Backpack Production: An exploration of independent production techniques in no-budget contemporary cinema

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Abstract

This research explores the concept of backpack production in no-budget contemporary cinema, examining its opportunities and challenges for independent filmmakers. Backpack production, as presented here, is defined as a filmmaking approach where a solo filmmaker conceptualises, shoots, and produces a film with minimal external collaboration. Through a combination of literature review, test footage, and the creation of a final narrative short film, this study evaluates the practical viability of backpack production as a filmmaking method. The research aims to assess the impact of technological accessibility, workflow efficiency, and creative autonomy in solo-operated film production while identifying the limitations of reduced collaboration. The methodology includes a practice-based approach, incorporating self-reflection, case studies, and production analysis. The findings highlight that while backpack production offers flexibility and creative control, it also presents cognitive and logistical challenges that impact the final output.

Author’s Declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for an award at this, or any other, University. All sources are acknowledged as References.

Acknowledgements

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1. Introduction

This research aims to explore, define, and critique ‘backpack production’ and answer the following question:

What opportunities can ‘backpack production’ offer in the creation of short films and what challenges should we expect to face when working this way?

The term *backpack production* is being proposed to describe a filmmaking process in which a solo shooter conceptualises and produces the work independently with little-to-no active collaboration from additional filmmakers. Whilst this specific term has yet to be adopted by the film and video communities, a similar term has already been coined by Charlie Gee in his article titled *Audience Preferences in Determining Quality News Production of Backpack Journalism* (2018), in which the writer discusses the term “backpack journalists (BPJs)” alongside alternative terms such as “One-man bands (OMBs)”, “video journalists (VJs)”, and “solo journalists (sojo)”. Each describes a form of production that allows an individual to travel independently while having “everything needed to create a TV news report” (Gee, 2018). Backpack production as explored here, sets itself apart from the BPJs, VJs, and OMBs by attempting to produce narrative work that historically relies on the collaborative involvement of others. Backpack production emphasises limited-to-no collaboration and minimised production equipment in order to maximise flexibility in the production process.

Intentionally, this research aims to identify case studies that apply backpack production methodology appropriately, set parameters for the technique, develop a short film within the workflow, and critique its application to understand its shortcomings. Additionally, it seeks to contribute to the emerging discourse surrounding technology and collaboration in the

burgeoning field of fictional short film creation, shedding light on its potential benefits and challenges within this context.

In addition to the written work here, as well as the attached appendices, a narrative short film[1] has been created that demonstrates backpack production to prove the experiment and provide grounds for reflection and analysis.

My initial goal when conceptualising this research, was to explore the potential impact minimised collaboration would have on contemporary filmmakers such as Sean Baker (*Tangerine (2015), Florida Project (2017), Anora (2024)*) and Chloé Zhao (*Nomadland (2020), The Rider (2017)*) as well as the historic impact seen in the work on Robert Rodriguez (*El Mariachi (1992)*) and Gareth Edwards (*Factory Farmed* (2008), *Monsters (2010)*). As noted above in Conolly's research, many young filmmakers are voicing a desire to work independently, with minimal-to-no collaboration; this is something I have anecdotally witnessed in my own day-to-day role as a lecturer for undergraduate students studying filmmaking[2]. With this in mind, two considerations arise: "Is it possible to undertake successfully?" and "what impact would it have on the work?".

When considering if it was possible, I turned to some of the historic examples of solo production. As early as 1922, Robert J Faherty demonstrated the ability to work with limited crew while producing *Nanook of the North* (1922) in remote northern Quebec. Faherty was enabled by the development of a relatively compact camera design called the Akeley 'Pancake' (1915). This relationship between solo operators and more accessible camera equipment continued to grow over the years resulting in the popularisation of the 8mm and Super 8mm film formats; these would enable filmmakers such as Andy Warhol (*Chelsea Girls* (1966)*, The Nude Restaurant* (1967)*, Blue Movie* (1969)). The notable popularity of this format was often accredited to its compact design, affordability and simplified loading process (Dodd, 2020). Jacob Dodd would describe this as:

> ...the cartridge does not require any threading of the film to create loops. The plastic cartridge holds the loops. This makes loading the film easy for the less tech-interested person and makes it a snap to use." (Dodds, 2020, pg.47)

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[1] Lost Inside (2025) Directed by Andy Harrison [Film]. University of York. Available at: https://drive.google.com/file/d/1mRoJrLfRVK_2ysBR_AWdL-eKPnSg39Qb/view?usp=sharing

[2] Andrew Harrison is the programme leader for BA (hons) Film & Video Production at the University Centre Middlesbrough in Middlesbrough College: Middlesbrough College. (2025). *BA (Hons) Film and Video Production - Full Time - Level 6 - Middlesbrough College*. [online] Available at: https://www.mbro.ac.uk/courses/ba-hons-film-and-video-production-full-time-level-6-2/ [Accessed 24 Feb. 2025].

The contemporary equivalent of this movement can be seen in the “DSLR revolution” (Bloom, 2008) and the considerable growth of smartphone filmmaking (Schleser, 2021). The ubiquitous nature of these technologies provides evidence that modern filmmakers have the tools to create films independently without requiring extensive collaboration. However, the impact this lack of collaboration could have on the projects has not been clearly documented.

To properly explore and answer these questions, the following set of aims and objectives were applied:

- **Aim 1: To explore the potential benefits and opportunities associated with backpack production.**
    - Maintain a production log throughout the production processes.
- **Aim 2: To evaluate critically the limitations and challenges of backpack production as a technique.**
    - Reflect on the workflow through written analysis.
- **Aim 3: To assess the viability of backpack production through the creation of a narrative short film.**
    - Plan and produce a narrative short within the parameters of the suggested workflow.

With collaboration at the heart of most filmmaking processes, its removal is bound to have significant impacts on the final product as well as the process itself. When asked “What is the worst kind of director to work with?”, Richard Crudo (*American Pie* (1999), *Down to Earth* (2001), *Grudge Match* (2013)) replied “...the guy who doesn’t know how to collaborate” (Crudo, cited in Frost, 2007, pg17), this sentiment is echoed consistently throughout the interviews in *Cinematography For Directors* (Frost, 2009), painting a clear picture of collaboration as a backbone of cinema. With filmmakers like Faherty and Warhol noted above, as well as others, such as Sean Baker’s minimalist production process to *Tangerine* (2015), the need for collaboration has been consistently challenged. This research aims to explore the impact of this movement on the film and the filmmaker.

2. Literature Review

To help identify current research and previous academic studies, the research began with the completion of a literature review (Appendix A).

While researching and writing the literature review, two clear themes emerged: technology and collaboration. These two core elements remain at the heart of narrative film and video production. While reading around technology, I noted a driving factor in technology's evolution has often been the filmmaker's desire to work more independently, lessening the confines of budget, crew, or time. This can be seen in the early camera developments of the Kinetograph, Biograph cameras, Pathe Professional studio cameras, the 'English Uprights' and the Debrie Parvo, all trending towards lightening the weight for independent operators (Lipton, 2021). This technological development has allowed low budget directors to become multi skilled and reduce the number of necessary collaborators, and such consistent desire to work with smaller crews can be seen in *El Mariachi* (1992), *Monsters* (2008), *Tangerine* (2015), and more recently with short films like Ryley O'Bryne's *Immaculate Virtual* (2021). However, as noted in the literature review (Appendix A, pg.51), this approach to production can severely limit a filmmaker's access to natural collaborators; with fewer voices involved fewer opinions are available for creative expansion. While some filmmakers may argue this strengthens the voice of the director, Jaqueline Frost presents consistent evidence for the importance of collaboration in the filmmaking processes in her book *Cinematography For Directors* (Frost, 2009), this has been analysed in more detail within the literature review (Appendix A. pg.34).

During the exploratory phase, a wide range of material was considered, some of which proved only tangentially relevant. However, this broader research helped shape the experimental approach and provided a foundation for further study. A more focused initial scope could have streamlined the process and led to more targeted findings. Nonetheless, given the limited research on backpack production, some exploratory dead ends were inevitable. Despite this, the study ultimately established a clear direction while examining filmmaking processes in depth.

Further areas for reading could help to appropriately assess the current state of research in this field. Some more specific examples of solo operators could help define the historic developments of filmmakers working independently; such as Andrew Bujalski (*Funny Ha Ha*

(2002), *Mutual Appreciation* (2005), *There There* (2022)), Jim Cummings (*Thunder Road* (2018), *The Wolf of Snow Hollow* (2020)), and Steven Soderbergh (*Traffic* (2000), *Erin Brokovich* (2000), *Ocean's Eleven* (2001)) specifically with his work on *Sex, Lies, and Videotape*s (1989). Additionally, identifying key developments in technology that have enabled filmmakers to reduce crew sizes would reinforce the idea that there is a correlation between technological developments and collaboration. Social media content creators could be an excellent starting point; these filmmakers are recurrently working on micro productions without any form of collaboration, often focussing on an approach that favours speed and quantity over technical fidelity. Starting with *SMS Sugarman* (Kaganof, 2008), 'Smartphone filmmaking' (Schleser, 2021) is a topic that should be further explored within the research as well; due to the ubiquitous nature of smartphones, this type of filmmaking represents the lowest technological barrier that we have ever seen in the medium's history. Max Schleser suggests a view of smartphone filmmaking that represents the early stages of young filmmakers careers that start isolated and independent before forming meaningful collaborations as they move into the professional industry:

> "Smartphone film festivals provide opportunities for filmmakers to share their work with audiences and engage in a conversation with them. In smartphone film festivals, audiences include peers as much as emerging filmmakers or cinephiles."
> (Schleser, 2021, pg.73)

It may be that this could be true of 'backpack production' but rather with the filmmaker having access to 'prosumer'[3] equipment, such as DSLR/mirrorless cameras, instead of being limited to a mobile phone. However, some filmmakers find themselves returning to these smaller productions later in their career, one rough approximation can be seen with Robert Rodriguez's *Red 11* (2018) where he attempted to recapture the production freedoms he experienced creating *El Mariachi* (1992).

In addition, the impact of the COVID-19 pandemic on filmmakers and student filmmakers represents a forced demonstration of solo filmmaking that should be further studied; one such example can be seen in Stephen Connolly's report *Positive outcomes for student filmmakers in a pandemic* (Conolly, 2022). In this report, Connolly documents one institution's changes to delivery and assessment of practical tasks during the 2020

[3] Toffler, A. (1980). *The Third Wave*. New York, N.Y.: Bantam Books.

COVID-19 lockdowns. Interestingly, Connolly notes how some student filmmakers were able to thrive, with some citing they were “glad that [they] didn't have to work in groups for the project”. Connolly suggests that this methodology allowed for less outgoing student filmmakers to flourish, where more typical filmmaking approaches results in “Contributions from the more assertive, and from those drawing on resources of social and cultural capital, often dominate.” (Connolly, 2022), this shift to solo filmmakers, or “*total filmmakers*” as he calls them, allowed some students to voice their creative visions without the perceived social stresses of collaboration. This closely ties to the original aims of this research and could have helped to inform some of the decisions made during this process had it been identified earlier.

3. Development Footage

During the development stages, a range of stylistic and technological options were explored to help identify appropriate formats and production processes for the film. As backpack production emphasises the solo operational role, it also felt fitting to make a film that explored themes of isolation. This led to the production of three pieces of test footage that will be explored in this section.

3.1 Test Film - *Cam*

For the creation of *Cam* (Appendix B) I was looking for a subject that could inform a documentary or interview foundation for the film while also hoping to explore the impact of backpack production . This process allowed me to test the principles of backpack production with a relatively simple format. I aimed to use minimal equipment while retaining control over the look of the image and explore themes of isolated creativity.

During the production of *Cam,* I had my first encounter with an issue that would recur throughout the research process: cognitive overload. As referenced in John Sweller’s publication *Cognitive Load During Problem Solving: Effects on Learning* (Sweller, 1988), cognitive load refers to the relationship between information and active memory. In the case of backpack production, taking on multiple production roles seems to put significant strain on the filmmaker’s own cognitive load. This manifested in technical distractions, such as setting up lighting while talking to the subject; this also manifested as technical mistakes, such as interview sections without audio recordings. As the original goal of backpack production was to enable a filmmaker and remove production barriers; this initial test suggested that by

reducing on-set collaborators, this could have the inverse effect and instead place more pressure on the solo filmmaker, reducing their capacity for creative success and experimentation.

Ultimately, the subject of *Cam* and the strenuous production process led to a video that struggles to present anything new, though it demonstrated some of the issues with solo filmmaking. The format of the film as a piece of nonfiction was at odds with the intent of the research; with the film representing more of a mini-documentary, even including an interview, the intent of the research was lost. It became clear at this stage that narrative design was at the core of what differentiate backpack production from the work of others such as the independent journalists described as VJs. This led to a different approach for the second test video *Chance* (see section 3.2).

3.2 Test Film - *Chance*

Chance (Appendix C) emerged as a response to the issues faced during the production of *Cam*. Despite attempts to cut down on the amount of equipment being used during *Cam*, a standard production kit comprising camera body, lenses, lighting, rigging, microphones, speakers, laptop, and more were still needed to complete production. Managing this much equipment on set introduced distractions that hindered the process. The aim with *Chance* was to strip back the equipment even further to enable a deeper focus on the subject and collaboration.

Minimal equipment — a tripod, a Blackmagic Pocket Cinema Camera, and a single lens — was used to produce this video. This deliberate minimalism afforded us considerable freedom, aligning more closely with guerrilla filmmaking[4] styles. It facilitated an ease of movement across numerous locations and allowed for a greater volume of footage when compared to *Cam*. With fewer concerns about equipment, I was able to focus on the performance and process much more intently. However, the trade-off for this production was audio; in an attempt to achieve a meaningful collaborative connection with my performer, I needed to reduce the number of distractions, this resulted in no audio equipment being used. However, the camera's onboard microphone was used. This suggests that some implementation of passive audio capture through an onboard microphone or wireless lavalier could be explored without shifting the filmmaker's focus; this could allow for sync dialogue to be achieved while the operational focus remains on the camera.

[4] Jones, C. and Jolliffe, G., 2006. *The guerilla film makers handbook*. A&C Black.

With limited equipment, it became much easier to experiment and whilst trying to capture a sense of comfort and belonging in *Chance*, we used a very minimal and still form of performance from the actor. This later informed further research and reading into Antony Gormley, whose sculptural work often features static iron figures who feel both at home and out of place in their environment. This can be seen in *Another Place* (1997), *Iron: Man* (1993) and *The Angel of the North* (1998).

Using minimal performers and simple actions allowed for easier monitoring and improvisation, though it also limited the film's complexity and narrative scope. Backpack filmmakers may benefit from restricting cast and staging to streamline their workflow, but this suggests that solo filmmakers may inherently limit the scope of their own work.

With *Chance*, further reducing equipment enabled a stronger focus on performance and visual design. Without the burden of rigging, the process felt more fluid and creatively freeing, allowing for rapid experimentation. However, while this improvisational approach enhanced spontaneity, it also resulted in structural weaknesses due to a lack of narrative planning.

3.3 Test Film - *Lomo Lakes*

The third and final test film, *Lomo Lakes* (Appendix D) reduced the necessary equipment even further and shifted focus to a more experimental format. This was produced with a LomoKino (Lomography, 2011), a cheap hand cranked camera that utilises 35mm photography rolls rather than traditional film reels. The camera is capable of capturing between 5-30 seconds of footage per roll, this variation is due to the hand cranking required; for example, a slower crank would result in less stock exposed but a lower frame rate. The Lomo Kino "shoots 4 frames per single frame of 35 mm film" (Lomography, 2025), with each roll providing 36 exposures, and average of ~5 frames per second being applied in the edit, two rolls of film were needed to capture the 40 seconds seen in the *Lomo Lakes*. The tactility of the film stock through soft focus, muted colour tones, and overall imperfections lend the image a dream-like quality similar to faded memories. This connection to memory, and the limited recollection we experience as humans, is why I chose to present the work at a low frame rate, further emphasising the hazy aesthetic. These themes would be present in the final short film and this part of the research allowed me to try and capture these feelings as a solo operator.

Lomo Lakes demonstrates potential for highly flexible filmmaking that can capture a naturally melancholic aesthetic. However, this process ignored much of the infrastructure inherent to traditional filmmaking. No sync audio was used, trained actors were not present, and takes were limited to very short bursts given the limited length of the film stock being used. The creation of *Lomo Lakes* importantly helped to solidify the workflow, the process was most successful when equipment was minimised to the bare essentials and the filmmaker was allowed to focus on the visual design as a cinematographer. However, this approach suggests the filmmaker ignores onset audio; a limiting and potentially problematic issue.

Between *Lomo Lakes* and *Chance*, it is evident that a filmmaker can more effectively focus when not trying to fulfill multiple roles. In the final edits, *Lomo Lakes* and *Chance* often look more like video montages that lack ridgid form or structured scenes. For future test videos, I would have explored the potential of sync audio capture to see if a more traditional narrative approach could have been achieved. It should be noted that while sync audio was captured during *Cam,* its inclusion contributed to the distracted production process and constituted some of the mistakes made during production. Another major issue would be the cost in producing a short film with the 35mm film format used in *Lomo Lakes*, given that costs for 40-seconds of footage came to a little over £100 for the stock, processing, and telecine. As this research was being self funded, the cost of stock and development was not achievable given the intended length of the final short film (~10 minutes).

4. Pre-Production

Building on the insights gained from the test films, development and pre-production began on the final short film. The lessons learned from *Cam*, *Chance*, and *Lomo Lakes* informed key decisions about equipment, workflow, and thematic direction, ensuring that the final film would be both a demonstration of backpack production and a cohesive exploration of isolation.

Significant time was spent refining the script (Appendix E) to ensure it suited backpack production while differentiating it from other media forms like journalism or documentary. The narrative explores three perspectives on isolation, reflecting both the film's production process and its thematic focus. One of these, would explore isolated modernity through repeated use of individualised technology, such as mobile phones. In his book, *Technology and Isolation* (Lawson, 2017), Clive Lawson describes humanity's drive for technological improvement, he quotes Francis Bacon as describing the pursuit of technology as "...good

and a clear mandate from God" (Bacon, cited by Lawson, 2017). This perspective was later criticised by Jean-Jacques Rousseau when he criticised the industrial revolution and Bacon's viewpoint as "complacent progressivism" (Rousseau, cited by Lawson, 2017). On reflection, these themes are present in the film and often represent the film's strongest moments. The thematic consistency between production process and narrative discussion presents a harmony I feel has been successful. However, some moments lack clarity, and the abstract nature of the script leaves room for varied audience interpretation.

Knowing that sync audio had presented issues during *Cam*, and that its absence had shown to be a strength in *Lomo Lakes* and *Chance,* I decided to write a voice-over to tie the film's vignettes together in place of sync dialogue. As *Lomo Lakes* had visualised the feelings of melancholy and memory through abstraction, I hoped to use poetry to achieve the same thing. By obscuring the overt meaning and intent of the voice over, I aimed to give the audience room to imply their own understanding. Reference for the poetry's style and structure was taken from Basil Bunting (1900–1985), an English poet associated with the modernist movement. Born in Northumberland, Bunting is best known for his long poem *Briggflatts* (Bunting, 1966) due to its innovative use of language, rhythm, and form, reflecting Bunting's deep engagement with both traditional and experimental poetic techniques (Burton, 2013). Second, inspiration was taken from Tony Harrison, a renowned English poet, born in Leeds in 1937. With his notable works, such as the long poem "V" (1985), Harrison is celebrated for his distinct voice that blends traditional and colloquial language, often addressing socio-political issues and personal experiences (Byrne, 1998).

Only a small portion of the written poetry was included in the final film to emphasize empty space and enhance pacing. While effective in complementing the imagery, stronger integration between the poetry and on-screen action could have improved the film. Recording actors performing sections of the poetry on set would have allowed for a more dynamic edit.

As a filmmaker often working behind the camera, writing poetry was a challenging process for me as it forced me to work outside of my regular comfort zone. This requirement to take on all parts of the production process could be viewed as backpack productions' defining feature: it highlights a filmmaker's authorial voice in both positive and negative ways. On reflection, this allowed me to voice personal ideas and thoughts but my inexperienced use of language could have been improved with meaningful collaboration. This process allows a filmmaker to present an uninterrupted thought from development, through production, and eventually post-production; this avoids any issues with the filmmaker's voice being diluted or

over dissected by well-intentioned contributors. On the other hand, it also creates a significant limitation on the filmmaker: they must act as writer, director, camera operator, editor, and all other crew roles. Without external influences they are left to the limitations of their own skill set, unable to take inspiration from others or widen their knowledge base through their collaborators.

5. Production

Production of the short film allowed me to explore a few areas of backpack production. The first of these was the filmmaker's relationship with equipment. I aimed to keep the primary camera equipment limited to a single backpack with only a tripod and some minimal lighting equipment expanding this to a second bag, this was essential as I would be responsible for the transportation of the equipment as well as its implementation. In order to keep the equipment as small and light as possible, I opted to shoot the film on a mirrorless Canon R6. This camera is small and lightweight while also using a full frame APS-H sensor, allowing for easier control over the image and more flexibility in low light. This direct relationship between the filmmaker and equipment is what differs solo operating from traditional crew-based filmmaking. When discussing his experiences shooting *El Mariachi* (1992), Robert Rodriguez summarised this as "Too many creative people don't want to learn how to become technical... they become dependent on technical people" (Rodriguez, 1993).

However, choosing a camera for its form rather than its function and output resulted in some impactful trade-offs. The Canon R6's inability to display focus peaking alongside zebra exposure monitoring led to a clunky process that slowed the production down. To alternate between these functions, the operator needs to navigate through menus, turn one off, and then navigate to the other option to turn on the other. This would need to be repeated for each setup. With a larger crew, this functionality could be solved with an additional monitor or it would be a minor inconvenience that could be handled in between takes; as a solo operator, the time between takes is determined by the filmmaker alone, thus this turned another otherwise minor inconvenience into a distraction that frequently slowed down production. Finding an appropriate camera that fully supports solo operating while maintaining a small body would have been the ideal solution.

One of the biggest strengths for backpack production came in its flexibility to workflow. Scheduling was easier, and reshoots required minimal coordination, leading to a process of multiple short shoots over nine days. This approach accommodated contributors' availability but also created logistical challenges. Administrative tasks often overlapped with creative work, as seen when planning the next shoot while on set (Appendix F). A producer could have alleviated this burden, allowing for a clearer separation between creative focus and organisational responsibilities.

Collaboration is a core part of any production, and though backpack production significantly changes the usual collaborative relationships, it does not eradicate them. Throughout her book *Cinematography For Directors* (Frost, 2009), Jacqueline Frost presents a consistent image of collaboration as a tentpole in the creative process of film production. Many of the interviews presented here discuss collaboration as a way of allowing the filmmaker to explore more complex ideas or open their eyes to avenues they had not considered. One of my biggest concerns going into a solo operated production was that this collaborative process could be lost entirely. While this isn't the case, the collaborative interactions are undeniably diminished. As noted in the production diary (Appendix F), contributors to the film provided a consistent willingness to help and collaborate, often offering assistance beyond the boundaries of their regular roles. However, these collaborations were often much more limited and temporary than those from a regular crew member, often offering suggestions that, while appreciated, failed to understand the intent of the film due to a lack of engagement with the script or other pre-production materials. These collaborations were often in the form of logistical problem solving rather than the complex expansion of influences found when intentionally collaborating with other creatives. Donald Petrie summarised this need for more meaningful collaborations:

> "I want someone who is going to bring something to the party, someone who will have creative input and ideas. I will always come to the set prepared with what I want, and I'm just waiting for someone to show me a better way"
> (Donald Petrie, 2006, Pg 13)

When considering how backpack production could help to bridge this gap, I feel some involvement from additional crew members could have a significant impact on the process. Having a few people support the filmmaker in their endeavour could help to offload the creative weight and expand the potential diversity of influences.

6. Post-Production

Editing revealed a major issue: the lack of sync audio. To simplify production, no sync dialogue was scripted, and only an onboard microphone was used during production, resulting in no clean sound assets. While I had planned to rely on voice-over and music, this proved insufficient, requiring a time-consuming and challenging audio reconstruction. In a traditional crew setup, an audio operator would have captured usable sound, making post-production significantly easier. In hindsight, incorporating sync dialogue with lavalier mics could have created a more immediately convincing sense of verisimilitude and streamlined editing. Conversely, it could be argued that had these precautions been taken and additional crew brought in, it would rob the filmmaker of the learning experience of expanding their own skillset.

Dailies highlighted another room for improvement in the workflow of backpack producers. With shoots that occurred back-to-back, the workload could not be split so post-production could begin simultaneously with ongoing production. Instead, these needed to be done sequentially, slowing down the process. Inversely, the time needed to review material was reduced due to my direct familiarity with the footage. A more effective way to emphasise these strengths would have been to schedule around them, allowing for shoots to occur every other day with the days inbetween being reserved for daily reviews and rough cuts.

7. Final Output

The final output is a short film (Appendix G) with a runtime of just over 8 minutes, entitled *Lost Inside*. This short film presents three stories that intertwine with a thematic throughline of isolation. Each story is connected with a voice over that recites a piece of poetry that discusses similar themes. As noted above, the film presents a demonstration of backpack production, being entirely produced by one person and some contributions from performers. I hoped to demonstrate the concept of backpack production, proving that additional crew members and expansive equipment are not essential to the filmmaking process, they should instead be seen as an expansion to the filmmakers skillset. I feel the final film demonstrates this well, we were able to achieve a relatively high production value that does not compromise on the visual fidelity of the image.

During this process, I also encountered some of the significant issues found when filmmakers refuse to collaborate. The most impactful of these is the creative isolation. As

noted in the production diary (Appendix F), the mental pressure of trying to take care of every part of production is significant. Even in the extant examples found in the research (Robert Rodriguez, Gareth Edwards, Chloé Zhao, Sean Baker), while each of these filmmakers produced work where they took on significant volume of roles, they would all go on to produce work simply as directors. They would all grow their crews and rely on others once this option became more readily available to them. This suggests that the fundamental ideas of backpack production only relate to filmmakers early in their careers, young filmmakers, or those purposefully aiming to work outside of the industry norms. I believe this can be attributed to the pressure this amount of work puts on a filmmaker.

However, from an audience's perspective, these films often feel personal and intimate. While I hoped to achieve this with *Lost Inside*, I believe the final edit only approximates this. There are moments in the film that get close to the emotional resonance intended but an equal number of moments that meander without clear impact. When struggling to make these moments land, I found myself without crew members to talk through the issues with. A sense of creative isolation came from this that highlighted my own shortcomings in my filmmaking toolkit. Because of it, I have found an excellent list of areas for improvement but the audience experience may be a film that struggles to capture the themes it is trying to discuss. That is not to say that the process is entirely to blame, should I approach filmmaking in this way again, I will endeavour to make something much more personal and emotionally honest. Without the need to discuss and dissect the script with others, a filmmaker can find themselves able to express deeply personal material - something that may resonate with audiences if it is able to make its way to the screen.

8. Further Developments & Conclusion

This research has explored the potential and limitations of backpack production in contemporary no-budget filmmaking. Through the development and execution of a short film under these constraints, it became evident that while technological advancements have enabled solo filmmakers to create visually compelling work, the absence of collaboration imposes significant challenges. While backpack production allows for flexibility, creative autonomy, and logistical simplicity, it also increases cognitive load, limits creative input, and strains a filmmaker's ability to manage multiple roles effectively.

The practical application of backpack production revealed that while technological innovation has made independent filmmaking more accessible, it has not supplanted the benefits of

collaboration. Historically, even filmmakers who have operated independently eventually transitioned into more collaborative approaches as their careers progressed. This suggests that while backpack production is valuable for emerging filmmakers and experimental projects, it remains an inherently constrained approach.

This study underscores the need for intentionality when adopting backpack production. Strategic decisions regarding equipment, workflow, and creative compromises must be made to mitigate the limitations imposed by solo operation. The findings suggest that hybrid approaches—where minimal collaboration is introduced in key areas such as sound design or post-production—could provide a more balanced workflow without entirely abandoning the benefits of backpack production.

Future research could explore audience reception of backpack-produced films, comparing their narrative and aesthetic impact to traditionally produced works. Additionally, examining emerging technologies, such as AI-assisted post-production and mobile filmmaking advancements, may provide insights into how solo filmmakers can enhance their efficiency without sacrificing creative quality.

Ultimately, backpack production represents both an opportunity and a challenge for independent filmmakers. While it fosters creative independence and adaptability, it also emphasises the enduring value of collaboration in cinematic storytelling. As the filmmaking landscape evolves, backpack production may serve as both a stepping stone for emerging filmmakers and a tool for established directors seeking to reconnect with the fundamentals of storytelling.

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10. Appendices

Appendix A: Literature Review
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1. Introduction

In the following literature review, we will look at the key texts that discuss the technologies that have enabled self-dependent filmmaking practise and examine how these developments have manifested on screen. Each have been grouped by their thematic relevance.

Throughout this writing, I will be suggesting the term ‘self-dependent filmmaker’ be used to refer to filmmakers who operates outside of the traditionally funded industry, often at the very bottom of the budgetary scale. Similar to an independent filmmaker, they are often collaboratively isolated, sometimes by choice and sometimes by circumstance, but inherently become the creative driving force behind their own work. Without access to a network or appropriate funding, a self-dependent filmmaker needs to employ the accessible technology of their time to create their work. I will also suggest the use of the term ‘enabling technology’. This definition is being used to help define technology that allows filmmakers to create work that otherwise would not have existed, for example: the affordability of Super 8mm enabling productions that would not have had the funding to shoot on 35mm or 16mm, as seen with *Symbiopsychotaxiplasm: Take One* (1968), the lack of almost any budget[1] limiting *Noah* (2013) to screen capture and webcams, or the reliance

on mobile phones as a motivating technology during the production of *Tangerine* (2015).

The first section will examine the enabling technologies and notes texts that have documented the development of camera technology, the contextual considerations of these developments, and the impact they had on screen. The movement of technology from ‘useful cinema’ (Acland, 2011) into narrative tools will become a defining element when considering a technology’s impact on cinema. This section will address the acceleration in modern technology with the ‘DSLR revolution’ (Laforet & Bloom, 2008), introduction of smart phone filmmaking, as seen with *Nocturns for the King of Rome* (2005), and cameraless productions as seen with films like *Immaculate Virtual* (2021).

The second and third sections will look at key examples of self-dependent practise, with the former examining historic examples while the latter will note more contemporary instances. This is where consideration will be given to individuals as potential case studies of significant practitioners. These include filmmakers who deployed emergent technologies or alternative workflows to develop productions of note, for example: Gareth Edwards (*Factory Farmed, Monsters, Godzilla*), Sean Baker (*Tangerine, The Florida Project, Snowbird*), Shane Carruth (*Primer, Upstream Color*), and Robert Rodriguez (*El Mariachi, Red 11, Bedhead*).

Finally, the fourth section will look at the audience experience. The texts here consider the experiences of today’s distribution platforms and the demands of modern audiences. This section will include widely experienced trends towards individualised consumption, the ‘streaming wars’ (a term used to discuss online

streaming platforms)[2], the options available to filmmakers for online distribution, as well as the problems with these platforms.

2. Technological Developments

Newly developed technology can act as an enabling component in production, allowing for production processes that were previously unobtainable or requiring further collaborative involvement. A driving factor in technology's evolution has often been the filmmaker's desire to work more independently; lessening the confines of budget, crew, or time; this can be seen in the early camera developments of the Kinetograph, Biograph cameras, Pathe Professional studio cameras, the 'English Uprights' and the Debrie Parvo, all trending towards lightening the weight for independent operators (Lipton, 2021) . To understand the impact of camera technology, we must understand the development of it.

Development of Camera Technology – The Cinema in Flux

In his book, *The Cinema in Flux: The Evolution of Motion Picture Technology From The Magic Lantern To The Digital Era*, Lenny Lipton (2021) presents a catalogued development of the camera's evolution. Lipton suggests the categorisation of moving image technology be broken down into 3 overarching eras: Glass Cinema, Celluloid Cinema, and Digital Cinema. The writer documents iterative developments in the technology while providing contextual understanding of why these developments occurred. For example, Lipton notes that due to the size and weight of cameras, "In

an age when electrification has barely taken hold” (Lipton, 2021), development of camera technology trended towards studio application prior to World War I, making independent location shooting a significant challenge. However, lightweight cameras with more easily accessible magazines (the light-tight chamber designed to hold filmstock) saw accelerated development to support isolated wartime operators. He notes the Aeroscope (Autoleograf), as seen in Figure 1 (Lipton, 2021), designed by Kasimir (de) Proszynski in 1910, allowed the operator to attain far more stable handheld footage than had previously been possible due to its implementation of compressed air as a way to power its drive.

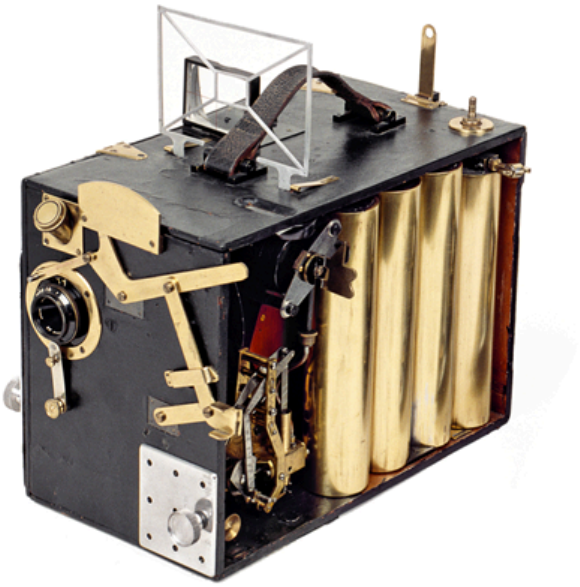

Figure 1: The Aeroscope (Lipton, 2021)

By allowing the operator to use both hands to stabilise the camera, Lipton identifies a clear impact of technology influencing visual style as this resulted in more stable footage. This is further supported in the chapter about camera design after World War II, where he notes the introduction of the Arriflex 35. This is the first camera to provide through-the-lens reflex viewing based on a rotating shutter, allowing the

operator to view the image while running the film. Prior to this, camera operators were unable to view the image while film was being run through the gate. A camera's gate is the opening located at the front of the camera, allowing for light to make contact with the film after being focussed through the lens[3]. Before the Arriflex 35, camera operators were unable to see through the gate at the same time as the film was being run through it, resulting in a significant amount of camera work remaining static as to not lose focus, shift the frame, or risk alternative impact on the image. Lipton states:

> ...the Arri eventually contributed to changes in filmmaking style, a notable example of which is the 1947 Hollywood feature *Dark Passage,* with Humphrey Bogart and Lauren Bacall. The film's first act is shot from the point of view of an escaped convict, played by Bogart, an application for which the camera was well-suited since it could be handheld and offered reflex viewing. (Lipton, 2021, pg199)

Documented impact of camera development influencing the stylistic decisions of filmmakers is apparent throughout Lipton's writing with the later chapters discussing the introduction of 16mm, 8mm, and digital, outlining work that would not exist without the introduction of these technologies.

Lipton also notes the importance of technology as an enabler for independent filmmakers. He cites the development of the Akeley 'Pancake' (1915) as being fuelled by Akeley's need to film remote expeditions. The camera was considered a "radical design concept" (Lipton, 2021) due to its circular housing and its twin matching interchangeable lenses mounted on a lens board; one of these lenses would be used for composition while the other was used for photography, as seen in

Figure 1 below (firstcinemakers, n.d). The camera was later employed during World War 1 and ultimately by Robert J. Faherty in remote northern Quebec while capturing footage for *Nanook of the North* (Faherty, 1922).

Figure 2: The Akeley Pancake (firstcinemakers, n.d)

Further Developments – American Cinematographer

This idea that technological innovation comes from industry demands, in addition to more unexpected external factors, is echoed by a writer for American Cinematographer, David E. Williams. Williams wrote *Cameras in Shooting War: AC in the 1940s* (2020) that notes the impact World War II had on camera operators, filmmakers, camera technology, and the publication American Cinematographer, mentioning:

> The magazine focused on new technical refinements, including improved silent cameras, anti-reflective coatings to make lenses faster, and the effects of “lantisification” to increase the speed of film stocks. (Williams, 2020)

This work focusses on World War II specifically but ultimately summarises and supports many of the ideas explored by Lenny Lipton noted above, commenting on the development of technology as a necessity to accommodate the isolated situation of operating in remote regions amidst combat. The writer cites the significant impact film would have on public opinions as a motivator for innovation and invention, he summarises this with a quote from the editor at the time, William Stull: “This war, it becomes increasingly evident, is going to be fought almost as much with cameras as with guns,” (Stull. 1941).

16mm and 8mm Development

After the impacts of World War I and in the lead up to World War II, demands for cheaper and more lightweight technology would lead to the development of 16mm film stock. This film gauge would be half the size of the standardised 35mm, as seen in Figure 3 below (PSAP,2004).

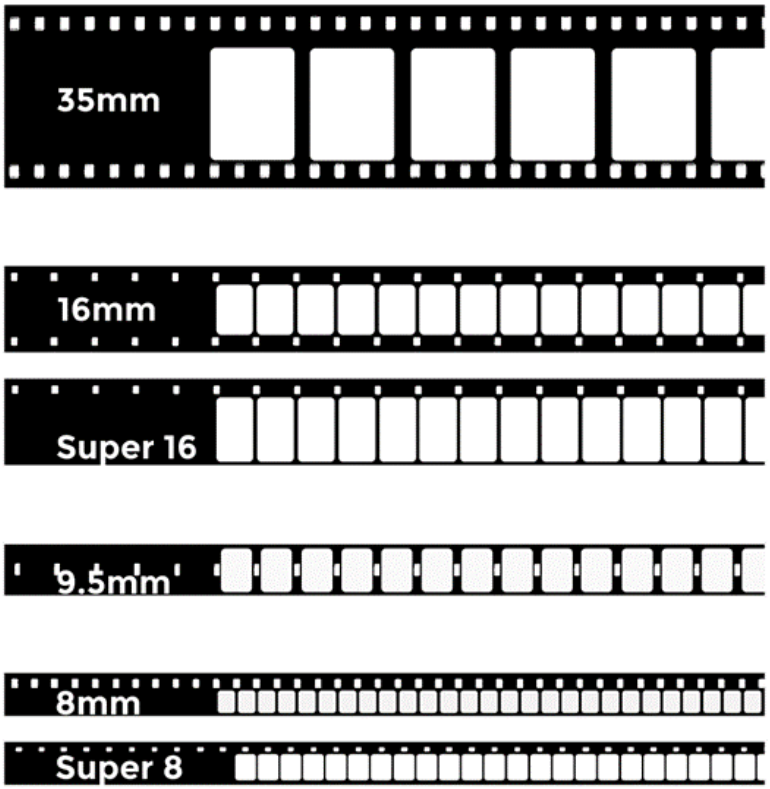

Figure 3: Relative size variation in film gauge (PSAP, 2004)

Norris Pope documented Kodak's development and introduction of this technology in his entry for the Indiana University Press journal entitled *Kodachrome and the Rise of 16mm Professional Film Production in America, 1938-1950* (Pope, 2016). The writer notes the introduction of the technology as capitalising on an untapped amateur market, this meant the technology had to be more affordable and require less production infrastructure than 35mm. Pope cites Kodachrome as developing the first amateur filmmaking scene alongside expanding the 'useful cinema', a market defined as day-to-day application that promotes accessible information, development, teaching, and communication, often in the business and education sectors (Acland, 2011).

As the formats for independent filmmakers developed, iteration and differentiation continued. Jacob Dodd catalogues many of the different formats that were available to low budget filmmakers between the years of 1930-1979 in his book *16mm and 8mm Filmmaking: An Essential Guide to Shooting on Celluloid* (Dodd, 2020). The early chapters provide camera overviews and component terminology to help familiarise the reader with the standardised technology behind film cameras. However, the author later goes on to identify format iterations, providing sections on: Standard 16mm, Super 16mm, Ultra 16mm, Standard 8mm (or Double 8), Uncut Standard 8mm, Super 8mm, and Max 8.

Dodd's writing and visual references are limited in citation. While the book covers a wealth of information on celluloid filmmaking, the work is fairly subjective throughout with the author providing anecdotes and personal stories as a comparison or reasoning for statements. However, he is able to consistently communicate the importance of the formats as well as their place in developmental history. For example, he notes the development from 8mm to Super 8mm as being primarily driven by accessibility:

> The other convenient features of the Super 8 medium include a notch-based system that tells the camera the ISO (film speed). Cameras read the exposure index (ISO) notch on a cartridge. This triggers the automatic electric light meter, which is built into the camera. (Dodds, 2020, pg.48)

By providing a built-in electric light meter and allowing it to interface with the film stock inserted into the camera, the operator is provided a streamlined experience.

Dodd's notes that this helped to make the format more accessible to a wider market but maybe more important was the cartridge stock itself:

> ...the cartridge does not require any threading of the film to create loops. The plastic cartridge holds the loops. This makes loading the film easy for the less tech-interested person and makes it a snap to use." (Dodds, 2020, pg.47)

This meant that operators did not have to learn to load film spools in dark environments or use darkroom changing bags. This combined with the cheap production costs, made Super 8mm an attractive format to home moviemakers and amateur filmmakers.

Digital - Television to Cinema

While independent filmmakers were navigating the range of film stocks available to them, the digital technologies that would change cinema were being developed. The development of digital video is best catalogued again by Lenny Lipton in his book *The Cinema In Flux* (Lipton, 2020). The writer provides context around the development of television broadcast technology as a separate instance before later converging back into cinema.

> The dream of reproducing real-world apparent motion advanced in two parallel directions: one led to the celluloid cinema and the other to television, which after more than a century, came together as the electro-digital cinema.
> (Lipton, 2020, pg.619)

The author explores the technological leaps that allowed for television to operate as well as the demands of the audience landscape at the time, noting that “Televison’s creation was motivated by the success of commercial radio and became an analog broadcast service...” (Lipton, 2020, pg619). Digital initiated itself as a cinema-radio hybrid that attempted to meet the demands of audience beginning to enjoy broadcast entertainment from the living room. Starting as far back as 1925 as ‘Radio Movies’ (Jenkins, 1925), Lipton notes that video broadcast was allowed to develop independently of cinema, without any attempt to merge the two industries. He considers cinema’s adoption of the technology a multi-stage infiltration that did not revolutionise the industry overnight, but instead overtook it through a slower, decades long, process of championing once the technology was able to rival the quality of celluloid.

A similar opinion can be found much earlier with John Belton who wrote in 2002 about the recent digitisation of cinema as occurring near the turn of the millennium. For Belton, cinema’s transition into a true digital era can be marked by the release of *Star Wars Episode I: The Phantom Menace* (Lucas, 1999). The writer believes that the digital capture, manipulation, and pivotally, projection, of the film was seen as a milestone by many, marking the adoption of digital video as a professional format beyond television, formalising its place in big budget Hollywood. Writing only a few years removed from this milestone, Belton notes that the digital technology was already quickly seeing application from independent filmmakers, stating:

> To be fair, digital cinema has not necessarily become the sole property of Lucas, James Cameron, and big-budget, commercial Hollywood. It has spawned a counter

> cinema of sorts. The relative cheapness of the technology has brought new opportunities for making independent films to a variety of filmmakers. (Belton, 2002)

The writer suggests that while it took a large budget film, such as *Star Wars Episode I: The Phantom Menace*, to push the technological infrastructure into the industry, it provided a rapid improvement to the low-budget workflow. The necessity for new projection facilities, post-production techniques, and digital capture formats, created a trickle-down effect that allowed low budget filmmakers to capitalise on this new environment.

The DSLR Revolution – Canon 5D Mk II

One of the most disruptive developments in modern camera technology has been the introduction of ‘HD’ video capture in digital single lens reflex cameras (DSLRs)[4]. The introduction of these cameras caused a significant shift in the camera market, not only shifting the financial structure but also the technological developments ever since.

Figure 4: Canon 5D Mark II (CNET, 2012)

Vincent Laforet (*The Story Behind the Still, Nocturne, Möbius*), a photographer and filmmaker, produced the first short film shot entirely on a DSLR, *Reverie* (Laforet, 2008), made independently with minimal creative collaboration. Upon the first prototypes arriving in the US, Laforet found himself in an impromptu meeting with Canon and secured access to the camera for a weekend to create his film, which was self-financed with a budget of $5,000[5]. Prior to shooting *Reverie*, Laforet had never shot a film before, so he brought in some additional crew to help with the process: a co-director and editor. Before publicly posting the short, he published a blog post titled *Something Very Interesting Is Coming...* (Laforet, 2008) in which he documents his initial experience with the first DSLR capable of capturing 1080p video: Canon's EOS 5D Mark II. Laforet notes some of the defining features of the camera as:

- 1080p video capture.
- Super 35mm sensor size.
- Impressive low light performance.
- Ability to use photography stills lenses.
- The camera body's small size.
- Comparatively low price: $2,700.

In his blog, the writer states "It has the potential to change our industry" and that "The camera is the ultimate "equalizer" - you no longer need half-million dollars worth of high definition video cameras...". Until this point, filmmakers trying to attain a 'cinematic' image while independently operating would often use 35mm lens adapters produced by companies such as Letus and P+S Technik, as noted by Philip Bloom (*The Wonder List, How to Start a Revolution, Salient Minus Ten*) in his blog entries from this time (Bloom, 2010). These would usually require a rail system to mount with additional rigging to support the lens and adapter, as seen in Figure 5 below. By comparison DSLRs would provide a much more accessible, lightweight solution.

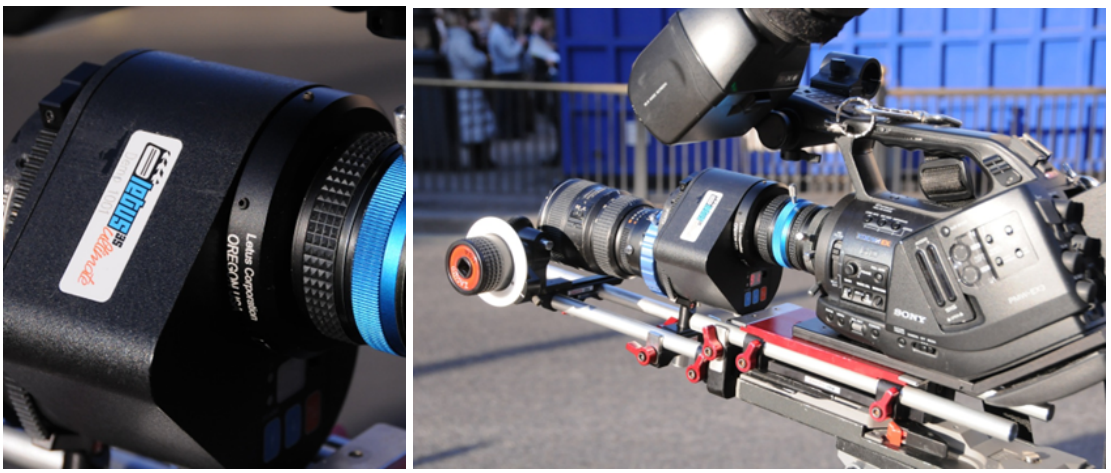

Figure 5: 35mm lens adapter (left) Sony EX3 rigged with the lens adapter (right) (Bloom, 2010)

With cinematic camera technology significantly more affordable, the market interest saw a significant rise. Like Laforet, Bloom would use the introduction of DSLR video to grow an audience, providing news coverage and commentary to many independent video producers looking to learn how to use these introductory cameras. Arriving in the internet era of online tutorials, community support, and niche audience development this created a ‘DIY’ culture around DSLR video production exponentially increasing the amount of high-quality content being produced. Coupled with the rise in demand for progressive streaming content such as YouTube, which was forgiving of video imperfection, this created a ‘lightning in a bottle’ moment for DSLR technology to grow exponentially. Laforet and Bloom’s coverage on their archived blogs, provides a detailed recount of each stage of this growth. While their work skews towards ‘prosumer’ engagement, it captures the essence of the filmmakers of this time precuring equipment without any necessity for collaboration or considerable financial backing.

The DSLR Style – Video Journalism

Considering the impact this contemporary camera technology has had, Krishnan Vasudeavan wrote an article titled *Depth of Field: How DSLR Cameras Informed Video Journalism Habitus and Style* (Vasudeavan, 2019). Video journalism provides recurrent examples of self-dependent filmmaking in isolated cirumstances, often lacking the support of crew and convenient resources. This article draws a direct connection between the introduction of DSLR 'HD' video capture and the stylistic application of video journalism. Veteran video journalists interviewed in the article recount the introduction of the Canon 5d Mk II: "...in the context of transition, often in terms of frustration" (Vasudeavan, 2019), noting the impact on their professional habitus as "adding more stress and complexity". While younger journalists who had never experienced traditional Electronic News Gathering (ENG) cameras were more positive towards the experience, feeling equipped to experiment and produce work on their own. Traditional ENG camera, like Sony's PXW and HDW series, were significantly larger, often implementing shoulder mounts into the camera body and servo-assisted zooms lenses; these larger cameras would produce images from a sensor size around ½-inch resulting in poor low light performance and persistent deep depth of field.

Figure 6: (Left) Sony HDW-F900R Cinealta. (Right) Canon 5d Mk II. (Red Shark News, 2020)

Vasudeavan documents the visual impact DSLRs like the Canon 5d Mk II had on the produced content; one of her interviewees, cited as ‘EE’ notes the footage “... looks like moving still images. To me the 5D, it doesn’t so much look like movie, it looks more like a still image.”. Vasudeavan defines this visual style as “...crisp focus, stationary composition, and... rendered by an image processor and sensor intended for photography” (Vasudeavan, 2019). It is evident from their perspective that this development in camera technology had an impact on the visual style of their work. This was not a stylistic change they sought but rather one that was thrust upon them by the enabling technology of their time. If this unconscious stylistic change occurred in the product of video journalism, it is likely it manifested elsewhere in the spectrum of video production.

DSLRs in War - Afghanistan

A contemporary example of wartime camera operating is noted by Danfung Dennis (*Hell and Back Again, Frontline, Zero Point*) in his article for NewShooter (formerly DSLRNewsShooter), entitled *Photojournalist Danfung Dennis: How I cover the Afghanistan war with the 5DmkII* (Dennis, 2010). This provides an equipment breakdown of the camera kit Danfung implemented during his coverage of the Afghanistan war. Most of the writing focuses on the practical challenges and the solutions he has implemented. These issues are shared by others working with

DSLRs at this time, such as the previously cited Vincent Laforet and Philip Bloom, and would often define the look of DSLR video until further technological iterations occurred. Some of these issues include:

- Rolling Shutter: This led to a ‘leaning’ effect in any fast-paced movements such as pans or tracking shots.
- Sensor Size: The large sensor allowed for more easily attained shallow depth of field that some found it difficult to avoid.
- Audio inputs: DSLRs at this time only offered 3.5mm jack inputs rather than the standardised XLR format. While this would not impact the visual style of DSLR video, it could often characterise the audio design.
- Stabilisation: The small form factors resulted in more obvious impact from handheld operating. This meant unsmooth shake from handheld work.
- Saturation: DSLRs captured a highly saturated, contrasty image. A third-party software be installed to produce alternative picture profiles to overcome these issues. Picture profiles determine an image’s characteristics through associated luma and chroma values.
- Neutral Density: Unlike most professional ENG cameras, DSLRs did not have any built in ND filters. Many inexperienced operators would solve this with higher shutter speeds resulting in less motion blur.
- Manual Focus: No autofocus features available during recording. When paired with a shallow depth of field lead to subjects moving in and out of focus.
- Overheating: Originally designed for still photography, the traditional DSLR body was not designed to deal with the heat produced while constantly capturing video.

- Recording format: Often capturing in a finishing codec, such as H.264, rather than a format suitable for postproduction such as Apple Prores. Codecs like H.264 discard chroma and luma data that can be helpful in postproduction manipulation, such as colour correction and grading.
- Aliasing and Moire. Noticeable video compression artefacts that unintentionally create visibly distracting patterns on repeated lines or frequencies.

Many independent filmmakers faced these same technological problems. Operators in extreme condition, such as Danfung, were forced to design and implement reliable solutions to these issues. Inexperienced, or uninformed, filmmakers using DSLRs often found these characteristics showing up in their work. These issues would come to define the 'DSLR look' until they were eventually addressed by manufacturers, or filmmakers learnt to work around them.

Mobile Phone Filmmaking

After the DSLR revolution, the technology enabling independent filmmakers expanded to include mobile phones. Due to the widespread adoption of mobile phones[6], it has proven difficult to document the beginnings of their role in filmmaking. For example, Aryan Kaganof's *SMS Sugar Man* (2008) is often cited as the first feature film to have been shot entirely on a mobile phone, with the crew shooting in 2006 on a Sony Ericsson W900i.

Figure 7: Sony Ericsson W900i (CNET, 2006)

However, an article written by Sarah Wachter in The Hollywood Reporter (2006, pg.96) cites a French film *Nocturns for the King of Rome* (2005) by Jean-Charles Fitoussi, as the first feature film produced entirely on a mobile phone and released 2 years prior to *SMS Sugar Man*. In the article, Wachter notes that the film was 'shot and edited entirely by [Fitoussi]' (Wachter, 2006), demonstrating a significantly creatively insular practise enabled by technological development.

Mobile phone filmmaking would continue to grow and in 2014, after the introduction of Apple's iPhone, the first feature film shot entirely on an iPhone, *Uneasy Lies The Mind* (2014), was produced with filmmaker Ricky Fosheim acting as director, producer and cinematographer. With each of these filmmakers taking on multiple significant production roles, we can again see a trend toward limited collaboration when suitably enabling technology becomes available.

Figure 8: Apple iPhone (Apple, 2007)

The development of filmmaking with modern mobile phones is well documented in Max Schleser's book *Smartphone Filmmaking: Theory and Practise* (2021). The author catalogues some of the earliest instances of mobiles phones crossing over into the professional filmmaking environment while also detailing the communities of practise and industry structure that developed around them. Schleser discusses mobile phone filmmaking as a new subsection of filmmaking with potentially distinct and developed forms of communication unique from those in traditional cinema. He believe that "…mobile filmmaking has the potential to provide innovative approaches and… disrupt the Creative Industries processes as well as markets" (Schleser, 2021, pg. 17). He credits the release of small sized cinema cameras, from industry leading manufacturers such as Blackmagic Design, ARRI, and RED, as a response to the growing popularity of smartphones; specifically noting the Blackmagic Pocket Cinema Camera and Arri ALEXA Mini. In the case of RED, a more direct

development is observed with the development of their own smartphone in the RED Hydrogen camera phone (Schleser, 2021, pg. 68). However, it is worth noting that after its release in 2018, the RED Hydrogen One received a poor reception. Immediately criticised for its price, unclear demographic, and limited performance as a camera. Jacob Kastrenakes, writing for The Verge, summarised his critiques of the camera phone as “while you can occasionally see glimmers of the potential... it’s certainly not present... and it’s hard to imagine that potential being realized any time soon.” (Kastrenakes, 2018).

Similar support can be seen elsewhere in the industry with Adobe producing a mobile version of Premiere Pro, their popular non-linear editing (NLE) platform, called Adobe Rush. Schleser provides an interview with a spokesperson for Adobe where they discuss the development of the software as a cloud-first platform that would prioritise running on any device rather than requiring a high spec PC. Adobe’s first attempt at a mobile focussed NLE was Adobe Clip in 2015. After observing the developments and demands from filmmakers, Adobe refocussed their efforts and launched Rush in 2018 for Mac, Windows, and iOS, with the Android version launching later in 2019 (Schleser, 2021, pg. 177). This ultimately led to a UI that favours touch controls for those using mobiles phones and tablets, suggesting that the majority of users favour the platform’s mobile options.

Figure 9: Promo Image from Adobe featuring Rush on low spec devices (Lardinois, 2018)

Beyond the technology, Schleser also documents the supportive industry that has grown around mobile phone filmmaking. He views the current structure of distribution as one that supports and develops before filmmakers can progress into alternative avenues of filmmaking. However, he maintains the importance of this as a creative and communal output:

> “Some countries like France (Wilson 2014) or South Korea (Wilson 2014) support film festivals to provide a forum for films in their respective languages and consequentially advocate regional or national culture and identity”
>
> (Schleser, 2021, pg.73)

His writing continues to define mobile film festivals as a place of community collaboration and networking. The writer paints a picture of somewhere to demonstrate skillsets, share ideas, and form larger networks of practise that will allow for future collaborations:

> “Smartphone film festivals provide opportunities for filmmakers to share their work with audiences and engage in a conversation with them. In smartphone film festivals, audiences include peers as much as emerging filmmakers or cinephiles.”
>
> (Schleser, 2021, pg.73)

The writer explores the most influential smartphone film festivals at the time of writing, he cites these as:

- International Mobile Film Festival (San Diego, United States)
- MoMo – Mobile Motion (Zurich, Switzerland)
- SF3, Smartphone Flick Fest (Sydney, Australia)
- African Smartphone International Film Festival (Lagos, Nigeria)

The continued representation of cultures deemed less profitable on the global market could be categorised as an essential practise in independent filmmaking. While the initial work produced in these forums may not find success in western mainstream medias, their developments and explorations ensure that filmmaking remains fresh, relevant, and expansive in its scope. If we assume, as Schleser does, that mobile phone filmmaking represents the early years for future professional filmmakers, then this period of collaborative exploration and spotlighting of cultural identity, becomes a necessity in scaffolding healthy formative practise.

Cameraless Filmmaking

While mobile phone filmmaking continues to develop, consumer technology, such as webcams, and entirely cameraless productions are seeing considerable growth. In 2013 Walter Woodman (*Late Night in the Studio, Rough Cut, JEFF*) and Patrick Cederberg (*Therapy Dogs, The Vow, The Great Hack*) received attention at the Toronto International Film Festival thanks to their short *Noah* (2013) set entirely on a teenager's desktop screen. With many outlets reporting on the film's - at the time – unusual production, some such as Joe Berkowitz reporting for FastCoCreate.com, referred to the film as a 'cameraless' production. The film uses online social cues to generate drama, such as the subtext in 'liking' posts and persistent commenting. The soundtrack is played out entirely through a desktop-based music application. Actors never share the same physical space, instead communicating only through text-based chat functions and video streaming applications such as Skype and Omegle.

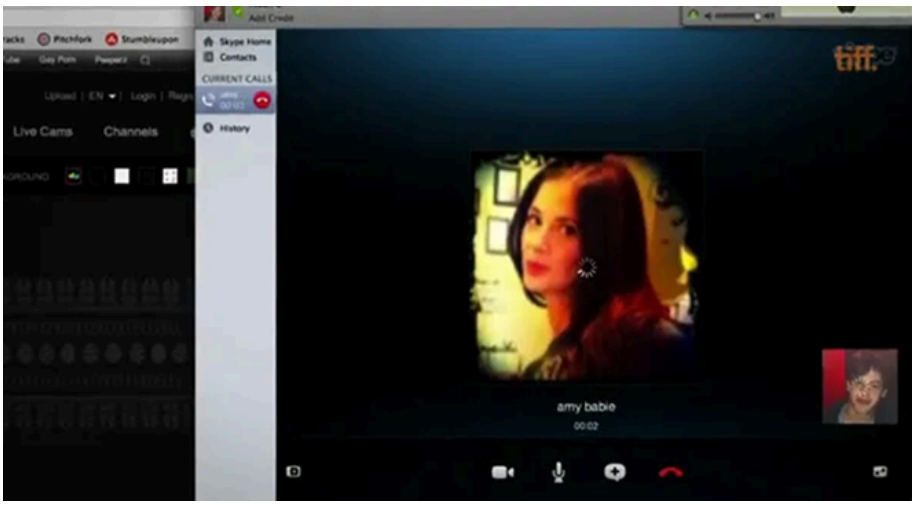

Figure 10: Noah (2013)

Although Berkowitz's reference to the film as a cameraless production is not entirely accurate due to the implementation of webcams, it does lay the foundation for a lot of true cameraless productions made later; *Immaculate Virtual* (O'Byrne, 2021) is one such example of a film further exploring 'desktop production'. By further integrating social medias, the visualisation of split attentions, considering the aesthetic design of digital imperfections, and layering multiple digital workspaces, O'Bryne is able create a significantly expressive piece of media that engages in an artistic, narrative, and emotional way while remaining the sole contributor; demonstrating self-dependent creativity in the digital age. However, these techniques are not exclusive to representation of contemporary digital relationships, with work such as Federica Foglia's *Currents/Perpendicolare Avanti* (2021), an autobiographical experience of immigration, providing a handmade 16mm collage that explores the same cameraless ethos but with older technology.

Alternative Digital Filmmaking

Another writer to address the role of modern cinematographers in digitised productions, is Daniel Maddock. Maddock's article *Reframing Cinematography* (Maddock, 2016) discusses virtual environments and digitised cinematography. The writer concludes that while technological approaches may have shifted considerably, "the practise of the contemporary cinematographer is, in style and substance, much the same as the very earliest cinematographic practise.".

But as filmmakers further explore production styles without the traditional camera, fringe practises, that explore niche filmmaking techniques, become more common. One such example is explored in *Revolution Postponed? Tracing the Development*

and Limitations of Open Content Filmmaking (Giannatou, et al., 2018). This journal entry looks at the “Open Content Filmmaking (OCF) movement” and the rise of filmmakers looking to source their content through the Creative Commons licenses. Giannatou et al. clearly identify the growing community of filmmakers seeking further independence as a desire to work outside the traditional industry:

> Digital cameras, online networks and web-enabled strategies allow filmmakers to manoeuvre away from the tightly controlled structures of the established mainstream industry by offering alternative means for film production and distribution.
> (Giannatou, et al., 2018)

Furthermore, the writer’s conclusion on Creative Commons licenses[7] shows minimised digital collaboration:

> ...collaborative peer production, which was hailed as the process underlying the transformative powers of networked technologies, is not often an objective in open film projects as most of them opt for a ‘Non-Derivative’ version of CC licences
> (Giannatou, et al., 2018)

This suggests that the intentions of online collaborative tools and infrastructure may not be aligned with the desire of practising “Open Content Filmmakers (OCFs)”. With filmmakers already technologically enabled due to cheap DSLRs, accessible mobile phone filmmaking, and costless cameraless productions, the value of collaboration is not readily apparent to these filmmakers. Similarly, gaining access to traditional engagement platforms such as theatrical release or broadcast may not be a priority

to these filmmakers as they view online platforms, such "financial remuneration is not always a priority though for OCF projects” (Giannatou, et al., 2018). It's clear these filmmakers are empowered in their self- dependent practise but the full extent to which this shapes a filmmaker’s style and professional viability remains mostly undefined.

3. Historic Practise

The technology available to filmmakers during their periods of production can inherently have an impact on the overall look and feel of their work. There are some key texts and productions that mark the first application of these enabling technologies and the styles they would influence.

Technology and Isolation

Clive Lawson’s book *Technology and Isolation* (Lawson, 2017) aims to ask objective questions about technological development and the unconsidered impact development can have. The writer cites multiple sources that praise technological development as well as those that criticise the assumptions that development is always a healthy progression. Lawson first cites the English philosopher Francis Bacon who considered the pursuit of technology good and a clear mandate of God (1626, quoted in Lawson, 2017). However, he opposes this against Jean-Jacques Rousseau’s perspective that this is “complacent progressivism” and that “...an organic conception of reality emerged to challenge Newtonian mechanics, and in which logic and reason were counterposed to imagination and feeling” (1778, quoted in Lawson, 2017). The writer aims to convey caution rather than blind acceptance in

each step of technological development. Lawson considers the development of technology to be led by efficiency and productivity, ignoring alternative criteria such as ethical and moral considerations and that advances are “removed from the political and ethical discourse” (Lawson, 2017, pg.82). The book presents some of the earliest scepticism of technology as a consistently positive development as well as a contemporary perspective of the wide-reaching impact technology has had. The writer notes that “Personal or emotional involvement is reduced to a minimum...” and that “Our engagements with technology thus end up transforming us...” (Lawson, 2018, pg.9). Lawson discusses a wide range of technological ethical considerations, allowing us to view filmmaking practice within its context.

Super 8mm

The next significant step towards technology enabling self-dependent filmmaking practise was the introduction of Super 8mm. As noted by Canon’s ‘History Hall’ “Eastman Kodak introduced the “Super 8″ system in April 1964, while Fuji Photo Film concurrently introduced the “Single 8″ system” (Canon, n.d). Designed as a consumer product for amateur home filmmakers, it was quickly adopted by independent filmmakers due to its affordability and pronounced visual aesthetic. Andy Warhol (*Chelsea Girls, Blue Movie, The Nude Restaurant*) was one of its earliest adopters, after capturing his documentary *The Velvet Underground and Nico: A Symphony of Sound* (1966) on 16mm but later transferring it to 8mm for home viewing. Similar experimental pieces were made with the format around this time with William Greaves’s *Symbiopsychotaxiplasm: Take One* (1968) also noted for its experimentation with multiple camera formats with Super 8mm among them. These

are often cited as the first feature documentaries to have been presented on Super 8, but it is worth noting that due to the prevalence of the technology, there are likely to be earlier undocumented examples that were captured and presented on the format.

Figure 11: *Symbiopsychotaxiplasm: Take One* (1968)

The format proved to be so popular and influential that it remains in production today. Communities of support have emerged and some festivals, such as the London based Straight 8, have designed their entire structure around the format. The Straight 8 is an annual competition that has run since 1999 that tasks its participants with shooting their entire film in sequence on one cartridge of super 8mm stock. The films are then processed by the organisers and screened for the first time at the festival event (Straight 8, n.d).

Figure 12: Edgar Wright's Straight 8 film *Forced Hilarity (2001)*

Collaboration – Cinematographer and Director

To understand the impact collaboratively isolated practice has on the creative process, we will need to understand the value in professional collaboration. This is a subject explored thoroughly in *Cinematography For Directors* (Frost, 2009). This text discusses the relationship between director and cinematographer. Frost consistently uses examples from the interviews she conducted while writing the book. The collaborative relationship between director and cinematographer is emphasised as a key component in the production process repeatedly. Many of the professional filmmakers interviewed were fully cognizant of this bond, for example, when asked "What is the worst kind of director to work with?", Richard Crudo (*Grudge Match, American Pie, Down to Earth*) replied "...the guys who doesn't know how to collaborate" (Crudo, cited in Frost, 2007, pg17). Many interviewees echoed a similar sentiment, such as John Seale (*Dead Poet's Society, Mad Max: Fury Road, The*

English Patient) stating ““I like a director who is a collaborator, who feels that you (the cinematographer) have something to contribute to the film” (Seale, cited in Frost, 2007, Pg 2.) Upon reflection, these filmmakers see significant value in their collaborative processes, this suggests that filmmaking practice that leans away from collaboration must be changed by its removal.

Frost also spends some time in the book exploring the nebulous idea of what a creative relationship is. She tries to define it as:

> But how does a creative collaboration of this magnitude begin? Usually it begins with director and DP getting to know each other by talking, “hanging out”, screening films together, and sharing various books, images, music, DVDs. (Frost, 2007, Pg2)

This structureless sharing of ideas and consideration given to the influences each collaborator is trying to achieve provides a process by which each member of the crew can indirectly affect one another. This is what more isolated practise, like that seen in self- dependent filmmakers, could be missing entirely; by reducing the number of collaborators involved in the process, these filmmakers are reducing the number of creative voices and influences on their work. Ultimately this may lead to less informed films that are produced in a more limited creative vacuum.

Later sections of the book look at some of the technological developments that have impacted the cinematographers in more recent years. With many of the interviews conducted in 2007, the topic most of the interviewees comment on is the shift from film to digital. As each of the cinematographers Frost chose to interview were well established, they had been working for decades at the point of writing. It is clear they

shared a reluctancy to fully embrace digital, often feeling like they were losing something intangible in the visual style, with Frost herself noting “Some cinematographers feel that the evolution of the digital camera is fixing something that wasn’t broken in the first place” (Frost, 2007, pg196). Matthew Libatique (*Black Swan, The Whale, Requiem for a Dream*) cites a desire to retain control over the image and distrust with the interference from VFX artists as his reasoning for preferring the medium over digital (Libatique, cited in Frost, 2007, pg.207). The writer also includes input from Roger Deakins (*No Country For Old Men, O Brother Where Art Thou?, The Shawshank Redemption*) commenting on the perceived change in filmmaking disciplines that digital brought: “Film forces a particular way of working that I think is good. There is no reason that you couldn’t do that with HD, but from what I hear, people don’t" (Deakins, cited in Frost, 2007, pg.208). Frost’s interviewees were skeptical of the format at this time and believed that it had a direct impact on the images they produced as well as an indirect impact on the collaborative process. They believed the ‘digital look’ was too clean, lacking the tactile physicality of film. However, it is worth noting that many of the cinematographers quotes in Frost’s work are now digital converts, shooting most of their work on various digital formats, this includes Roger Deakins, Matthew Libatique, and Richard Crudo.

Independent Cinema – Robert Rodriguez

An alternative opinion to those shared above can be found from Robert Rodriguez. Rodriguez’s first feature film was *El Mariachi* (1992), a film made on an incredibly small budget of just $7,000[8]. Even this micro budget did not come from traditional

investors or funding programs but was instead pieced together from the cash prizes the filmmaker had won with his previous short film, along with money he made by signing up for laboratory trials (Rodriguez, 1996). This left the filmmaker with a very strict budget. While the project was still captured on film, Rodriguez has been open about the necessity he felt in transferring the material to tape to embrace a digitised postproduction:

> Don't cut on film. Film is your enemy. You may be shooting on film but don't cut on film... Everything is on computers these days. Film is slow. Film is expensive. Film is not creative. Film takes too long. (Rodriguez, 1993)

While discussing the production of *El Mariachi* in Philip Day's *The Robert Rodriguez: 10 Minute Film School* (1993), the filmmaker cites creative autonomy as a major contributing factor, stating ""Too many creative people don't want to learn how to become technical... they become dependent on technical people" (Rodriguez, 1993). This desire to be free from dependence on others is evident throughout the production of *El Mariachi*, advising others to stay away from complex equipment that requires larger crew collaborations to implement (Rodriguez, 1993). Rodriguez clearly embraces the inherent stylistic distinction this creates:

> ...That's the great thing about first films is they have so much life and so much energy. Big productions can't even duplicate that energy because they've got too good a stand, too much crew. Everything is really smooth and polished and it's lifeless. (Rodriguez, 1993)

Years later in 2018, Rodriguez challenged himself to again produce a film for $7,000, resulting in *Red 11* (2018), a film inspired by the laboratory testing that helped fund *El Marichi*. A companion series, *Rebel Without A Crew: The Robert Rodriguez Film School* (2021), was produced at the same time to document the production and provide advice and guidance for young filmmakers trying to make their own no-budget films.

Rodriguez's approach to filmmaking was born out of financial restrictions. Without access to significant funding, he was forced to embrace enabling technologies and find creative solutions to production problems. It is through his own reflections though that Rodriguez evidently found creative and aesthetic value in those limitations, forming an opinion on the filmmaking process that champions independent practice away from the traditional trappings of Hollywood.

The British Cinematographer

Written by Duncan Petrie, *The British Cinematographer* (1996) explores the differences in the development of the British film industry when compared to the international markets and specifically the dominating US landscape. Along the way, Petrie notes the rate at which technology influenced British films as opposed to their American counterparts, for example Petrie states that "...the wholesale arrival of sound to the cinema in Britain did not occur until 1929/30" (Petrie, 1996, pg. 20), a significant difference when compared to the US introduction of 1923, resulting in multiple years of disjointed prioritised development.

The writer provides examples of mechanical deviations as well as differentiations in style and technique. While discussing the development of new technologies in the 1950s that would proliferate cinema as a spectacle, he emphasises British filmmakers' continued interest in 'reality' filmmaking. This would naturally develop in the 1960s with 'Kitchen Sink', a movement usually categorised by its interest in the dramatic every day and defined by Petrie as "...a series of films, mainly adaptations of contemporary novels and plays, which represented urban working class life with an unprecedented frankness and verisimilitude" (Petrie, 1996, pg 54). The writer quotes Billy Williams (1991) as crediting Walter Lassally (*Zorba the Greek, Before Midnight, We Are the Lambeth Boys*) as the first documentary cameraman to breakthrough into feature film production with *A Taste of Honey* (1961). Williams notes the natural look that Lassally brought to the project as an influential development on the camera work produced under the 'New Wave' and Kitchen Sink movements.

The book consistently references the work of British filmmakers and their collaborators throughout, with the latter half focusing entirely on career notes and filmographies. The book provides an excellent view of foundational development but, due to its date of publication, it lacks the contemporary view of today's filmmaking landscape after technological reshaping has continued.

4. Contemporary Practise

The following section will look at texts that discuss contemporary filmmaking practices, as well as some examples of contemporary practitioners that are notable for their application of enabling technology or for significant self-dependent productions.

Professional Writing in Isolation

The writing process often forms the foundations of film and video practise. As the script is frequently the first document produced, and the writer the first contributor to the production, creative collaboration often starts here. Alex Pheby wrote about the romanticised view of the solitary writer in his entry for Creative Writing: Teaching Theory & Practise: *The Myth of Isolation: It's Effect on Literary Culture and Creative Writing as a Discipline* (Pheby, 2010). Pheby's discusses the concept of the isolated writer as a myth that is fundamentally untrue when considered in the wider professional practise. He notes the constant desire for writers to collaborate with other writers through networking, discussion forums, and other social events, as evidence that good writers understand the value of input from multiple sources. In their desire to share and discuss their work, they hope to improve it. However, Pheby notes that this is something that a writer would have to opt into, given the ability to produce a script is not tied to the engagement with these collaborative activities. What he argues as unavoidable is the movement from scriptwriting as an artform into a professional product.

> If and when the manuscript reaches a major publishing house, another layer is added: judgement is passed by an editor, and then another layer: that of the marketing team, and another: that of the senior editor who controls the funding of any publication. They all have something to say about how the manuscript is written (Pheby, 2010, pg.53)

Pheby's view is that the commercial world requires unavoidable influence, that once a writer attempts to use their work as a professional asset it will inevitably become a collaborative piece. Complete creative insularity in this case is impossible as the structure of publishing, marketing, and distribution start to weigh on the creator and the creation. A similar view could be taken for the professional filmmaker then; as funders, producers, and distributors contribute their opinions in an effort to create a preferable product. Investment leads to collaboration. This type of collaboration may not be motivated by artistic values, but it is still collaboration. This may indicate that the real impact of creative isolation can be more effectively seen in low/no budget filmmaking, student filmmaking, and independent videography, rather than well-funded high-profile releases.

Gareth Edwards

In 2010 a British filmmaker, Gareth Edwards, created *Monsters* (2010) a key example of contemporary filmmaking that demonstrated self-dependent practise, similar to Rodriguez's process noted in the Historic Practise section above. Edwards's contributions to the film were extensive, acting as writer, director, producer, cinematographer, editor, and the sole visual effects artist. Produced with

an equipment budget of $15,000[9], and an undisclosed production budget (Hantke, 2016), Edwards took 2 actors, an editor, and an audio engineer with him to Belize, Mexico, Guatemala, and Costa Rica. With the editor processing dailies from hotel rooms, it left Edwards with only 3 collaborators during much of the production cycle.

Figure 13: Gareth Edwards with a Sony PMW EX3 alongside the film's cast and crew

A rough script encouraged the filmmaker to remain flexible and design scenes that could be malleable in post. Shot mostly on a Sony PMW EX3, Edwards embraced the Letus 35mm lens adapters noted in the Technology section above. These adapters allowed Edwards to maintain control over his depth of field, use interchangeable lenses, and attain a cinematic image while still embracing the digital format. The filmmaker notes the importance of digital on such a small budget, allowing him to 'overshoot' on coverage without cost restraints and more smoothly transition into digital manipulation in post (Edwards, 2010).

Edward's background as a VFX artist is key to the success of *Monsters's* production. Acting as cinematographer, he knew exactly the limits of what he would need during postproduction. Familiar with software of the time, Edwards produced all the effects

in the film with software “off the shelf” (Edwards, 2010), meaning software that was widely accessible for the low/no budget filmmakers or the general public. This included software such as the Adobe package of After Effects, Photoshop, and Premiere Pro, again keeping costs and outside involvement to a minimum.

Monsters is not a radical film in its narrative or thematic value but demonstrates a culmination of contemporary independent filmmaking practises to empower its filmmaker to work alone. Edwards’s collaborations remained minimal through preproduction, production, and post. However, it is important to note that after being distributed by Vertigo, the film’s final budget stood at $500,000 (Hantke, 2016) in order to fund a wider distribution, marketing, and cover additional production costs. It is likely that professional collaborations, like those noted by Pheby, were inevitable before *Monsters* was widely released for audiences. Edwards’s work after this would be far more traditional, working on high-profile Hollywood properties with large collaborative crew environments.

Shane Carruth

Shane Carruth is another filmmaker notable for working with minimal collaboration to develop his films. His first film *Primer* (2004) was produced before the ‘DSLR revolution’, forcing him to work on Super 16mm stock. The film stock would require most of the film’s $7,000 budget. As with Edwards involvement in *Monsters*, Carruth’s contributions to the film were extensive: he was the film’s director, producer, cinematographer, editor, music composer, and acted as one of the film’s lead characters. Amy Taubin interviewed Carruth and Mark Urman, the head of theatrical distribution for THINKfilm, at the Sundance film festival where the film

secured its distribution deal. Urman notes that "Shane is a complete autodidact," (Taubin, 2004) and that during the process of negotiating the deal “He was less interested in getting the maximum up front than in reserving certain kind of rights.”, suggesting his creative autonomy remained an important factor for Carruth during negotiations.

Unlike Edwards, Carruth continued his multi-skilled approach to filmmaking with continued autonomy. His next film, *Upstream Color* (2013), again saw Carruth taking on the role of director, writer, producer, cinematographer, and composer as well as starring in the film. Working on a minimal budget again, $50,000, it is clear Carruth’s interests as a filmmaker require significant creative control. It is worth noting that thematically, *Upstream Color* follows characters isolated from the rest of the world, references the self-reliance isolation subtext of *Walden* (Thoreau, 1854), and has been referred to by some as a discussion of transcendentalism (Francis 2007). It is clear to see the link between these themes and the Carruth’s own practise as an independent creative.

Sean Baker

After Carruth and Edwards were empowered by the development of digital filmmaking processes, the technological trickle down allowed consumer mobile phones to start capturing high-definition video. Sean Baker saw the growing popularity of mobile phone filmmaking as an opportunity to demonstrate contemporary filmmaking capabilities on widely accessible technology.

Figure 14: Production of *Tangerine* with the iPhone 5s (Baker, 2015)

Baker produced *Tangerine* (2015) using three iPhone 5s, FilmicPro app, Steadicams, and three 1.33x Anamorphic Adapter Lenses from Moondog Labs (Newton, 2015). While this wasn't the first film of its kind to be produced on an iPhone, with *Uneasy Lies The Mind* coming one year earlier, it is most notable for its refined style and commercial success. While discussing the film's visual aesthetic, Meagan E. Malone (2020) notes the three major ways the Tangerine looks different from other films of its genre as:

- Heavily saturated image.
- Use of extremely close, intimate shots on a wide-angle lens.
- Deep focal plane maintaining focus throughout the image.

Two of Malone's identifiers are technologically lead with the camera's fixed lens and small sensor size contributing to unavoidable characteristics, as evident in Figure 15 below. But the writer notes the goal for the film remains "...a picture quality that many

critics and viewers alike accepted *as* a film." (Malone, 2020); choosing not to wholly embrace the technology's characteristics but still to chase a style that is considered appropriate for cinema.

Figure 15: *Tangerine* (Baker, 2015)

The application of anamorphic lens adapters and a desire to have the image considered 'filmic' echoes the same desires of the early 35mm adapter and DSLR coverage by Philip Bloom and Vincent Laforet. In both instances the creators are striving to achieve a cinematic image that approaches the look of 35mm film through third party hardware and software designed to shift the image closer to audience expectations. During an interview with Casey Newton, Baker himself notes the importance of the adapters they used "To tell you the truth, I wouldn't have even made the movie without it... It truly elevated it to a cinematic level." (Baker, 2015). Baker's intentions were to emulate a type of 'cinematic' image that is familiar to film-going audiences; embracing some of the aesthetics of this enabling technology, but not allowing it to entirely define the image.

Isolation as a Theme

Due to their lack of resources, collaborative limitations, and reliance on their own skillsets, self-dependent filmmakers can often find themselves more creatively isolated than traditional filmmakers. As with any significant social influence, this often finds its way into the thematic content of artistic expression – both consciously and subconsciously. This results in a trend of self-dependent filmmakers presenting narrative focused on isolation or introverted characters struggling to find their way. This can be seen in recent short form productions such as Yingtong Li's *The Silent Whistle* (2022), Rory Fleck Bryne's *Dash* (2021) and Ryley O'Bryne's *Immaculate Virtual* (2021), each of which tackle themes of isolation from their own differing perspectives.

Figure 16: *The Silent Whistle* (2022)

The Silent Whistle follows an introverted young woman's involvement in her neighbor's family matters, emphasising the neighbors disconnect from his parents and similarly her own self-imposed isolation from her own issues.

Figure 17: *Dash* (2021)

Dash strives to provide a visual representation of isolation through experimental framing and aspect ratios, consistently keeping its protagonist disjointed from its world until he is finally able accept and express himself resulting in an empowering use of clear central framing.

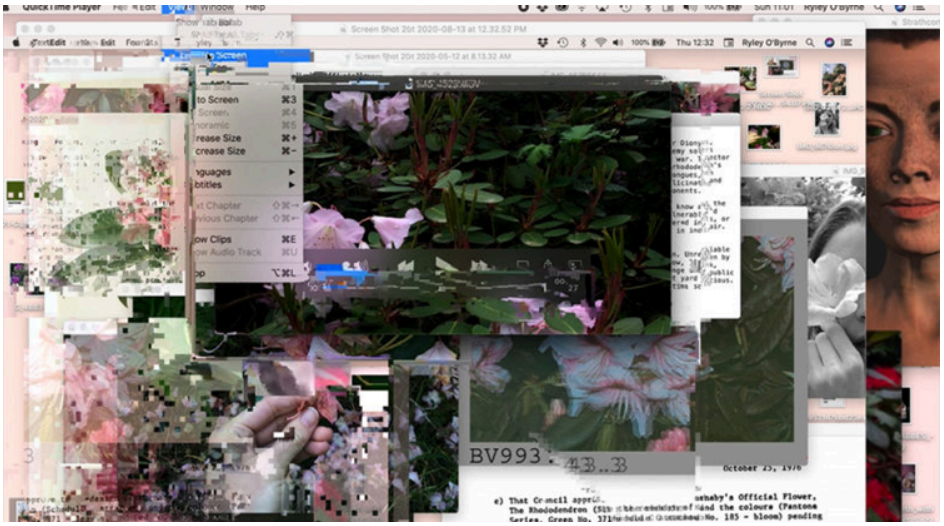

Figure 18: *Immaculate Virtual* (2021)

Finally, *Immaculate Virtual* depicts our contemporary digital lives and the communicative troubles this can bring, frequently spotlighting visual glitches and

shared thought processes, it communicates disconnected connectivity in the digital age.

Extreme examples of isolation are an often-repeated theme in wide release content as well, *Room* (Abrahamson, 2015) is one such example that uses a modern view of abduction and illegal imprisonment to explore grief and PTSD. The film also explores Plato's allegory of the cave[10], as played out through the eyes of the victim's child. This explores the effects of education on human perception, in the case of *Room*, the child has never known a world beyond a small room so he struggles to believe one exists at all. The subjects of Robert Egger's *The Lighthouse* (2019) remain geographically isolated throughout the film, providing a German expressionist inspired extrinsic representation of their internal social conflict; the film depicts isolation as a sorrowful retreat from lurking unknown horrors.

Conversely, Chloe Zhao's *Nomadland* (2020) views American nomadic isolation as a more cathartic experience, one that celebrates the rejection of modern living under commercially driven capitalism, but still seen as a lifestyle only experienced by those going through periods of significant pain or rejection. Zhao's previous films explore similar themes, including *The Rider* (2017), a film that more overtly displays its western influences, a genre frequently linked to themes of solitude.

Host (2020)

Filmmakers have always faced unforeseen problems far outside of their control, but contemporary practitioners are able to navigate solutions through cleverly utilised technologies. One such example is Rob Savage's *Host* (2020), a British film made during the 2020 COVID-19 pandemic lockdowns. *Host* is notable for its production cycle in an unusual period of isolation. Like *Noah* (2013), the film takes place entirely on a desktop interface.

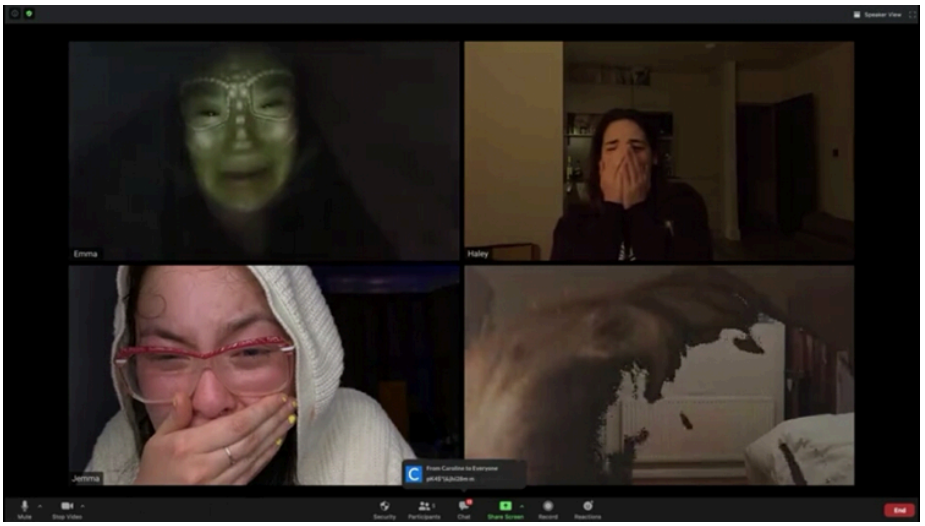

Figure 19: Host (2020)

Specifically, *Host* plays out using the video conferencing software Zoom. In their book *Creative Resilience and COVID-19* (Turner & Murray, 2022), Turner and Murray note the familiarity of *Host's* narrative content and that the films form is what provides its originality. The writers note that "The film's unrelenting and unbroken point of view via the Zoom interface frames the entire film through a medium become all too familiar during the pandemic." (Turner & Murray, 2022) and argue that its familiarity provides the most unnerving part of the final film.

Outsider Cinema

Written by Emanuel Levy, *Cinema of Outsiders* (1999, Levy) is an exploration of American independent cinema. Levy uses the term ‘outsider cinema’ to define work produced outside of the traditional Hollywood system. Some of the directors discussed in the book include Spike Lee (*Do the Right Thing, Malcolm X, She’s Gotta Have It*), David Lynch (Eraserhead, Blue Velvet, Mulholland Drive), Jim Jarmusch (*Broken Flowers, Stanger Than Paradise, Mystery Train*), among others. These filmmakers are frequently removed from the mainstream industry and have limited access to facilities, resources, and expansive budgets. The writer notes that due to their financial limitations and limited access to technical knowledge, these restrictions frequently result in experimental solutions to their production problems. For example, while producing *Eraserhead* (1977), Lynch couldn’t afford a typical production period, instead choosing to shoot the film on-and-off across a period of years[11]; resolving one resource issue by leaning more heavily on another. Levy suggests that this type of problem solving is characteristic of independent filmmakers.

While Levy explores the influence of these filmmakers, and considers their independence as a key factor in producing distinct auteuristic work, it is important to note that due to the book’s date of publication it lacks the perspective of more contemporary developments.

5. Audience Experience

As technology continues to develop the filmmaking experience, the audience's process of consumption is similarly changed. While early developments trended towards refinement within the theatre, emphasising the shared viewing experience, more recent demands have priotised choice for an individualistic experience that challenges our traditional views of cinema as a social, community driven practice. While this may add significant technical complexities for today's filmmakers, it also provides multitiered avenues of distribution that independent filmmakers are able to explore regardless of production budget.

Streaming Wars

One of the most often cited benefits of today's distribution landscape is a filmmaker's ability to reach a global audience through online streaming platforms. This newly developed market is explored and categorised in an article from Ramon Lobato and Amanda Lotz entitled *Beyond Streaming Wars: Rethinking Competition in Video Services* (2021).

In their writing, the authors explore the newly formed landscape of video streaming and attempt to identify categorisation that defines the market potential for each platform type. They use three categories of service type defined as:

- AVOD. Advertising video-on-demand.
- SVOD. Subscription video-on-demand.
- TVOD. Transactional video-on-demand.

The writers discuss the type of content expected from each of these services, noting that AVODs derive value from mass viewing and that the content must either be widely appealing or compliment a wider spectrum of content that maintains attention for extended periods. SVODs, they claim, should offer content viewers are willing to pay for, inferring the need for higher production values and fewer opportunities for independent filmmakers. This may lead independent filmmakers to believe that SVODs, such as Netflix, represent the new age of broadcast productions; an area of distribution for well-funded crews, curated by standardised distribution policy to be streamed en masse for a monocultural experience. Conversely, independent filmmakers may view AVODs, such as YouTube, as providing the flexible audience engagement for polycultural experiences, where a free market determines growth to near-infinite niches. While this clean-cut definition can be challenged in a multitude of ways, Lobato and Lotz provide a geographical observation.

The writers note that a common misconception is for media professionals to assume that streaming platforms globally compete directly with traditional forms of media such as theatrical distribution and broadcast television. In their view, some countries, such as the United Kingdom, have demonstrated complementarity among services, though they do contrast this with the United States audience that have trended towards substitution instead (Lobato & Lotz, 2021). This differentiation by geography is noted in the funding practices of the competing platforms as well where they cite the benefits of Netflix's investment: "Netflix has progressively expanded its original production worldwide, shooting original series and movies in more than thirty countries" (Lobato & Lotz, 2021). Should Netflix continue to grow its investment in this manner, this could result in notable opportunities for independent and

established filmmakers outside of the US. However, this type of investment is not common across all SVODs.

> ...there is a notable difference in operational dynamics between national services and multi-territory services and, furthermore, between the multi-territory services committed to significant international production investment (especially Netflix) and those using a “US export” model (Apple and Disney, at this stage).
>
> (Lobato & Lotz, 2021)

Their findings indicate that the current market leader, Netflix, has continued to invest significantly with filmmakers based outside of the US. However, Disney+, a significant competitor in the market, remains geographically insular in its content investment, providing minimal financial support to international productions. A trend noted again in the following section.

American Cultural Insularity

An often-proposed benefit of online distribution is its leveling of the cultural playing field. While American-made content has traditionally dominated the global box office, it is thought that without the reliance on limited theatre space – theatre space often eaten up by the Hollywood marketing machine – that foreign films and low budget films would have a bigger chance of finding an audience. Christof Demont-Heinrich explores this in his article *American Cultural Insularity and Global Online Video: Are Netflix, Amazon Prime and Other Digital Streaming Platforms Broadening Americans’ Foreign Film Consumption Horizons?* (Demont-Heinrich, 2022).

The writer outlines a theory called American Cultural Insularity that he abbreviates to ‘ACI’. From his findings, he believes that American audiences tend to remain insular in their media consumption habits, with non-English-language and foreign films “never exceeding more than 7% of annual domestic box office shares” (Demont-Heinrich, 2022) in the US. Rather than use the medium to explore other cultures, he claims American audiences look for work produced by American creators.

> ... compared to most people in most other countries, Americans tend to consume much more of their own cultural media products and much fewer cultural media products produced in other countries than people in other countries consume. (Demont-Heinrich, 2022)

Demont-Heinrich accredits this to a few things but emphasises an entrenched ‘Hollywood cartel’, a nameless set of executives, who’s political and economic interests align with keeping American audiences watching American produced Hollywood content.

> Political economic forces antithetical to foreign film, most notably, the so-called Hollywood cartel, which has fought successfully for more than a century to protect its American market hegemony from foreign competitors, has almost certainly played the biggest role in comparative lack of consumption of foreign film in the United States (Demont-Heinrich, 2022)

The second factor that is emphasised is the definition of white middle/upper class American as the DCG, an abbreviation used for ‘Dominant Cultural Group’ from a global perspective. This claim is that Americans, as the world’s DCG, produce the most amount of media content and thus cyclically expose themselves to their own culture. This insular cultural consumption is something that Demont-Heinrich claims is common among global DCGs.

During his research, Demont-Heinrich hoped to find evidence of a trend away from this traditional insularity seen in American audiences. He theorised that the shifting forms of consumption, from theatrical viewing to online video streaming, had the potential to emphasise viewing habits outside of the established ACI inward trends. His work focused on reviewing popularity charts compiled by Flixpatrol[12]. However, upon completion of the research, the writer notes “no evidence exists of a movement among American-based consumers toward more consumption of foreign, non-English-language feature length films...” (Demont-Heinrich, 2022). His conclusive reasoning is that the research carried out looked only at the upper percentile and ignored any movement lower on the charts. This suggests that while further research may reveal some change in watch habits, a significant shift has not yet occurred for American audiences. Citing some of the issues with the current online streaming platforms, the writer suggests “Such change *could* happen *if* [Netflix and Amazon] were to, for instance, acquire and place more non-American produced and non-English language films squarely and directly in front of more of their subscribers” (Demont-Heinrich, 2022).

It is evident from Demont-Heinrich's study that providing easier access to low budget, foreign, and non-English-speaking films may not be enough to increase their

market viability. When paired with the view of Lobato & Lotz, regarding SVODs noted above, we can see that independent filmmakers operating outside of the US may struggle to find an audience on these platforms; this could result in further limitation in funding, should these trends be observed by the platform holders themselves.

YouTube and Vimeo

As noted above, today's distribution options for independent filmmakers have been shaped significantly by technological developments. While some distribution models appear as online facsimiles to those that preceded them, others present unknown territory and opportunities. While independent filmmakers working with financial backing may still be able to operate within the SVOD systems, like Netflix, self-dependent filmmakers working outside of the industry will quickly find themselves looking elsewhere to get their work seen. When searching for an audience, these filmmakers are likely to gravitate towards two primary platforms: YouTube and Vimeo.

While discussing the potential for VOD services to increase experiential representation in cinema, Joseph Owen Jackson writes "...Youtube and Vimeo offer important online spaces for aspiring independent filmmakers on modest budgets to nurture audiences and promote their work" (Jackson, 2020). The authors focus remains on the decolonialisation and presence of African voices on the platforms, though his writing acknowledges the potential for voices of any background to gain an audience.

Unlike the SVODs providing premium content to today's mass market, YouTube and Vimeo offer their users interactive opportunities. Whether through the creation of playlists, creating comments, or generating their own content, users are empowered to take part in the platform's output. In her book *Vidding* (Coppa, 2022), Francesca Coppa discusses the development of audience involvement in the re-editing of mainstream media. Start in the 1970s, she tracks the development of this 'remix culture' until its current state, where the practice of Vidding finds its home on YouTube and Vimeo. The author understands the interest in Vidding comes from a desire for audiences to see their own stamp on the work, they want to "...remake the mass media so that it's personal, customized, handworked." (Coppa, 2022).

Coppa's writing explores the expressive nature of this work and how audiences have often been eager to engage further with the film and video they consume. Platforms like YouTube and Vimeo allow for this direct engagement with audiences, and in some cases, create a space in which new filmmaking talent can be developed from Vidding. Interestingly, Coppa does not draw any comparison between this desire to personalise content and communicate through shared media knowledge, and today's online meme culture.

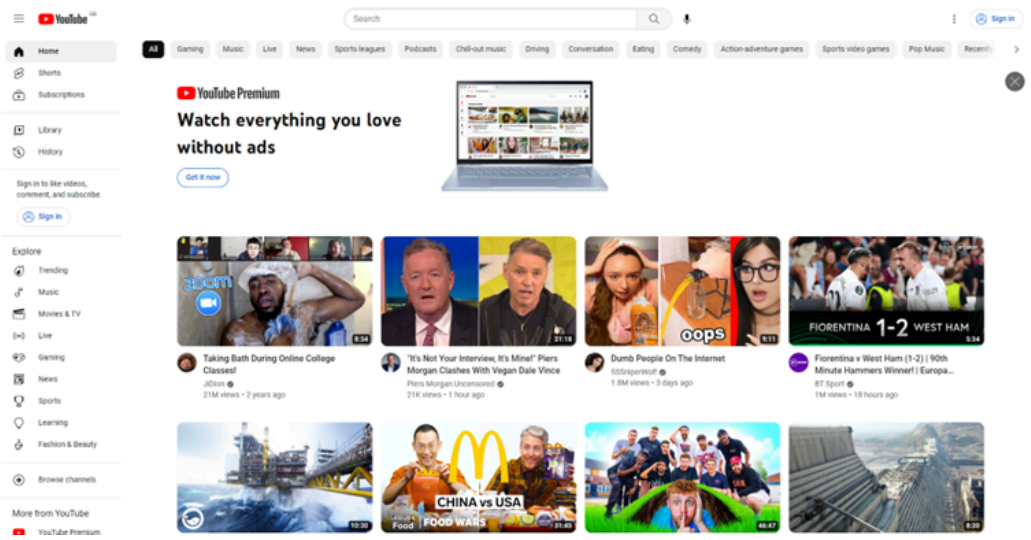

Figure 20: Landing page for YouTube.com (June, 2023)

However, Coppa also notes the problematic space these platforms occupy, citing machine learning and algorithmic delivery as a clear issue when it comes to generating genuine online engagement. The author outlines this as “Social media platforms increasingly use algorithms—complex software— to sift through content and decide what to surface, prioritize, and publicize and what to bury.” (Coppa, 2022). The algorithms that dictate engagement are often mysterious by design, Coppa defines these as “black box algorithms”, a name given because neither the audience, nor the content creator, knows how they work. This black box approach to audience engaging algorithms poses a significant challenge to independent filmmakers attempting to utilise the platform as a distribution tool, ultimately undermining the promise of a ‘free alternative’ to contemporary distribution through SVODs like Netflix and Amazon Prime Video.

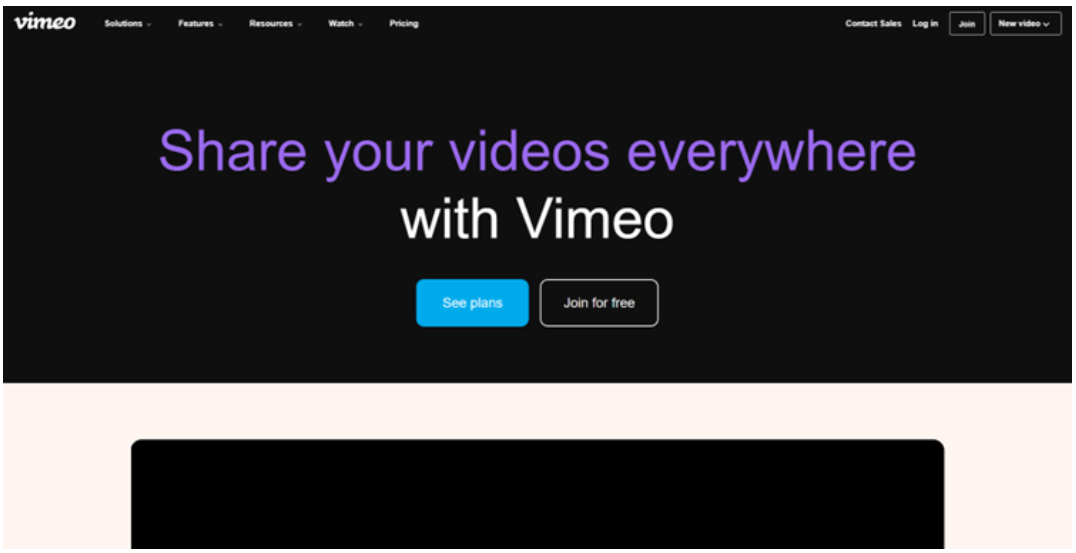

Figure 21: Landing page for Vimeo.com (June, 2023)

While YouTube remains focused as a platform for all audiences, Vimeo considers itself “a video hosting and sharing site designed specifically for filmmakers to showcase their work in the best possible setting (Vimeo “Home”)” (Cited in Olibet, 2022). The approach for Vimeo as a platform is to emphasise the creator experience rather than the audience experience: “Vimeo is less a platform for social media and more geared toward creator-centered content delivery (Tavares, 2015, cited in Olibet, 2022).

When considering the opportunity to engage an audience, the community size plays an important role for any filmmaker. YouTube is often cited as one of the most frequented websites on the internet with “Over 2 billion users visit the site each month” (Shelton, 2023), while “Vimeo has a significantly smaller user base, with around 170 million active users.” (Shelton, 2023). This leaves filmmakers with a

difficult decision to make when weighing up the potential audience pool and the suitability of the platform for their type of content.

While many alternative exist to YouTube and Vimeo, such as cinema curation websites like ShortOfTheWeek or Nowness, these two platforms still represent the majority of free-to-access video sharing online. When looking for end destination platforms, self- dependent filmmakers are likely to find themselves uploading their work to one of these platforms – if not both.

6. Conclusion

It is evident from the research gathered that technologies have frequently enabled filmmakers to produce work in ways they otherwise would not have been able to. The technology involved often allows for more complex setups, or a greater range of visual styles to be achieved on lower budgets. By continually narrowing the gap between ‘professional equipment’ and ‘consumer equipment’, the independent filmmaking workflow has significantly developed over the years. Historically, developments in camera tech have led to shifting markets and demonstrable creativity from independent filmmakers, such as those seen in the era of 16mm, 8mm, and early video. The most enabling technology for filmmakers today can be seen in small, affordable cameras such as DSLRs/Mirrorless cameras and mobile phones. Mobile phones in particular have seen significant support by manufacturers and filmmakers, with NLE software developed to support these devices as self-contained filmmaking ecosystems; allowing for pre-production, capture, post-production, and even distribution to all occur on the same device. Bespoke

festivals have been created to support the work produced this way while trying to create a culture around the practise.

While these technologies are often chosen for their accessibility, this choice comes with a stylistic knock-on effect. As noted with the impact on the video journalist scene, DSLRs and Mirrorless cameras brought achievable control over depth of field and standardised progressive images, as well as unwanted artefacts such as rolling shutter. Similarly, the widespread adoption of Smartphone filmmaker saw filmmakers like Sean Baker face issues with stabilisation, image processing, and fixed lenses; problem solving these issues lead to the striking visual style of films like *Tangerine* as discussed above. The characteristics of these technologies create a visual style that can define these films, setting them in a period of filmmaking characterised by its technology.

Beyond the technology, the reduced collaboration seen in self-dependent work is likely to be having an impact that is more difficult to trace. As explored by Jacqueline Frost, the collaboration between members of the crew have historically been considered significant contributors to a film's DNA. The communication of influences and sharing of skills is often cited as a key skill in a director's toolkit. If the technology and budget inherent in self-dependent work reduces the need for collaboration, it also reduced the number of influential voices the film is exposed to. While this may lead to directors creating more authorial work, given a more direct control over the final product, it may also result in less creatively broad work; limited by one voice rather than being allowed to grow through the influence of many. Open content filmmakers and those involved in remix editing like 'vidding', take this in

another direction with anonymous collaboration through their reliance on pre-existing assets generated by filmmakers they may never interact with.

Even in distribution, filmmakers today are empowered to find their own audiences. Multiple platforms exist to allow for produced work to be seen by – potentially – millions of people with no cost involved. However, the reality of this is significantly different than the utopian dream often described. From AVODs, SVODs, TVODs to the remaining broadcast and theatrical releases, today's filmmakers are considering a range of platform engagement in ways never seen before. With each of these platforms favouring a different type of content design, it is vital that filmmakers understand their distribution plans before beginning production. Again, this can result in changes to the work based not on creative decision making, but on the demands of business realities.

As an independent film is currently defined as a production budgeted below $2 million[13], this leaves a significant amount of varied production types labelled under the same definition. The reality is that a filmmaker working at the top end of this scale is generally well funded and their experiences are vastly different than that of filmmakers at the opposite end of the scale. This research will continue by defining the challenges faced in self-dependent workflows. By identifying the differences these filmmakers faced when compared to more traditional workflows, we can better understand how emerging filmmakers are engaging with their practise. We will be able to more clearly identify the enabling technologies that self-dependent filmmakers are relying on and consider the wider impact this has on their professional development.

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Appendix B: Test Video 1: *Cam*
https://drive.google.com/file/d/19x3fTJ9NOmQzALoIcJ6JR5A7dwOpFxie/view?usp=drive_link

Appendix C: Test Video 2: *Chance*
https://drive.google.com/file/d/1Ain2phLTw5pD5dp_7YgabA1oVnxiKepj/view?usp=sharing

Appendix D: Test Video 3: *Lomo Lakes*

https://drive.google.com/file/d/1-yXE2oLXc1Ntevy8rXVVqj7sV4gkesbE/view?usp=sharing

Appendix E: Script
https://drive.google.com/file/d/1aiEHN-UPalb_G1Pmh-4NaPOaUzDW6beP/view?usp=sharing

Forgotten Glow

(Working Title)

written by

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EXT. MOORS - MORNING

The air is cold, thick with fog. A WOMAN (40s) is dressed in a large coat, thick wellies, and muddy trousers. She wades through the boggy marsh of the moors.

A backpack hangs over her shoulders, we watch it bounce back and forth as she walks.

A dog runs off its leash but stays close. Walking towards a small structure, she stops and looks down.

Noticing something at her feet, she hesitates before kneeling down to pick it up. The item remains off screen, we don't see it.

POETRY (V.O)
When we were young we felt connected,
Three futures bound by scraps of twine,
A tangle of hope, love without loss,
But far too young to truly connect.

EXT. TOWN CENTER - DAY

A busy crowd of people bustling down the street. A YOUNG GIRL (8) who resembles the woman on the moors. She runs through the middle of the crowds. She is too small for most people to notice.

She runs past legs, coats, bags, and more on her way to something unseen. The NOISE of the street grows louder as she pushes past more people.

POETRY (V.O)
When we grew, we all grew apart,
I was slower then, couldn't keep up,
A trip in the mud left me further behind,
But time demands desolate growth.

INT. BUS - DAY

The setting sun shines through the window, the seats are mostly empty. For the few people that do clutter the seats, their vision is occluded by each row. No one is talking to each other.

A YOUNG LADY (20) sits in her seat, headphones on, eyes wandering out the window. In front of her sits her FRIEND.

She looks at the back of her friend's head. She is reading a book.

Before she has time to look away, her friend gets up on her seat, turns around and kneels on the chair to talking to her.

The friend flows directly into a conversation that goes unheard.

As she talks, the girl sits and stares without interest. Her headphones stay on and we continue to hear her MUSIC.

POETRY (V.O)
We stayed close but you didn't want to stay,
Too close to hear on any given day,
Kept at arms, held a hundred long,
We stayed close but no one asked you to stay.

EXT. BUS STOP - DAY

The same young lady now sits on a bench. She is waiting. Headphones still on; the MUSIC still plays. She sits on a two person seat. No one besides her. People pass by: an array of faces and personality.

POETRY (V.O)
I see bonds strong and remembered well,
Lonely facades online and off,
It's easy to hide behind posted pleasantry,
I see bonds fragile and broken.

INT. BEDROOM - NIGHT

A TEENAGER (19) dressed in a dirty torn hoodie with scuffed Chuck Taylors on their feet with torn laces.

He sits in a computer chair, staring at the screen. A NOTIFICATION tears his eyes from the screen to his phone.

POETRY (V.O)
Community generations and online cliques,
Faces you remember, still fresh from time,
Names you forgot - or tried to at least,
A generation by name, the connection is
lost.

EXT. CITY - NIGHT

He walks out the room as if guided by the message he just received.

He walks out into the urban city streets. The ground is wet, reflecting the light around him.

Staring at his phone, he bumps into a MAN (Early 50s) doing the same. The two barely acknowledge the interaction. Both pass by.

EXT. BRIDGE - NIGHT

POETRY (V.O)
Shallow serpents chase the binary dream,
And we all took a bite of the Apple - OS,
They locked the garden and threw us away,
The world we all need, now traded in meme.

The teenager arrives at a bridge passing over a busy road. As he walks his eyes only ever leave the screen for fleeting glances at the world around him.

INT. BAR - NIGHT

A busy noise fills the air, people CHATTER as they drink. The NOISE of voices, television, and clinking glass drowns out any attempt at quiet.

A booth of 3 friends sit with half-drank glasses on the table, each of them looking at their phones; They swipe and tap. Among them is the woman from the moors.

The man from earlier is sitting at a small table, drink it hand and phone in the other.

POETRY (V.O)
Forums for us and forums for them,
Secluded in personalised prisons,
A quick fix swipe, a few more for the road,
Click. Click. Click. Click.

The teenager sits at the bar. Puts his phone in his pocket and looks around. No one is looking back. The NOISE of the bar grows louder. He closes his eyes and breathes in.

POETRY (V.O) (CONT'D)
Smiles without subtext and sneering clock,
Eye contact without those important alerts,
Presence as a present, a gift that won't give,
You never had time. Tick tick tick, tock.

EXT. FOREST - DAY

The noise of the bar stops. The teenager is standing on a path among tall trees. He runs the edge of his shoes along the dirt at his feet.

POETRY (V.O)
The road split in two, three, four,
Paths become trails and fall into dirt,
We knew the route, knew it by heart,
But the road split in two, three, four.

A cyclist passes by, a quiet whirring of wheel the bike's wheels on the ground mixes with the birds CHIRPING. The two make eye contact and smile.

The cyclist throws something to the teenager. He fumbles to catch the item, it falls at his feet. He kneels down to pick it up. We catch a fleeting glimpse of an unlit flare.

EXT. SEASIDE TOWN - EVENING

The same man we saw earlier is dressed in muted colours. He walks down by the docks. He stops every so often to look at his surroundings. He arrives near a set of boats, their masts and sails create a web of rope.

POETRY (V.O)
Weekly bells ring but we can't listen,
Tired now, I'm quieter than I was,
Taking our time as we race to the end,
Bells ringing on without a musician.

INT. HOME - DAY

A modern home, furnished and lived in but we do not see any occupant. An extractor fan slowly closes, it whines as the blades meet in the middle.

A crumpled bag sits in the soft light, its leather cracked and worn.

A CRT television displays static, it quietly hums a high frequency.

POETRY (V.O)
But we're still here. You and I,
Memories dormant, dim, dulled,
Pages blowing freely in open wind,
Why memory? We're still here you and I.

INT. DINING ROOM - EVENING

Through a window, we see the same man from the docks, he's with his family sitting at the table. Food is being passed around. The light pouring out of the window is a warm golden orange. They are celebrating.

We see them talking but cannot hear. Every comment seems to bring muffled laughter to the table.

POETRY (V.O)
Past times can pass the time,
Where warmth and kinship comfort,
Gift wraps and table snacks in suburban light,
We smile so we laugh before the laughing
passes.

The same man is standing outside of the window, looking in. He smiles to himself. He turns to walk away before noticing something at his feet.

He bends down and picks up an unlit flare, the same as what the teenager held.

EXT. GARDEN - EVENING

Weathered and unkempt, grass overgrown as wildlife starts to reclaim the once cared for space. The day's light has fallen into a deep blue.

A children's bike is laid on its side, cobwebs grown on the dirty spokes.

A small stone statue shows the passed years, its features weathered by time.

Rusted metal furniture sits empty in the evening's air.

POETRY (V.O)
Say you need us, or say you don't,
Pick it apart and all comes undone,
Trodden tile cracks under silence,
Say you need someone, say something at all.

EXT. MOORS - MORNING

We return to the woman on the moors. She rummages through her bag and pulls out the flare she found. Music slowly begins to swell.

EXT. FOREST - DAY

We return to the teenager in the forest. His hand still holding the flare thrown to him. He stands up, hesitant but excited.

EXT. SEASIDE - NIGHT

We return to the man at the seaside. He holds the flare, wraps his finger around the pin, and thinks for a moment.

POETRY (V.O)
Backs like a shield, we face away,
Slowly turning year after year,
Inch by inch we close ourselves off,
But keep turning and we open back up.

Each of our characters pulls the ring on their flares. They hold them high above their heads. Light pours out as we cross-cut between them. They hold back a feeling of relief as the light calls to each other. In this moment, they are connected. Our music crescendos.

POETRY (V.O) (CONT'D)
Ships in the night share the same water,
If light brings us home, I'll find warmth with you
Moments burn quickly but we're here together,
I see you now, do you see it too?

EXT. MOORS - MORNING

A landscape drenched in fog. Light from the flare, still being held high, can be seen in the distance illuminating a small patch. The flare's light runs out as the music fades. The figure returns to the fog. We see only a foggy moor once again.

CUT TO BLACK.

THE END.

Appendix F: Production Diary

https://docs.google.com/spreadsheets/d/1dClxsWXDDcPSLjQ4OoAsk6kNUpT1mAzg/edit?usp=sharing&ouid=100422341698635653190&rtpof=true&sd=true

Entry #	Date	Section	Notes	Positive Reflections	Negative Reflections
1	14/10/23	Cam	Audio, studio session. First session with Cam. No cameras at this stage. This was used to create a relationship with Cam and understand his story further, while recording/missing the music track that will be used.	Plenty of time to connect with the subject	No actual footage recorded Organisation for this took longer than expected. Mostly chasing the subject.
2	21/10/23	Cam	Studio session Continued studio session, this time with cameras. Cam clearly has some minor nerves on camera but is extroverted enough to work through them. This is the first recording session to utilise camera and lighting. An RGB LED tube kit was used. The tubes caused major distractions for me during setup. A wifi/bluetooth issue while pairing caused an update to automatically install. This took my attention away from the subject, ensuring Cam was comfortable, and considering more tactile ways we could capture the story.	Produced independently in a backpack approach First video elements produced	Lighting kit was a distraction Camera and lighting put more pressure on Cam. He was clearly more nervous
3	29/11/23	Cam	Theatre recording session. Edit before submission. Similar to the previous session, this took longer than expected to arrange. Discussions with Cam so far have mostly been about availability and logistical planning. During the shoot, contrasting idea were being discussed on set rather than being worked out ahead of time. Equipment again became a distraction with a significant amount of rigging being needed to utilise the space properly. Playing the audio for sync became a similar hindrance, consistently removing my attention from the subject and the camera.	More material has produced with some of it capturing the space Cam wanted to use	Too much kit, to many lighting setups
4	30/10/23	Lomo Lakes	Lomo capture Tried using a LomoKino camera for the first time. This uses a 35mm photography roll with a hand crank mechanism to pull the roll through the gate. I used 2 rolls during the trip. None of the material was planned, I just used the actuality of some friends on a day out. This let me focus on the camera and not worry about the content. The camera is small and very light weight, it lacks a professional build quality. The hand cranking mechanism is cumbersome and tricky to maintain during a take. Framing is very inaccurate as the camera uses a small view finder approximator on the top of the body that is difficult to see through. The body's shape makes for awkward hand holding, though rigging the camera for tripod would likely undermine the aesthetic.	It was a freeing process Closer to street photography Completely removes technological barriers Subjects are less visibly uncomfortable when filming	Cumbersome camera Audio would require a dual system
5	3/11/23	Chance	Capture Chance and I set out to shoot a few locations around Hartlepool (and the surrounding area) that hold significance to him. Through this we hope to design a sort	Quick and flexible workflow New ideas could be generated and tested on the fly	Camera limitations made the shoot challenging at times. The absence of a viewfinder or monitor made some environments tricky to work in.

			of visual poem that expresses geography and minimised performance as a the main feature. We used an old BMPCC, 1/2 lenses, and a tripod. This variation of backpack production felt more appropriate for digital cinema cameras (over the LomoKino experience) but still maintained a minimal set of equipment. The shoot relied heavily on natural light, forcing us to shape the image around it at times.	The concept is simple and effective without over engineering	
6	5/11/23	Chance	Edit Initial edit doesn't use any audio. We tried slow releases on opacity blending to leave images over the top of others for extended periods of time. While effective, I wonder if this could be emphasised further. Reversing the speed on a few of the clips let may let us know how much of the audience is taking in the surrounding area compared to those that look for the performer instead. This could also create an impactful sense of displacement if pushed further. During colour grading an issue with the camera has become apparent: a fixed noise pattern is present and clearly seen in the darker parts of the image. This is unfortunately a known issue with this camera (BMPCC)	The wordless narrative creates a stimulating experience for the viewer Unusual visual style of overlays with the minimal, still, performance Quick turnaround overall	Fixed noise pattern Overlay effect should be pushed further
7	6/11/23	Lomo Lakes	Edit The film stock, processing and telecine averaged about £45 per roll. After importing as an image sequence, each roll has averaged about 20 seconds of useable frames (3fps). This is quite a high cost and must be used sparingly if appropriate for the production. The final effect has a very pleasant tactility to it. The colour is muted but rich, black levels appear raised, and film grain that is very apparent. When pairing this look with a very low frame rate, the images suggest motion rather than capture it. This effect could be likened to memory: imperfect recollection of what actually happened. This has been given a quick audio design for presentation with a film reel and minimal music to emphasise the quiet contemplative feeling.	Effective aesthetic. Replicates the idea of memory recollection. Conveys a clear tone and mood Successfully captured candid moments that feel authentic	Expensive
8	12/12/23	Cam	Studio session 2 Similar to the previous sessions with Cam, the style relies on lighting rigs and audio engineering that has been pulling my attention away. For the next session, I will need to approach things very differently to remove the technological barrier.		Managing audio, lighting, camera, rigging, directing, and producing is becoming detrimental to the final product.
9	16/12/23	Cam	Interview & Kino During this session, only a DSLR and wireless lav was used to capture the interview. This was a huge improvement in terms of removing distraction and being able to connect with the subject more personally. Cam was much more comfortable on camera this time and I felt I was able to help him work around the nerves. In addition to the interview, we shot some Kino material of Cam on the street and around his area. This hasn't yet been developed but I'm wondering if it would be more effective to have friends/family in the Kino material to make the subjects more isolated in the other footage. This could	Relaxed atmosphere Removed the technological barrier.	Kino - Should there have been multiple people? Waiting for processing and telecine to confirm Audio mistake - Some audio may need rerecording. This again is a problem with solo backpack production without crew support.

			pair well with the pre-covid/lockdown/present timeline. After reviewing the footage it is apparent that an audio error has occurred and some of the audio may need rerecording. This error on my part could be symptomatic of backpack production stretching a solo operator's attention in too many directions.		
10	08/07/2024	Lost Inside	Planned Shoot- Delayed		
11	11/07/2024	Lost Inside	All shoots put on hold		
12	17/09/2024	Lost Inside	Ethics approved. Shoots to be scheduled.		
13	21/09/2024	Lost Inside	Shoot with Steve (Seaside) R6 - The camera has an operational quirk in its inability to use zebras and focus peaking at the same time. It is a frustrating issue that slowed down production.	A small shoot. Controlled but flexible with the weather and environment.	R6 issues slowing down operational role
14	22/09/2024	Lost Inside	Shoot with Steve (Kitchen) A fairly complex shoot early on. Unlike yesterday, today required some set dressing and the use of specific extras. This was far more to handle and started to highlight the issues with backpack production. People often take more time to manage than equipment but when you have both it compounds significantly. During the shoot, I needed to take a phone call regarding the next upcoming shoot. These details were minor but important to ensure the shoot can happen. This was a major distraction and interrupted the flow of the shoot. This could have been easily offloaded with another pair of hands.	Lots of offers of support from those contributing.	Managing people and contributors was quickly overwhelming. Needing to take a phone call during production to ensure shoot 3 could go ahead on schedule.
15	28/09/2024	Lost Inside	Shoot with Luke (Forest) This shoot was moved and rescheduled a few times to ensure we could get the perfect timing for light. This also resulted in a change of location to something that provided better colour contrast and lighting potential. R6 - Same issue as before. Even more notable during this shoot. Lots of coverage meant lots of menuing. Distracting from the subject.	Small crew/cast meant that this shoot could be moved multiple times to get the perfect light.	Continued R6 issues
16	29/09/2024	Lost Inside	Shoot with Luke (Bar) A more traditional approach with a designated location, extras to manage, lighting to setup, etc. Contributors were surprisingly helpful, often looking to lend a hand to keep themselves busy and help out. Lots of people slowed down production. Without them knowing each other, or having defined crew roles, they are often looking for attention from the filmmaker. Lots of stress setting in as many people want your attention.	Controlled environment Small cast/crew meant the location was easy to secure.	No meaningful collaborators. People are hesitant to make creative suggestions or get too involved. This is in contrast to the normal crew approach with plentiful suggestions and well considered contributions. Lighting setups were slow. This resulted in actors getting bored/frustrated.
17	09/10/2024	Lost Inside	Ad Hoc shoot with Lauren and Lily	Flexible Shooting. Without the need for a crew and a	Usability of the footage.

			Improvised shoot with two actresses while traveling between another job. This may or may not be used but shows the flexibility of backpack production's "run and gun" approach. The benefit of using minimal equipment is evident here in that I had the camera on me and could capture something without additional infrastructure.	larger camera, I was able to capture this.	
18	13/10/2024	Lost Inside	Adhoc shoot with Natalie Being able to do these ad hoc shoots is a huge benefit of backpack production. No crew means you can skip organisational elements and take hold of the moment. We got the fog thanks to this approach.	Flexible Shooting	Shot with a willing family member to make the most of an immediate weather opportunity. Could this actually be replicated in an academic capacity?
19	16/10/2024	Lost Inside	Steven's Flare Organisation has been a challenge throughout the production days. This one required some communication with external bodies to ensure a safe production. While not normally an issue,, having to handle practicalities is distracting from my creative considerations.	Intimate performance. Fantastic performance from the actor seemingly due to how comfortable he has gotten with the solo crew. We were able to take the shoot at his pace. Small amount of coverage. Quick shoot meant we could focus on what was needed.	R6 issues persisted throughout production. Would not recommend for solo operators.
20	19/10/2024	Lost Inside	Post Production Begins Without an additional editor, there hasn't been any time for dailies. This meant that today started with the reviewing of lots of material. To avoid losing the benefits of reviewing daily rushes, it may be best to schedule shoots for backpack production further apart. This would allow the filmmaker time to review their own work before heading further into production.	Familiarity with the material.	Loss of dailies being reviewed during production
21	23/10/2024	Lost Inside	Reshoots to be scheduled		
22	20/11/2024	Lost Inside	Reshoot of the bus. Location and actors found. Location was only available for 2 hours. While a tight production period, we were able to capture the scene. Lighting was a struggle throughout due to the dark environment. Cast were a challenge to work with due to the quick casting period.	Quick turn around was possible due to the small crew/cast.	Unsure about the performances given during this shoot. Location was happy to help but less willing to alter schedules without compensation.
23	27/11/2024	Lost Inside	Post Production Editing continues. No voice over at this time. The plan was to use the VO and music to cover off the lack of sound. On reflection in the edit, the film needs sync audio. A soundscape will need to be made or the film will suffer from a significant disconnect. This could have been much easier with an extra crew member on set to capture this and wouldn't have changed the 'solo operator' experience too much. Removing bus scene. This could be reshot again but the scene does not fit the current actors.	Chance to reflect ont he backpack production process. The need for a soundscape is frustrating but highlights the clear benefits of collaboration.	Removing bus scene. Rushing through pre-production on my own has resulted in a messy casting/directing. This scene will be removed.
24	20/02/2025	Lost Inside	VO Recording	Ease of access to facilities. This is a benefit of my job	Would have liked a wider range of options for the VO

			With most of the post production complete, I finally got the voice over recorded. The contributor was happy to help with travel/coffee being covered. While willing, scheduling it was trickier; similar to the bus, this issue is inherent with lack of payment. Recording session went well. Fits the edit but could benefit from some test screening and additional opinions.	and may be something other filmmakers would struggle with in a backpack approach. However, simple VO setups can easily be achieved in most quiet environments for very little.	artist. Bringing a producer on board could have helped.

Appendix G: Final Short Film: ‘Lost Inside’

https://drive.google.com/file/d/1mRoJrLfRVK_2ysBR_AWdL-eKPnSg39Qb/view?usp=sharing