Transgenerational Nuclear Trauma', p.438-439.
[57] In a documentary appearing before *La Jetée* and made by Marker in 1960 about "everyday life in Israel," the voice-over in the films points out: "This we have done, we old Europe who boast of our spiritual values, caused thousands to flee from us, camp survivors, camp orphans, born in camps, crushed by camps, they fled from us, Germany, with our crimes, France, with our indifference, and when they turned to England, they were dragged back to the camps." In Alter, *Chris Marker*, p.47-48.
[58] Croombs, '"La Jetée" in historical time', p.31.
[59] Carpenter, 'Shifting the Nuclear Imaginary', p.9.
[60] As highlighted in Chapter III, Bedjaoui refers to the apathy of the Parisians who are "more interested in enjoying this merry month of May, than of speaking about a war being prolonged by the actions of the OAS." In Bedjaoui, *Cinema and the Algerian War of Independence*, p.113-114.
[61] In relation to the notion of indifference in *Night and Fog*, for example, Rebecca M. Pauly remarks: "In *Nuit et Brouillard* Resnais expressed his frustration and sombre disbelief through the contrasts between the captured footage and stills, the album of Auschwitz documenting Nazi horrors and prisoners' agony, and the passivity and indifference of the empty camp ten years later." Rebecca M. Pauly, 'From Shoah to

In synthesis, these films address the imminent nuclear threat in the Cold War period, while also tracing an *ante litteram* shift in the politics of representation of the atomic bomb from the nuclear sublime to the nuclear uncanny, by prophetically pre-emptying and signalling a future characterised by the pervasive, and yet imperceptible diffusion of radiation. As argued in Chapter III, in *La Jetée* a singular underground space conjures up the Nazi experiments on prisoners, Algerian accounts of torture, and a variety of nuclear experiments. However, the correlations between the Holocaust, World War II and the atomic bombing of Hiroshima in the film as well as in *Hiroshima Mon Amour* exclude the materiality of radioactivity from the discourse. Therefore, the limits to this kind of association is hindered by the material continuity between a nuclear trauma and radioactivity. Using a non-radioactive trauma to remember a nuclear trauma removes the radioactive isotopes from the construction of memory. As Samia Henni points out, radioactivity is a significant element determining the status of continuity underlying the colonial relationship between France and Algeria even after the declaration of Independence of the latter.[62] Despite this, through this association Marker sheds light on the repetition of systemic torture as a means used by a variety of regimes to keep control over people and dehumanise them. While not addressing the long-term effects of radioactivity, he focuses, instead, on the way structures of power, exploitation and subjugation of human beings are repeated across time and space.

These palimpsestic evocations are not just concerned with the representation of the invisible threat of the Cold War, but they also address the first symptoms of indifference surrounding the perception of the nuclear threat in the post-war period, as a reaction to the future oversaturation of information about nuclear issues which characterises the last decades of the twenty-first century. In *Hiroshima Mon Amour*, Elle voices the "fear of indifference" following the end of World War II, when prompted by Lui to describe how Hiroshima was perceived in France.[63] As Gabrielle Schwab notices:

> It is virtually impossible not to become numb to the now almost daily news of nuclear war talk or the frequent reports about irresolvable problems of nuclear reactors and the storage of nuclear waste. To the extent that the nuclear provokes a genuine trauma, the formation of defences is inevitable.[64]

Holocaust: Image and Ideology in Alain Resnais's Nuit et Brouillard and Hiroshima Mon Amour', French Cultural Studies, 3.9 (1992), 253–61 (p.256) <doi: 10.1177/095715589200300903>.

[62] STIR, *Samia Henni on the Enduring Remnants of Nuclear Colonialism*, min. [00:00:57-00:01:22].

[63] Duras, *Hiroshima Mon Amour*, p.23.

[64] Schwab, 'Transgenerational Nuclear Trauma', p.439.

Insofar as in this thesis the nuclear uncanny was also framed as anticipation, the films *Hiroshima Mon Amour* and *La Jetée* echo this tendency too, as they anticipate some of the themes linked to the invisibility of the nuclear threat. To re-evoke what Hogg asserts about a change in the way the nuclear was represented in audio-visual productions, and its progressive invisibility in the period following 1995, as referenced in the introduction,[65] these two films anticipate the threat of invisibility expressing the fear that nuclear issues were already disappearing from public consciousness in the period following World War II.

Furthermore, these diverse ideas and histories coexisting within the same fictional and non-fictional space of each text were read through the lens of the palimpsest. As mentioned throughout this thesis, the notions of the palimpsest and of palimpsestic memory were drawn from the theories developed by Sarah Dillon (palimpsest) and Max Silverman (palimpsestic memory). I employed these notions as a methodological tool to explore the films and the series in this thesis, insofar as they resonated with the structures utilised by the majority of the texts. Max Silverman had already applied his notion of palimpsestic memory to *La Jetée*, however, I recontextualised the film within the nuclear age, adding the nuclear theme as yet another layer onto which Marker constructs its complex aesthetic and narrative. Moreover, from the close reading of these texts, other concepts have emerged, which I put into communication with the idea of the palimpsest. For example, forgetting is a recurrent thematic element which unites these texts also via the image of the ashes and of dust. In order to reveal the meaning behind the use of these visual symbols, I connected them with Derrida's notion of cinders as traces of non-memory, which, alongside the theory of the palimpsest, generate a productive tension, for which memory and non-memory are employed by these audio-visual productions to map out nuclear legacies across time and space. I used the palimpsest as a tool to disentangle and discern the various themes intersecting within each text, insofar as they created multiple layers of meaning, of past, present and future histories mixing together, particularly on an aesthetic level. The use of the palimpsest, therefore, was aimed at contrasting the fundamental invisibility of the nuclear theme as it intersected with other topics and histories, as well as aiding me in the process of resurfacing concealed histories, together with a hidden nuclear trace.

On a material level, the notion of the palimpsest also enabled me to create connections between one text and another, in spite of the spatial and temporal stretch separating them. In this sense, I

[65] Hogg, *British Nuclear Culture*, p.167.

conducted a “palimpsestuous reading” of these texts which enabled me to find points in common but also differences between apparently distant texts. As Dillon points out, a palimpsestuous reading consists of an “inventive process of creating relations where there may, or should, be none.”[66] While these texts originate from a variety of specific national contexts and timeframes, and they respond to as many national and transnational contemporaneous, past and future issues, they relate to one another through a common genealogical (or palimpsestuous) nuclear tree. Each text identifies different dysfunctional traits of nuclear technologies, exploring them in conjunction with other issues, as well as opposing the invisibility of the nuclear-military-industrial complex, and constructing a net of aesthetic and discursive practices of resistance against its disappearance from the public debate. All these audio-visual productions challenge this invisibility building on a non-linear structure, which is variously achieved through notions of memory, trauma and time. By the same token, bringing these texts together, it was possible to map out an evolution of aesthetics linked to the depiction of nuclear technologies, which is conveyed through a continuous yet changing narrative connecting *La Jetée* and *Hiroshima Mon Amour* to *Dark*, *Into Eternity*, and *Burial*, despite their obvious differences in genre, as I will explore below.

As argued throughout this thesis, in fact, while *Hiroshima Mon Amour* and *La Jetée* focus specifically on the invention of the atomic bomb and its various employments, both fictional and real – namely the bombing of Hiroshima, a potential future nuclear war, and nuclear experiments – the more recent audio-visual productions reckon with the trauma of the Chernobyl nuclear energy accident through a variety of viewpoints, as well as the multiple and complex ethical implications of nuclear waste. The military and civilian use of nuclear technologies are not framed as two separate, distinct entities because these audio-visual productions reflect on the accumulated effects of their employment since their invention up to the present day. Using *Into Eternity* as point of reference, Peter C Van Wyck observes:

> Michael Madsen, director of *Into Eternity* - a documentary about the Finnish deep geological repository, Onkalo - suggested that the nuclear practices of the past 70 years amount to the commission of “a crime against humanity in the future.” Although he’s not the first to suggest this - a similar claim is being made by the Algerians - it is nevertheless a striking claim. The implications here is that the toxicity of the present has no ethical horizon beyond which the future could not hold us responsible, could not call us to account; its juridical status in lockstep with its material longevity.[67]

[66] Dillon, ‘Reinscribing De Quincey's Palimpsest’.
[67] Peter C Van Wyck, ‘Nuclear Anthropocene’, in *The Nuclear Culture Source Book* ed. by Ele Carpenter, (London: Black Dog Publishing, 2016), p.28.

The perception and depiction of nuclear technologies and their visible and invisible effects on human and non-human animals, as well as on the environment, therefore, follow a structure of continuity in which the past is not disconnected from the present and the future. These are brought together by the "material longevity" deriving from the nuclear phenomenon and, as stated in Chapter IV, by the continuity which should inform a responsible re-thinking of nuclear technologies from the perspective of the future, as *Into Eternity*, *Burial* and *Dark* do in very different ways.

The way in which nuclear technologies are brought together echoes the stratified and multi-layered structure of the palimpsest: as time goes by, the cultural memory associated with these technologies adds new layers to the nuclear palimpsest. In *Burial*, for example, Škarnulytė claims to use the camera "to reflect on different strata", which include "galaxies, astronomy, historical/cultural layers, deep time, and underwater."[68] She, therefore, employs the principles of stratigraphy to explore and outline affinities between different cultural, geological and cosmological layers, operating between and linking together the humanities with the sciences, re-interpreting and reconfiguring them via creative practices and filmmaking. Crucially, stratigraphy is a notion employed in geology to address, interpret and establish the strata and layers that compose the earth. This concept, in turn, is borrowed by archaeology. As observed by McAnany and Hodder:

> The ways that archaeologists explore stratigraphy derive from geology. The superpositioning of layers allows relative chronologies to be built, and thus the development of forms (fossil species in geology, cultural types in archaeology) to be studied. In modern archaeology, the Harris matrix - although not without its detractors - is a major strut of archaeological method. It allows contexts, units and loci to be arranged into phases and the associations of artefacts to be studied.[69]

In Chapter IV, using the expression of Dovydaityte, Škarnulytė was identified as a "future Archaeologist" who, unearthing strata of geology, history and the universe, shows the evolution of planetary movements from the perspective of the future within the present.[70] However, these reflections are also directed to outline specifically the different strata forming the nuclear heritage, as a testimony to or, as Carpenter would suggest, an archive of nuclear legacies.

[68] NY Baltic Film Festival, *Burial Film Talk | NY Baltic FF 2022*.
[69] Patricia A. McAnany, and Ian Hodder, 'Thinking About Archaeological Excavation in Reflexive Terms', *Archaeological Dialogues*, 16.1 (2009), 41–49 (p.2) <DOI: 10.1017/S1380203809002797>.
[70] Dovydaitytė, '(Re)Imagining the Nuclear in Lithuania Following the Shutdown of the Ignalina Nuclear Power Plant', p.430.

As pointed out in Chapter IV, in *Burial* the nuclear-industrial-military-complex is deconstructed and analysed in its complexity, through an aesthetic structure which follows a non-linear narrative through which Škarnulytė links the different aspects of the nuclear history of Lithuania in connection with the former Soviet-Union, and in which the contemporary issue of the disposal of nuclear waste is overshadowed by the spectre of Soviet colonialism. In detailing conspicuously the dismantling of the Ignalina Nuclear Power Plant, *Burial* explicitly draws on the documentary *Laikas Neskyla į Atomus* directed by Lithuanian director Gediminas Skvarnavičius, quoted by Škarnulytė, and recalled as a ghostly intertextual trace which haunts a model duplicate of Ignalina via an audio montage of disembodied voices extrapolated from the original document. To a certain extent, as noticed for *Hiroshima Mon Amour* and *Dark*, this documentary is a source informing *Burial*'s convoluted set of references and aesthetics, through which Škarnulytė reformulates the identity of her work. Contrary to *Laikas Neskyla į Atomus*, however, *Burial* cannot be reduced to a documentary whose aim is to trace the history of energy in Lithuania. In *Burial*, in fact, images of the Ignalina Nuclear Power Plant intersect with footage of a series of explosions of nuclear testing, the uranium mine of Kowary in Poland, the Plokštinė missile base in Lithuania, as well as the deep geological repository in process of being built in France to house nuclear waste. In this way, Škarnulytė builds a sort of visual archive in which a variety of nuclear histories are brought together and read through notions of deep time, within a palimpsest in which the burying of the nuclear waste is edited alongside the processes and the archaeological sites of human inhumation. Here, memory and non-memory conflate against what Carpenter calls "the deep time of the radioactive half-life of things" and of planetary ceaselessly evolving processes.[71]

Dark, *Burial* and *Into Eternity*: Responsibility and the Future

On the surface, *Burial* and *Dark* do not present many traits in common: *Burial*, is an artistic documentation of strata of nuclear heritage and legacy intersecting with planetary and cultural evocations, through which human and geological processes are brought together within a complex nuclear palimpsest; *Dark*, on the other hand, is a post-modern Sci-Fi series, descending from a long tradition of mystery serial dramas, from *Twin Peaks* to *Stranger Things*, as well as being inspired by the experimental cinema of Chris Marker (and *La Jetée* in particular). *Dark* narrates the story of at least one apocalypse against a backdrop dominated by a nuclear power plant and focuses on the long and laborious search for the truth of a group of teenagers which, eventually, leads to the salvation of their city from absolute destruction. However, both

[71] Ele Carpenter, 'Shifting the Nuclear Imaginary', p.129.

productions draw on the poetics of cinders in order to reconfigure the "ethical horizon beyond which the future could not hold us responsible, could not call us to account" of which Van Wyck talks about in reference to *Into Eternity*.[72] Looking at nuclear technologies from the privileged perspective of the future – as only fiction and poetry can do – they shift this "ethical horizon" into the present, and reposition responsibility into human hands, creating a momentum in which nuclear issues can and should be discussed. This discussion takes a different shape in *Burial* and *Dark*. *Burial* is a jigsaw of evocations and ideas which draws on the theme of burial behind the dismantling of a nuclear power plant, and in this sense can be seen as a poetic documentation of the process of decommissioning (following on from the creative documentary tradition of Resnais and Marker). *Dark* also belongs to the category of "puzzle films", which, as Silos Ribas observes, invites the audiences to value "the strategies used to manipulate the narrative."[73] However, the universe created by *Dark* is entirely fictional, including the locations in which the series is filmed. As Friese, the author of the series, claims: "We picked various different places: a house here, a house there. But all the locations are shot around Berlin."[74] Through this positioning *Dark* avoids the confusion generated by a series like *Chernobyl*, which, as Kate Brown observes, has been labelled "fictionalised drama" and "historical nonfiction" at once.[75] In spite of recounting a completely fictional story within a fictionalised universe, however, *Dark* evokes the history of resistance and protest against nuclear technologies characterising German society up to recent times.

As suggested in the introduction to this thesis, *Dark* operates a shift in perspective. By envisioning the possibility of an apocalypse which has already happened elsewhere in a fictional German town,[76] the series anticipates the moment in which destruction will affect the local population of a western country and speculates on ways to prevent catastrophe from repeating itself *ad infinitum*. Talking about the fact that the apocalypse is not a figment of the imagination, but an undeniable

[72] Peter C Van Wyck, 'Nuclear Anthropocene', p.28.
[73] Silos Ribas, 'Looking into the Abyss', p.263.
[74] Fragments of an interview with the writer and director of *Dark* appeared in the following article in *Radio Times*: Claire Webb, 'Where is Netflix's new series Dark filmed? Is Winden a real place?', *RadioTimes*, 1 December 2017 <https://www.radiotimes.com/tv/drama/dark-netflix-location-guide-filming/> [Accessed 28 February 2024>
[75] Kate Brown, 'Afterword on Chernobyl (2019): A Soviet Propaganda Win Delivered 33 Years Late', in Energy Culture: Work, Power, and Waste in Russia and the Soviet Union, ed. by Jillian Porter, Maya Vinokour (Springer International Publishing, 2023) pp. 297-303 (pp. 297-298) <DOI: 10.1007/978-3-031-14320-5_13>.
[76] As discussed by DeLoughrey and argued in the introduction to this thesis. In DeLoughrey, *Allegories of the Anthropocene*, p.7.

reality to be found in the past and the present, DeLoughrey quotes Heather Davis and Zoe Todd as the maintain that:

> This seismic shockwave has rolled through and across space and time and is now hitting those nations, legal systems, and structures that brought about the rending and disruption of lifeways and life-worlds in the first place. The Anthropocene – or at least all of the anxiety produced around these realities for those in Euro-Western contexts – is really the arrival of the reverberations of that seismic shockwave into the nations who introduced colonial, capitalist processes across the globe in the last half-millennium in the first place.[77]

Therefore, just like the Anthropocene results from those "colonial, capitalist processes across the globe," nuclear technologies are a necessary part and parcel of this systemic modus operandi, contributing to shaping this new geological era. From this perspective, *Dark* records fictionally the "reverberations of that seismic shockwave" using, therefore, the notion of the nuclear uncanny to emphasise the fact that the apocalypse is not something to not "ultimate futurity," but the repetition of an original trauma to be experienced belatedly. In this context, the notion of the nuclear uncanny articulated by Paul K. Saint-Amour and through which *Dark* was explored in Chapter I signals the sense of anticipation for an imminent catastrophe. Saint-Amour develops this notion from the Japanese word *bukimi*, which can be translated as the "weird, ghastly, or unearthly."[78] It was used to qualify an feeling perceived by the people of Hiroshima before the nuclear attack, which was described as an "eerie suspension" between salvation and total destruction, and which "spoke to the suspended question of whether Hiroshima and its inhabitants had been singled out for preservation or for annihilation."[79]

Recontextualising the notion of *bukimi* within a contemporary context informed by ecological crisis of which nuclear experiments and disasters are partly responsible, this sense of anticipation associated with the nuclear uncanny indicates the repetition of a trauma that has already occurred and, therefore, can be experienced as belated. As DeLoughrey further observes: "Some may rightly question whether the claim of Anthropocene discourse that we have an entirely new ecological crisis is, in fact, belated."[80] It is in this sense that *Dark* articulates questions of responsibility linked to the development and persistence of the nuclear-military-industrial

[77] Heather Davis and Zoe Todd, 'On the Importance of a Date, or Decolonizing the Anthropocene', *ACME an International e-Journal for Critical Geographies*, 16.4 (2017), 761–80 (p.774) <https://acme-journal.org/index.php/acme/issue/view/106> [accessed 6 July 2024].
[78] Saint-Amour, 'Bombing and the Symptom', p.60
[79] Ibid, p.60.
[80] DeLoughrey, *Allegories of the Anthropocene*, p.7.

complex, also speculating on whether technology could be unlearned and whether this would lead to change and rethink the present and future of humanity. By asking these questions, *Dark* focuses the attention on localised, specific responsibilities in creating fertile conditions for catastrophe to take place, while also considering the transgenerational effects of current decisions and employment of nuclear technologies. I expressed these elements through the concept of "historical stuckness" conceptualised by Bartori in Chapter I. In *Dark* "historical stuckness" confronts the limitations and problematic elements encountered by a community which establishes an a-critical relationship with the past through the repression of their legacy of violence and horror. As pointed out in Chapter I, in *Dark* this sense of stuckness is signalled by the cyclical repetition of the apocalypse and the sense of anticipation derived from the nuclear uncanny, which affects the inhabitants of Winden transgenerationally. *Dark*, ultimately, creates an alternative to this idea of stuckness, the series emphasises the idea that the decisions taken in the past have consequences in the future, and looking at the future through the perspective of the past (the idea that the apocalypse has already happened elsewhere) can offer valuable insights about the collective future of humanity.

As argued in Chapter I and Chapter II, by evoking other forms of "apocalypse" as they occurred in the past, such as the atomic bombing of Hiroshima and Nagasaki and the nuclear power plant accident in Chernobyl, *Dark* sheds light on the legacy of death and destruction associated with the development of nuclear technologies. In doing so, not only does the show engage in a radical critique of the nuclear-military-industrial complex, but it also speculates on the idea of unlearning and uninventing deadly inventions, such as those leading to the creation of the nuclear bomb and nuclear power plants. As such, I used *Dark* and *Burial* to open and close this thesis, following the ouroboros structure of the loop by which they are haunted throughout the narratives, since they both build on national aesthetics and values to represent a story which, to some degree, offer an alternative perspective of nuclear technologies, while also transferring them into a transnational context. As argued in Chapter I and Chapter IV, both audio-visual productions use the image of cinders to articulate a conception of non-memory which, by spotting light on the world through the viewpoint of the future and the past simultaneously, they show the perennially state of changing to which all material things are destined. By the same token, they indicate diverse temporal perspectives (the non-linear time-travel temporality of fiction in *Dark*, and the deep time of the planet in *Burial*) within which radiological decay and the invisible threat of radioactivity are brought back to the condition of human responsibility. *Into Eternity* also voices these concerns, focusing on the future of the deep geological repository in Finland.

Into Eternity poses a variety of questions about the future: by emphasising the long term transgenerational implications of building a deep geological repository to house nuclear waste for human and non-human entities, Madsen, on the one hand, creates an imaginary dialogue with future individuals, raising a series of questions about how likely or unlikely they would be to dig into the hidden nuclear waste; through a fable of sorts, he tries to warn these future people, inviting them to stay away from Onkalo; he also addresses visually how non-humans will pay the price of current decisions concerning nuclear waste and technology. Applying the words of Saint-Amour to these three audio-visual materials, the latter keep open the question of whether humanity will be "singled out for preservation or for annihilation,"[81] depending on how the terms of the nuclear issue are brought back into public consciousness and are not reduced to cinders.

As delineated in this conclusion, the works included in this thesis address both the allusiveness and transnationality of nuclear issues and technologies creating correspondences with other histories and legacies of violence, while also historically and culturally contextualising all these themes. The idea of a palimpsestuous reading of these texts enables this superimposition of diverse (hi)stories without depriving them of their specificity. Returning to Dillon's explanation of palimpsestuous reading, this indicates the "inventive process of creating relations where there may, or should, be none."[82] Bringing this concept together with that of palimpsestic memory and considering the role that cultural memory and its transmission plays in this thesis, this idea of the palimpsest also allows "a different politics of transversal, transnational and transcultural solidarities."[83] This aspect was reinforced by the focus given to the nuclear theme within this thesis. As Carpenter points out, artistic responses aimed at problematising nuclear technologies should consider them and their effects as "the problem of a global industry," rather than through a "localised" lens, insofar as, moreover, this is not an issue which can be contained within national borders.[84] As Carpenter further observes:

> William Morris held the view that war is the inevitable outcome of capitalism; and if we apply his logic to the nuclear, we can map the ways in which nuclear modernity leads to a slow radiological conflict, one that knows no boundaries or borders, and has shifted from the Cold War rubric of "Mutually Assured Destruction" to that of a singularly assured destruction.[85]

[81] Saint-Amour, 'Bombing and the Symptom', p.60.
[82] Dillon, 'Reinscribing De Quincey's Palimpsest', p.254.
[83] Silverman, *Palimpsestic Memory*, p.21.
[84] Carpenter, 'Shifting the Nuclear Imaginary', p.125.
[85] Carpenter, *The Nuclear Culture Source Book*, p.9.

Following this lead, artistic and creative responses to nuclear technologies have to allow a certain degree of transferability to other cultures and realities, insofar as the message they are delivering does not only concern a single circumscribed reality. By the same token, when it comes to specific historical issues, it is crucial to balance these narratives in order to view "the local and global not as binary opposites but as part of an ambivalent space of 'relationality' between sameness and difference," as Silverman observes.[86] He also points out that mediation is embedded into every fictional output aimed at channelling experience through the work of memory, as he maintains: "Cultural memory is, by its very nature, a mediated and imagined form, whether it springs from direct or indirect experience."[87]

In this thesis, the processes underlying cultural memory and its relation with nuclear technologies assumed a mediated, transnational form, while also operating a reflection on the role that this mediation of experience and testimony plays within filmmaking, as observed in relation to *Hiroshima Mon Amour* and *La Jetée*. This focus on experience has been analysed from the perspective of the future, while also returning to the notion of human responsibility in determining the future of humanity, as has been observed through the exploration of *Dark*, *Into Eternity* and *Burial*. Ultimately, the connection between these diverse texts offered a composite and continuous palimpsest in which nuclear cultural memory intersected with notions of responsibility and non-memory, as well as articulating forms of resistance which offered alternative ideas to reconfigure culturally and aesthetically the perception and reception of nuclear technologies in the present, past and future.

In this conclusion, I framed a changing but continuous aesthetic discourse related to nuclear technologies in terms of a palimpsest. As in a palimpsest, the accumulated effects of nuclear bombings, experiments and the consequences connected to the production of nuclear energy constitute different intersecting layers. This aspect allowed me to delineate an evolution of the nuclear discourse which, in the texts analysed, implicated a shift of point of view from a human-centric post-war discourse of annihilation and suffering to the tracing of planetary changes and deep time. In Chapter IV, I argued that in *Burial* humanity, despite being materially absent, is perceived through nuclear and non-nuclear archaeologies which, populating and modifying the surface and depths of the earth, become a marker of the impact of human life affecting the

[86] Silverman, *Palimpsestic Memory*, p.176.
[87] Ibid., p.176.

planetary make-up. As I further observed in this conclusion, the framing of human action as a force able to modify the chemical composition of the planet, its climate and ecosystems belongs to the idea of the new geological era of the Anthropocene.

The Future of The Nuclear Anthropocene: The Nuclear Heritage Sites in *Burial*

In this thesis, I addressed the different states through which nuclear technologies find their material expressions, namely the atomic bomb, nuclear power plants and deep geological repositories. Arguably, these diverse products of technology are linked to multiple ideas of memory as they connect to the way it is preserved and transmitted in the film. In Chapter II and Chapter III, for example, I discussed the role of the Hiroshima Peace Museum and Resnais's critique of this institution to create knowledge and understanding of the atomic bombing as an event. I also returned to the topic in Chapter IV, through Ran Zwigenberg's critique of Hiroshima's politics of memorialisation. In *Hiroshima: The Origins of Global Memory Culture*, Zwigenberg addresses the complex legacy of memory and forgetting articulated in the city after the atomic bombing and argues that the romanticised idea of reconstruction associated with Hiroshima is juxtaposed with the notion of a successfully recovered city, whereby "In both Japanese and American narratives, the destruction brought about a better city and ushered in a bright modern future." Zwigenberg observes that within the memorialised reconstruction of the bombing of the city, the nuclear bomb is framed as coming from nowhere and "Hiroshima is presented like the scene of a natural disaster, separated from any historical chain of events." This tension between memory and amnesia linked to the memorialisation of Hiroshima therefore, on the one hand, is built on the thesis according to which the reconstruction of the city's identity is completely detached from its colonial past, as stated by Yoneyama in Chapter II. On the other hand, the destruction of Hiroshima is disenfranchised from any responsibility, as, from the information presented in the Hiroshima Peace Memorial Museum, it is not clear who dropped the bomb and why. Significantly, in *Into Eternity* Madsen does not include the Onkalo Visitor Centre, but he gathers the opinions and reflections of experts on the facility. This also allows Madsen, as observed by, to engage in a "philosophical speculation about the ethics of pollution, human extinction, communication between societies across millennia, and civilization's grandest aspirations."[88]

[88] Vincent Ialenti, *Deep Time Reckoning*, p.22.

With this in mind, Chapter IV was dedicated to discussing how *Burial* and *Into Eternity* invite the viewer to imagine and speculate on a future without humanity, broadening the topic of nuclear technologies to involve nonhuman protagonists, describing and observing the complex network created by the associations between diverse entities.[89] *Burial* in particular challenges conceptions of human exceptionalism and sheds light on natural and (un)natural landscapes and reserves, nonhuman animals and the archaeological remains of the nuclear past, which enable a complex critique of the nuclear Anthropocene and the potential destruction or preservation of life on earth post-humanity. The two films create new forms of solidarity with the future in two different ways. *Into Eternity*, by tackling the potentially harmful legacy of nuclear waste, reflects on the transgenerational responsibility of present humanity in warning future people of the dangers of Onkalo. As suggested above in this conclusion, Madsen, therefore, engages in a philosophical reflection on how the interaction between memory and forgetting via the medium of storytelling can keep future generations away from the facility.

I argued that, despite some conceptual connections with *Into Eternity*, *Burial* takes a step further both discursively and aesthetically. The film addresses the presence of nuclear archaeologies as a visible trace of the nuclear Anthropocene, and their significant contribution to modifying the make-up of the earth. In Chapter IV, I pointed out that the film uses the lens of deep time to argue how these tracers of the nuclear past will outlive humanity. Škarnulytė navigates a complex set of associations, which bring together ancient necropolises with enduring radioactive isotopes. As much as the memory of the extinct Etruscan civilisation is still preserved through the persistence of the complex system of tombs in Cerveteri, the material, visible remains of the nuclear Anthropocene will allow future generations and civilizations to recover the nuclear history.

[89] *Burial* evokes a new societal structure similar to Latour's Actor-Network Theory (ANT). According to ANT, non-human entities, both technological, architectural and natural, are considered as possessing agency, therefore contributing to transformation occurring within a system or network. As Latour states, ANT "does not limit itself to human individual actors, but extends the word actor – or actant – to *non-human, non-individual* entities." In Bruno Latour, 'On Actor-Network Theory: A Few Clarifications', *Soziale Welt*, 47.4 (1996), 369–81 (p.369) < https://www.jstor.org/stable/40878163> [accessed 7 July 2024]. Latour also believes that in ANT, connections between entities can occur beyond axioms of proximity and distance, via "a tracing of associations" which is what, arguably, Škarnulytė does in her film when she draws associations between stories and places apparently distant in time and space. On proximity and distance, see Latour, 'On Actor-Network Theory', p. 371. On the functioning of a "tracing of associations, see, for example: Bruno Latour, and American Council of Learned Societies, Reassembling the Social: *An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005) (p.6) Ebook Central ebook.

Ultimately, Škarnulytė offers an alternative idea on how to use the existent traces of the Nuclear Anthropocene as future markers of nuclear sites and spaces of knowledge creation. This sits within Eglė Rindzevičiūtė's Nuclear Cultural Heritage project, the final report of which states that nuclear heritage is "a form of constructing society."[90] This report maintains the centrality of nuclear heritage as "key for the preservation of the nuclear past and safeguarding its future."[91] It suggests that:

> Collection of nuclear cultural heritage, in its traditional sense, entails selecting distinctive or typical objects representing the development of the nuclear industry, listing buildings and sites as heritage objects and establishing museums displaying the histories of nuclear communities. However, the practice of collecting is far from straightforward in the nuclear sector which, since the Second World War, has been embedded in a regime of secrecy. Collecting nuclear cultural heritage, therefore, is limited in many ways, where access of curators and the public is restrained in the name of technological safety, national security and corporate economy.[92]

Škarnulytė seems to follow this lead, as she navigates a variety of sites transformed into museums and containing exhibits, such as the Korway uranium mine in Poland, which is punctuating by exhibitions or the Plokštinė missile base in Lithuania within the Zemaitija National Park, now open to tourists, as discussed in Chapter IV.[93] Škarnulytė, also, indirectly links the topic of nuclear heritage with the decommissioning of the Ignalina Nuclear Power Plant, which sits in stark contrast with the work of conservation rendering former nuclear sites accessible to the public. In the report on nuclear heritage, Rindzevičiūtė also tackles the issue of nuclear decommissioning as hindering the full appreciation of the nuclear history in the future. She points out:

> Nuclear decommissioning has significant implications for the cultural heritage sector, because nuclear industry establishments routinely make decisions about the preservation value of data, documents, samples, devices, objects, buildings and landscapes by deciding what will be preserved and what will be destroyed, auctioned or recycled. These decisions, taken by the nuclear industry, create path dependencies that will impact the future understanding of the history of 20th century nuclear power. Nuclear decommissioning is primarily based on the values of efficiency and safety and creating a new type of science and technology for the management of radioactive materials in the extreme long term. While these tasks are core for the industry, there is a pressing need to

[90] *Nuclear Heritage Final Report*, p.12.
[91] Ibid, p.12.
[92] Eglė Rindzevičiūtė, *Nuclear Cultural Heritage: From Knowledge to Practice*, (Kingston upon Thames: Kingston University London, 2022), p.12 <https://nuclearculturalheritage.wordpress.com/final-report-nuclear-cultural-heritage-2022/> [accessed 6 July 2024].
[93] John Schofield, Wayne Cocroft, and Marina Dobronovskaya, 'Cold War: a Transnational Approach to a Global Heritage', p.41.

> consider the creation of cultural values as part of the decommissioning process.[94]

In the introduction, I stated that one of the aims of this thesis was to delineate an evolution of aesthetics through a close reading of diverse films, series and a documentary. The nuclear heritage angle tackled by Škarnulytė in *Burial* is a crucial aspect of the evolving nature of nuclear representation and discourse. In fact, not only does the film address the changing discourse associated with nuclear technologies by creating connections between the diverse aspects of the nuclear-military-industrial complex, but it contributes to the redefinition of the nuclear Anthropocene. By addressing alternative solutions aimed at preserving nuclear memory through cultural heritage, Škarnulytė might be suggesting that, considering the deep time implications of some sites, these will be able to be an integral part of the construction of awareness in relation to the nuclear history, rather than just being considered as elements to further hide and locate out of sight, since, as Rindzevičiūtė further states: "While nuclear decommissioning entails disassembling reactors, taking down buildings, cleaning up landscapes, it is also about creating values through documentation, archiving and selective preservation of nuclear material culture."[95]

The evolution of aesthetics, therefore, addresses the transition from an anthropocentric perspective – as the one central to *Hiroshima Mon Amour* and *La Jetée* – to an almost complete absence of human beings, their perspectives and representations, as the one identified in *Burial*. This movement also indicates a transition from the effects of the atomic bomb on human beings and population, to a more specific focus on the characterisation and critique of the nuclear Anthropocene, while also entailing concrete solutions to the issue of maintaining historical memory through artistic and heritage practices.

The topic of nuclear heritage in which the film engages intersects with the argument on (un)natural reserves I addressed in Chapter IV. Here, I reflected on the current discourse around natural reserves created as a result of nuclear contamination, such as those present in the exclusion zone in Chernobyl or in Fukushima. Drawing on Nixon, I argued that these post-apocalyptic ecosystems reappropriated by nature are used as a way not to investigate in depth the causes behind nuclear accidents and experiments or confronting the dangers underlying nuclear technologies. In general, these contaminated and therefore uninhabitable landscapes include

[94] Rindzevičiūtė, *Nuclear Cultural Heritage*, pp.12-13.
[95] Rindzevičiūtė, *Nuclear Cultural Heritage*, p. 13.

national parks, military areas, contaminated zones and Indigenous reservations, but only *Burial* among the films selected deals directly with some of these sites. As observed above in this introduction, the last sequence of the film juxtaposes the figure of a python shedding its skin with images of bison located in the Paddock of Pašiliai in Lithuania.[96] Despite the fact that the near extinction of bison and their recovery in this reserve are not strictly related to radioactivity, Skarnulyte connects this image with the nuclear discourse taking place elsewhere in the film. The juxtaposition of the snake and the bison park addresses the looming presence of the threat of radioactivity and its contribution to the extinction of species of animals. As argued in this conclusion, the film's conclusion resists the rhetoric engendered by the nuclear sublime as the framing of the nuclear explosion as pure visuality. By rendering radioactivity perceptible through its visually haptic representation, the python makes the invisible (radioactivity) sensible.

Furthermore, observed in Chapter IV and above in this conclusion, Skarnulyte shows images of the Plokštinė missile base, a Soviet-era nuclear missile base in Lithuania now turned into a Cold War Museum and located in the Samogitia National Park. This is, in fact, a previous military area repurposed as a national park in which, however, the original military base has been kept and transformed into a museum and is part of the local nuclear heritage. However, these films fail to deal with other contaminated zones or to address the deadly colonial legacies of nuclear experiments. Aside from *La Jetée*, which, as I argued in Chapter III, responds to the atomic experiments in the Algerian desert targeting the perspective of the perpetrators during the colonial occupation of Algeria through a composite set of interlacing references, the other films focus on other aspects of nuclear legacies, bracketing away almost completely the experience of the colonial legacy of nuclear experiments from the equation. However, *Burial* brings together images and evocations belonging to a Western context, emphasising the responsibility and implications attached to the employment of nuclear technologies, creating correspondences on how the nuclear heritage linked to the ex-Soviet Union continues in other Western countries.

Relationship of Primary Materials with the Decolonial

Shibata observes that Resnais, alongside Marker, viewed several fiction and non-fiction Japanese films on the atomic destruction of Hiroshima over a period of six months while undertaking research for their documentary.[97] Additionally, Emma Wilson maintains that "there were also

[96] Panevėžys now, 'Bison Paddock of Pašiliai', Panevėžys now, <https://www.panevezysnow.lt/entry-193/places-to-visit-in-the-region/pasiliai-auroch-paddock/> [accessed 6 July 2024].

[97] Shibata, *Producing Hiroshima and Nagasaki*, p.8.

already around fifteen Japanese documentaries on Hiroshima" at the time Argos Film commissioned the director to make a film about the nuclear bombing of Hiroshima, and which later produced *Hiroshima Mon Amour*.[98] Resnais's conclusion was that he could not add any significant contribution to what Japanese directors had already expressed through their work. He invited Argos Film to purchase the rights of these Japanese films since, as he states: "If you want to make a film on Hiroshima, buy the rights from the Japanese; neither Marker nor I could do better."[99] Despite arguing that Resnais did not acknowledge the impact and influence of these films on the final version, nor did he address the palimpsestic relationship with these other works, Shibata points out that: "Here Resnais not only acknowledged the prior Japanese films but also praised their accomplishments."[100]

The film, therefore, results from the tension between multiple ethical meditations. Resnais considers his positionality within the content and message of a film about Hiroshima, by choosing not to speak on behalf of the inhabitants affected by the bomb as well as representing their suffering from an external, appropriative position. He thus reframes and challenges the hierarchy of power attached to representation; by wondering why he should make a film about Hiroshima when Japanese people can address these issues and speak for themselves through their own filmic productions and artistic outputs. In doing so, the cold and observational gap between the camera and the *hibakusha* via Elle's mediated account of these images reveals a critique of the expectation to understand the suffering of the *other* from a safe distance. In reality, Resnais is criticising ethnographic representation and his avoidance of making a documentary a film about the people of Hiroshima after the bombing resists the colonial basis of these strategies and techniques. As Marks observes:

> Ethnographic representations of one culture for the consumption of another tend to reduce it to what is visible, and hence readily consumable. [...] Visual anthropology has been critiqued for forcing the cultures it studies into a regime of the visual, interpreting events in terms of visible evidence, ignoring nonvisual experience, and in general ''colonising'' the studied cultures' sensory orders.[101]

This is why, as Marks further remarks and as suggested above in this conclusion, Resnais uses "both poetic and aggressive strategies to compel the viewer to consider the destructive effects of

[98] Wilson, *Emma Wilson*, p.48.
[99] Shibata, *Producing Hiroshima and Nagasaki*, p.8.
[100] Ibid., p.8.
[101] Marks, *The Skin of the Film*, p.230.

believing that one can know another culture or another time through visual information alone."[102] In this way, the scientific observational distance between subjects and camera, as well as between the bomb and the viewer (either Elle or the spectator of the film) is offset by the incommensurable proximity enabled by the visually haptic images in the film.

Despite these initial considerations, Resnais inserts snippets of Japanese films as disembodied footage in his own work, without a fair acknowledgement of their origin and *de facto* modifying, if not manipulating, their original message, context and narrative. The film, therefore, employs sections and extracts from other source material without a fair acknowledgment, while also decontextualising them from their frame of reference. By inserting extracts from these films, Resnais is responsible for a double betrayal as suggested in the introduction to this thesis: on the one hand, he betrays the work of Japanese directors, whose footage is used without being recognised or specifically addressed, while also modifying the meaning which the authorial wanted to convey through their recontextualization. As argued in Chapter II, Resnais does this by editing some extracts from the original Japanese films alongside Elle's speech and her insights on what she sees in Hiroshima. The second betrayal which the film perpetuates is related to the victims of the atomic bomb, whose representation not only is mediated through the perspective of the French woman, but whose suffering also relies on the interpretation that Elle offers of it, and whose significance is positioned in the background. In short, by attempting a critique of the medium and the methods, Resnais ends up being guilty of what he is trying to challenge in the film.

The double betrayal, however, does not erase completely Resnais's critique of the limits of representation when it comes to expressing the suffering of the *other*, in particular within the transcultural context explored in the film. The film engages in ideas connected to nuclear universalism and anti-war humanism, as both mentioned in the introduction and Chapter II. However, when Elle conveys these principles through her initial speech, while images of Hiroshima and extracts of the Japanese films interlace, she is constantly challenged by Lui, who says: "You saw nothing in Hiroshima",[103] "You know nothing about Hiroshima."[104]

[102] Marks, *The Skin of the Film*, p.134.
[103] Duras, *Hiroshima Mon Amour*, p.12.
[104] Ibid, p.13.

In short, Resnais and Duras express the tension between the representation of the victims of the atomic bomb, the mediation of distant events and the limitations, if not banality, of a humanistic and universal rhetoric. At the same time, the juxtaposition of diverse and yet interlacing stories creates the circumstances for which these complex ideas can be put side by side, analysed, reflected upon and, ultimately, challenged and dismantled. This element can be further elucidated by returning, for one last time, to the way the nuclear index is employed in *Hiroshima Mon Amour*, as it reveals the mechanics of memory and forgetting vis-à-vis the effects of the nuclear bomb. In Chapter II, I discussed the uncanny indexical connection between the body of the German soldier, the Japanese lover and the picture of the survivor of the atomic bomb lying on his stomach. Here, I would like to further interpret this link returning to the notion of screen memory, which will further clarify this stratified and complex relationship between the sign, its referent and a further layer of meaning. In this context, rather than an equal, flattened out connection between three diverse (and unrelated, if not through the workings of individual trauma) events, this connection can be explained through the meaning that the background holds, which will allow me to go back to my argument at the beginning of this conclusion. Resnais observes that his idea was to position the bomb "in the background, as a sort of landscape."[105] In its place, he and Duras decided to focus on a "banal love story." To a certain extent, what happens in the foreground, the banal story of the two lovers and her intimate journey through Elle's past trauma, constitute a sort of screen which does not render completely invisible the history of violence taking place in Hiroshima. As Silverman observes in relation to screen memory and the ambivalent screen:

> This idea of the ambivalent screen – combining visibility and invisibility, absence and presence – allows a more complex model to emerge in which the screen is always a composite assemblage and superimposition of conscious and unconscious elements and different times and spaces. It also aligns with the mechanics of trauma – in which banal actions, objects and landscapes in the present can be visible sites for the acting out of invisible wounds from the past – and with art forms that attempt to figure the paradox of showing the invisible.[106]

Silverman believes that the notion of screen memory indicates the relationship between "an initial trauma and its substitute," whereby the past trauma is not completely erased to give way to a new one, but they are both engaged in "a doubling process by which the displaced object continues to haunt the visible site."[107]

[105] Guzmán, *Alain Resnais Interview 2*, min. [00:08:44-00:08:54].
[106] Silverman, 'Screen Memory', p.127.
[107] Silverman, *Palimpsestic Memory*, p.16.

In the context of *Hiroshima Mon Amour*, "the banal actions, objects and landscapes" are signalled by the love story central to the film: the "banal love story" indicated by Resnais and Duras,[108] the objects present in the museum, namely indexical markers pointing towards the absence of the atomic bomb, and the reconstructed metropolitan landscape of Hiroshima. These elements function as "visible sites for the acting out of invisible wounds from the past."[109] The banality of these actions and the displacement of memory acted out by Elle shift the attention to other places and times, namely Nevers and World War II. But the "invisible wounds from the past" are signalled by the background which re-emerges fragmentarily through the extracts retrieved from the Japanese films, where the *hibakusha* are placed, and discussed in terms of the impossibility to appreciate fully the suffering of those who were killed by the bomb.

Despite the constant "displacement of affect from one thing to another and one time to another in a chain of association," the invisible destruction of Hiroshima, as much as the imperceptible embodied presence of radioactivity signalled by the *hibakusha*, remains an indelible wound the film ultimately fails to confront. As argued in Chapter III, Elle comes to terms with her traumatic past through the act of storytelling, which enables her to undergo the process of healing and *remembering*. The experience of sharing one's pain applies to the way Phillips explains the Freudian process which the retrieval of repressed memories engenders, namely "as though one is evacuating the past, emptying oneself of it by remembering it."[110] Unlike Elle, in the film the *hibakusha*, whose images are stolen and reproposed in their utter, alienating and uncanny silence, are not offered the chance to retell their story and initiate the process of mourning, of forgetting. As stated in Chapter III, the wound of Hiroshima presented in *Hiroshima Mon Amour* is synthesised by an absolute silence, which is, ultimately, a reminder of the horror of the atomic bomb and a significant element of the problematic aspects implicated in the process (and limits) of representing a story which should be told by those who experienced it.

This last point allows me to reconsider the films, art film, series and documentary analysed in this thesis critically, also bringing back two works briefly encountered in the introduction and in Chapter III: namely, Samia Henni's exhibition *Performing Colonial Toxicity* and Azzedine

[108] As Duras describes it in the synopsis of the film: "Histoire banale." In Duras, *Hiroshima Mon Amour*, p.5
[109] Silverman, 'Screen Memory', p.127.
[110] Phillips, *On Flirtation*, p.54.

Meddour's documentary *Combien Je Vous Aime*. While some of these texts focus on the implications of European colonial policies in perpetuating a state of exploitation and subjugation through torture during the Algerian War and the long-term legacy of nuclear experiments, as argued in relation to *La Jetée*, others shift the focus on to national histories, connecting the nuclear past with other violent events, such as *Dark*, or linking history with the colonial legacy of the Soviet Union, such as *Burial*. These works, therefore, utilised these themes to self-reflect on their own history, pinpoint the specific responsibilities of single countries in continuing (nuclear) injustice and violence, while also opposing the erasure of the traces of these events. As argued in Chapter IV, these films can be framed as documents and testimonies to these histories, as they try to preserve them from becoming *cinder* and create an alternative to the dissolution of memory via nuclear heritage, storytelling, the possibility of rethinking technology or by denouncing crimes otherwise silenced or forgotten.

As emerged from this thesis, one of these silenced histories is represented by the nuclear experiments in the Algerian Sahara which, as Sami Henni claims, shows how colonialism continued beyond the Algerian Independence in 1962 "through this radioactivity that is circulating in the Sahara and is contaminating the human and non-human life as well as the environments." *Combien Je Vous Aime* is also a significant example of how apparently forgotten histories can re-emerge through the audio-visual archive. Meddour's documentary, in fact, retells the story of 150 anonymous Algerian prisoners used as guinea pigs for nuclear experiments by the French in the Algerian Sahara, which, as Bedjaoui observed, caused "a great stir during the distribution."[111] Combining these observations with Resnais's critical position about representing the suffering of the *other* from a Eurocentric perspective represents an opportunity to address the need of hearing and watching cultural and artistic products which come from the regions where these histories took and still take place, which also allows us to address two fundamental aspects of a more genuine decolonial approach: *who is speaking* and *whose history* has been told. It is only through the creation of a palimpsestic space in which a diversity of perspectives and interlacing (hi)stories that will allow us to re-imagine the possibility of expressing reciprocal solidarities.

The works analysed over the course of this work used a variety of filmic and artistic strategies, styles and stories to initiate a critique of the limitations, consequences and challenges which the employment of nuclear technologies hold for the future of humanity, focusing on the particular

[111] Bedjaoui, *Cinema and the Algerian War of Independence*, p.63.

historical implications of their national contexts, while also enabling a transcultural and transnational dialogue between different realities. This choice enabled a critique of and reflection on the nuclear-industrial-military-complex from a Euro-Western perspective, while spotlighting the responsibilities which humanity and the West hold in avoiding the repetition of an apocalypse which, as Elizabeth DeLoughrey observes, “has already happened” elsewhere.[112]

[112] DeLoughrey, *Allegories of the Anthropocene*, p.7.

Appendix

Dark Synopsis

Series 1

The series starts in the year 2019, with the disappearance of Mikkel Nielsen, an 11-year-old boy, in the German town of Winden, where the story takes place. This suburban community is served by a nuclear power plant where many of the residents work. Around the time of his disappearance, Mikkel and his friends were looking for a drugs stash of Erik Obdendorf, another boy from Winden who had vanished, near the entrance of a cave in the proximity of the nuclear power plant.

These disappearances become explained by, seemingly, an explosion at the nuclear power plant in 1986 which opened up a wormhole which enables the movement in time in 33-year intervals.

Mikkel's older sister Martha and older brother Magnus try to discover the truth behind his disappearance alongside Martha's boyfriend Bartosz, Magnus' girlfriend Franziska and their classmate Jonas Kahnwald, who wears a distinctive yellow raincoat. Jonas has just returned from time spent at a psychiatric institution following his father, Michael's suicide (an event which is positioned as the first scene of the series).

Aided by a mysterious figure, The Stranger, Jonas discovers a wormhole which allows the characters to travel through time. Time-travel helps him to understand Mikkel's disappearance, revealing that he also had travelled through time to 1986. Meanwhile, in present day Winden, a new figure, Noah, is illustrated to be the orchestrator of the child disappearances through the use of a crudely assembled time machine, which resembles a torture chair and is placed in a bunker.

Having travelled through time, Jonas discovers that Mikkel is, in fact, his father Michael. The Stranger reveals himself to be another time travelling figure – Jonas, 33 years into the future. The teenage version of Jonas attempts to destroy the wormhole but, in trying to do so, projects himself into a post-apocalyptic future, 33 years later, in 2052.

Series 2

Teenage Jonas remains stuck in the future for a year but eventually finds a way to use the wormhole once more and travels back in time to 1921. There, he learns that an old man called Adam has been the architect of the events of the story thus far. Adam is the head of a secret time

travelling society called Sic Mundus, which predicts the apocalypse will happen on June 27th, 2020. Jonas, who has witnessed the fall out of this event in 2052, knows this prediction to be true.

Adam is revealed to be another older version of Jonas. Jonas tries to put an end to the cycle of events by attempting to prevent his father's suicide. He fails, however, and during this moment Adam travels through time to kill Martha who was helping Jonas. As soon as Martha dies, another version of her appears from an alternative reality. She beckons Jonas to join her in her reality via a time-travelling device. The series concludes with the apocalypse happening.

Series 3

In series 3, *Dark* explores in more depth the existence of alternate realities, and how they intersect in a constant loop (symbolised by the triquetra). In one of these, Jonas meets an older version of Martha, who introduces herself as Eva. Eva is the leader of an opposite faction to Adam: while Adam's aim is to destruct the knot which links all the realities together and, therefore, cause the apocalypse to happen and destroy Winden once and for all, Eva fights to preserve the knot and encourage the eternal cycle of death and rebirth characterising the series.

However, this cycle (symbolised by the figure of the ouroboros) will be interrupted finally by Jonas and Martha who, travelling together through time, discover the root cause which initiated the chain of events triggering the apocalypse. In this final journey, the two protagonists encounter a grieving father called Tannhaus, who lost his son and daughter-in-law in a car accident in 1971, begins the cause-and-effect sequence which enables time travel. In order to find a solution to avoid his family's demise, in fact, Tannhaus creates a time-travel device, which will lead to the creation of Adam and Eve's timeline, the opening of a portal and the time loop which traps the inhabitants of Winden. Jonas and Martha travel to the moment just before the crash happened, preventing it. This new chain of events and the restoration of the original world also means that Martha and Jonas will not be born. In a final scene, their bodies, alongside the other characters whose origin is associated with the parallel reality created through the introduction of the time-travel device, vanish into particles, thus leading to the restoration of the origin world.

The series concludes in modern day Winden inside a house. This new set up is the result of the end of the time loop, which, nonetheless, does alludes to the fact that the past could repeat itself. Here, the woman who was Jonas's mother before the closure of the time-loop, Hannah, is heavily pregnant, and is hosting a dinner party with some friends, while a storm is taking place outside. Guests comment on the 'apocalyptic' weather before one asks if Hannah has thought of a name for her soon-to-arrive baby. Experiencing *déjà vu* caused by the combination of the weather

conditions (evoking the apocalypse) and the sight of a yellow raincoat on a chair (a sort of “index” signalling Jonas), Hannah replies: “I think that Jonas is a beautiful name.”

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