LOVE FOR LEARNING

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ABSTRACT

In this thesis I answer two closely related questions: answering each of them gives us insight into the other. They are 1) How do we help someone to come to "love" learning? And 2) what characterises those who love learning? To begin with, I establish that an approach to learning that prioritises cognitive control is the "best" kind of learning for facilitating love for learning. Then, I show that pleasure is an important aspect in fostering love for learning and that lovers of learning find learning pleasurable. Following that I argue that lovers of learning are vulnerable and "open" to learning. Finally, I show that a lover of learning is someone who is wholehearted about learning.

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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.

LOVE FOR LEARNING

Introduction

In an article for the *Guardian* newspaper, George Monbiot argued that children in the U.K.'s schools are being turned into robots and having their spirits crushed by teaching methods akin to indoctrination. He rightly laments that these old-fashioned methods of teaching and learning do not support children's love of learning and encourage them to be like machines. Halfway across the world in Singapore, a country renowned for its education system, Bobby Jeyaraman writes in the *Straits Times* newspaper that the "drilling" method of educating children may result in high test scores (and worldwide acclaim) but "kills a love of learning" and that the "force-feeding of knowledge" is an "ageing education strategy that won't take Singapore to the next level of growth".

The culprit responsible for turning children into "machines" who are at risk of irrelevance, is, in both cases, a style of educating that prizes the accumulation of knowledge and content over creativity, exploration, discovery, critical thinking and autonomy. These rote learning, force-feeding, indoctrination-style educational strategies are also those that inadvertently bore students, prevent them from retaining knowledge, and support the idea that what they learn in school is often going to be useless to them in real life— ultimately making the educational experience seem of little value. Studies conducted by the Department for Education and Skills in the UK show that these are some of the reasons that learners left school prematurely, or stayed on only as disinterested and impassive learners.

Over the course of my twenty-year career in education, I have heard politicians, civil servants, educators, parents and even students say that a key solution to this problem is to inculcate the "love for learning". I have read policy documents, manifestos and curriculum plans that use the phrase "love for learning" liberally, believing that it is this "love for learning" that will "stoke the fires" of learning and keep students wanting to engage more deeply and meaningfully in their learning, and to see value in it. Yet, in spite of the "linchpin" role that the "love for learning" apparently plays in our learning lives, one is hard-pressed to find answers to questions about what this love of learning involves, how we might foster and encourage it, and exactly why it is valuable. Trying to offer some answers to these questions was what inspired me to take on this research project.

In this thesis, I seek to answer two closely related questions:

1) How do we help someone to come to "love" learning?
2) What characterises those who love learning?

In many ways these two key questions share a symbiotic relationship. In answering one, we also gain insight into the other - where I show how we might help someone to come to love learning, I also show what characterises a lover of learning. For example, I say that facilitating pleasurable experiences in learning is important to nurture a love for learning, but one can also see how finding learning pleasurable is a characteristic of someone who loves learning.

As teachers who hope to encourage a love for learning, knowing where we want our students to "get to", that is the goal we want to achieve, is of crucial importance. The goal is made clearer for teachers by understanding the characteristics of a lover of learning – these are the traits that we want to facilitate and support our students to develop, embody and preserve. As such, the characteristics of a lover of learning are of significant interest.

Educational activists such as Monbiot and Jeyaraman, pedagogical experts as well as educational psychologists, suggest that one of the most successful ways to foster the "love for learning" is to turn away from the emphasis on surface approaches to learning, that is, those focusing largely on simply increasing knowledge content, acquiring facts and information, memorisation and drilling, in order to improve test scores, and focus instead on strategies that encourage deep learning.[1]

I begin by exploring this concept of deep learning from the empirical side, as this is where this term "deep learning" originates, and where studies have been done to support the claim that this approach is successful in engaging learners. I then show that many of the characteristics of this approach have a strong footing in philosophy that goes as far back as Plato, all the way down to Rousseau, Dewey and contemporary philosophers such as Alison Hills and Duncan Pritchard. I do some exegetical work here, explaining these theories and then critically examining them, responding to relevant criticisms. I also establish pertinent links between these existing theories, the empirical research, and my own views on learning.

Next, I establish that Alison Hills' account of cognitive control offers a philosophical account of characteristics very similar to deep learning and does

[1] Many of the activists, like those I have mentioned, have painstakingly brought to attention the problems that our education systems and strategies cause. Those who have crafted educational approaches have dedicated resources and passion to their projects, providing us with excellent and meaningful solutions to these problems. The role of this thesis is to provide an account of that which seems consistently to be the shared goal of these activists and educators: their desire to foster a love of learning, which often, though expressed as the overarching ambition, itself goes unexplored.

so with more robustness and comprehensiveness than the more empirical accounts. Hills' theory argues that understanding why refers to a special kind of "intellectual know-how" that is different from knowledge that p and knowledge how p (663). She offers a set of six abilities that one must possess in order to claim that one has cognitive control. I argue that it is cognitive control that is one of the key factors that will help students come to "love" learning. One will also, no doubt, see similarities between cognitive control and the historical material I present in the chapters on Plato, Rousseau and Dewey. All these philosophers clearly value this sort of learning over the surface approaches. Additionally, I present reasons why cognitive control is valuable and worth having.

Following this, I suggest that the second factor that will help students "love" learning is making learning as pleasurable as possible. In this chapter I refer to Aristotle's ideas on pleasure, showing how his work on the relationship between pleasure and contemplation is similar to the relationship between cognitive control and pleasure, since I assert that cognitive control is similar to contemplation. My aim is to convince the reader that cognitive control is pleasurable. In this chapter I also draw inspiration from "flow theory", which is a psychological theory that explores the value of creating opportunities for "flow" in learning. I do this in order to investigate optimal situations for enabling pleasure in learning. Since flow theory draws insight from Aristotle's work on unimpeded activity, which is a crucial component of Aristotelian pleasure, the links I make between cognitive control, flow and pleasure are further fortified by Aristotle's theories. I also respond to some of the relevant criticisms here concluding that "flow" promotes pleasurable experiences of learning and that such experiences could be of great help in nurturing and sustaining the "love for learning".

Next I explore two other characteristics - vulnerability in learning and wholeheartedness in learning – that lovers of learning possess. Those who

possess these traits tend to persevere with learning in spite of challenges and setbacks, develop confidence and independence and find learning pleasurable. I hold that these traits will facilitate the love for learning, if they are carefully and diligently encouraged and developed with a robust focus on deep learning, and, in particular, developing cognitive control.

In the chapter on vulnerability, my aim is to first contribute to the existing literature on vulnerability in philosophy by fleshing out a concept called "inherent vulnerability", something we all possess, and explaining how this sort of vulnerability and the potential for "wounding" can be helpful in a learning context if experienced appropriately and carefully. By way of contributing to the existing literature, I also explore the idea of "epistemic vulnerability" which refers to situations in which "wounds" come about as a result of one being "carried away" or "drifting away" from the truth, for example, by acquiring false beliefs during learning. I conclude that lovers of learning are characterised by their willingness to be "open" to learning, to overcome "wounding" and to persist with learning even if they have experienced "wounding" because they acknowledge that the advantages can often outweigh the detriments.

In the final chapter, I discuss wholeheartedness. My point here is that a lover of learning is one who possesses volition with respect to learning. This means that lovers of learning want to learn and they endorse their desire to learn. It also means that they persevere with learning in the face of difficulties and experiences of "wounding". I draw mostly from the work of Harry Frankfurt in this section but I recommend a "softer" approach to wholeheartedness than that offered by Frankfurt. I argue that this "softer" approach makes some room for changing circumstances and takes into account the fuller picture of an agent's life and their on-going attitudes. Given that learning is a lifelong process and there are times when both learning and life are challenging, it is helpful to allow for some ambivalence to commitments of learning, so long as

this ambivalence is for good reasons and the decision finally taken remains in line with one's "principles of action" – this is a term I discuss in more detail in the chapter itself but which refers to how we decide to act based on our broader principles, our longer term projects and ways of life. I explain that this better describes our real-life experiences of learning. Additionally, making some room for ambivalence might actually aid our learning in cases where giving up a particular experience of learning results in some other experience of learning that is more relevant, useful, or that yields greater benefits in some way. It also makes "love for learning" more achievable, which I think is important because setting theoretical standards that disregard actual life experiences of many people can make some goals seem pointless to pursue in the first place.

I do think that the "love for learning" is something that can be fostered. I believe that students can be helped to see learning as something that is deeply valuable and worth committing to even when they find it challenging and in spite of "wounds" they might experience in the process. Some students may see this value of learning without much assistance and commit themselves to it readily. Even in those cases though, it is important that this "love for learning" be sustained, and help may be required to do that. Others may require more support in cultivating this sort of relationship with learning and this may require schools and teachers to think creatively and thoughtfully about how to incorporate the factors I discuss here into as many of their students' learning experiences as possible. The inspiration for this thesis came from my own teaching experiences, which are happily reinforced by the philosophical discourse I have researched. I know this will help me in future teaching and hope the grounding offered here is of value to other educators too.

Chapter 1: Explaining "Love" in "Love for Learning"

Since this thesis is about "love for learning", a good place to begin would be to explain what we actually mean when we use the word "love" in "love for learning". In this short chapter I set out that "love" as it is used in this phrase actually means to deeply value learning. I assess the value of learning throughout this thesis, but pay special attention to it in chapters 4, 5 and 6 where I consider the value of cognitive control and explore in much more detail the characteristics of a person who values learning in this way. I do not consider the value in great detail here because I think it comes more naturally after I have laid out the groundwork for what learning should entail in order to enable this sort of valuing. That said, I hope that the brief explanation here means that our exploration of the topic is clearly guided by this meaning.

In everyday speech, most of us use the word "love" in a few different senses and contexts. I say that I love my child or partner, and this is a reference to personal love, or love for a person. Bennett Helm points out that philosophers normally focus on personal love when they discuss the topic of love. Even when some of us say that we love our pets, this is similar to personal love in some ways, but perhaps a more diluted version. I also say that I love Mexican food, for example. When we use love in this way, what we mean is that we really like Mexican food. When I say I love being a teacher, what I mean is that being a teacher is something I deeply value. So, which of these, if any, best corresponds to what we mean when we say we "love" learning? To give a philosophical account of "love" as used in a non-personal way, that is, in a way where the love is not focused on a person, is problematic. It is problematic because, while there are countless accounts of love by philosophers, almost all

of these refer to personal love. So, an account of love for learning, learning being a non-personal phenomenon or experience, is simply not available.[2]

Personal accounts of love refer to agents who are autonomous individuals in their own right. These autonomous agents have their own cares, concerns, motivations and so on, and the various accounts of love aim at exploring love in the context of how these autonomous agents recognise and interact with each other. As such, it would make no sense to apply these accounts to learning because learning is not an autonomous agent, it has no concerns or cares of its own, and it is unable to reciprocate care in any way, or to actively form any kind of a union with the lover of learning. For instance, most philosophical accounts of love claim that love involves some element of objective care or interest in the welfare of the beloved for their own sake. The accounts that focus most prominently on this are usually called "robust concern" or "care" accounts of love. Proponents of this view include Taylor, Newton-Smith, LaFollette, Frankfurt and White. It makes little sense to say that one objectively cares about the welfare of learning, or that one is motivated to choose and act in particular ways as a response to concerns about or for learning. Another familiar philosophical account of love is one that focuses on the idea of love as "union". This also requires that the interests and cares of the beloved are given significant importance, and for this theory of 'union' in particular, joined with the lover's own cares and interests in such a way that the lover and beloved become a unit or a "we". Contemporary proponents of this view include Solomon, Scruton and Nozick.[3]

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[2] There are discussions on the "love of wisdom" and "love of the "good"" where the "good" is akin to knowledge from the likes of ancients such as Plato and Socrates and contemporary philosophers such as FC White but these do not discuss the nature of the 'love' with specific reference to wisdom.

[3] For full listings of these philosopher's relevant works please see the bibliography.

In light of this, my view is that applying existing theories of personal love to learning is not the best way forward. Instead, I wish to suggest that when someone talks about having a "love" for learning, what they really mean by "love" is something more along the lines of deeply valuing learning. Likewise, when educational policies and curricula call for the inculcation or encouragement of "love for learning", as they often do, I think what they really mean is that they want learners to truly value learning and find it meaningful. I think the word "love" is usually used in this situation more as a way to denote the depth, extent and genuineness of the valuing.[4] Most of us can appreciate that the use of "love" in describing our responses towards something in non-personal situations is meant to indicate that we have strong feelings towards it, so it is reasonable to ask that we do not take love in its literal sense here. Essentially, in using "love" to reference the attitude one should have towards learning, I think educators want to covey that the ideal is more than just liking learning; it is finding learning to be deeply valuable and meaningful.[5] As I said earlier, I will leave it at that for now and return to fuller explorations in later chapters. For now, I move on to establishing the foundations for this discussion by considering a theory of learning called *deep learning* which I believe is crucial to enabling "love for learning".

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[4] There are also philosophical accounts of love that argue that love is essentially valuing – Velleman and Singer are two examples. These accounts cannot be adapted for a non-personal object of love-related value either because these accounts are also grounded in beliefs about well-being, autonomy and additionally, dignity; all of which are characteristics of a person.

[5] I will nevertheless continue to use the phrase "love for learning" as this is how this ideal attitude is described in so much of the literature on education.

Chapter 2: Deep Learning and Surface Learning

Deep and surface learning are two approaches to learning that can be found predominantly in research on educational theory and psychology. They were first presented on the basis of studies conducted by researchers Roger Säljö and Ference Marton. Following their studies, more researchers, including Entwistle, Ramsden and Biggs carried out further studies, which corroborated and elaborated on the work by Marton and Säljö.[6]

Marton and Säljö's influential paper was based on the observation that one common example of the different ways in which people perceive learning can be seen in the fact that some believe learning is about acquiring many facts and committing them to memory so they can reproduce them when necessary, while others believe that learning is more about trying to understand the material for themselves and relate it to their experiences. With these observations in mind, in the hope of pinning down precisely how people, particularly students, conceive of learning, Marton and Säljö carried out a variety of studies.

In one such study, students were asked to read academic articles and told they would be questioned on what they read afterwards. Some students saw the academic text as a collection of information that they needed to memorise so that they could answer the questions. Other students approached the text as something that contained meaning to be understood in light of the text's claims, arguments and implications. The first approach was referred to as the "surface approach", and the second, the "deep approach". Describing the two approaches based on Marton and Säljö's research, Tamsin Haggis writes:

[6] See bibliography for full listings.

> …quantitative, memorising and acquisition conceptions underlying a 'surface' approach (in which the student's intention is to memorise the text), and abstraction, understanding reality and developing as a person underlying a 'deep' approach (in which the student's intention is to understand the meaning of the text) (90).

Students who employed the "deep" approach appeared to understand and remember the main messages, arguments and conclusions of the article and examine the logic of these. They were also better able to answer questions about the article. On the other hand, the surface approach was restricted to memorisation of facts without much real understanding and meaning. Students who employed this approach tended to reproduce rather than engage with the material.[7] These two approaches have also been described as "information reproducing" for the surface approach and "knowledge transforming" for the deep approach.

The original study and those that followed showed that "reproducing" of information tends to happen with students who see learning as something that is a means to passing exams or satisfying the minimal criteria. In line with this, they accept information passively, focusing only what they think will be assessed and approaching the material with that attitude. They are also less inclined towards seeing patterns and principles in what they learn. It would seem that these patterns or any other attempt to interact with knowledge content would be of interest to such learners only if they are to be tested on it. On the contrary, the idea of "transforming" knowledge (the deep learning approach) refers to the relating of new knowledge to one's previous knowledge and experiences, organizing and integrating ideas in such a way

[7] Researchers such as Gibbs, Kember & Gow and Marton & Säljö have discussed this in more detail. See bibliography for full listings.

that the new knowledge ceases to be simply new facts and information for the purposes of restating but is now material that the student can more readily interact with and shape for more learning, independent learning and problem-solving.

Research shows that it is the deep approach to learning that consistently yields better and higher quality learning outcomes. According to Biggs and Tang, the surface approach, which is connected with low level learning activities like memorization, nearly always leads to poorer quality of learning outcomes and the deep approach leads to more meaningful ones (50-63). What exactly are these outcomes though? Though the literature on this can be varied, what is consistent in almost all the definitions of learning outcomes is that they describe what students are able to demonstrate in terms of knowledge, skills and attitudes upon completing the learning activity. Haggis writes, summarising one of the main focuses on the literature on this subject:

> …'without exception', deep approaches to learning and 'ways of understanding which include more complete ways of conceiving something' are 'more likely' to result in high quality learning outcomes (Prosser & Trigwell, 1999, p. 4) (91).

Surface learning approaches lead to outcomes such as a shorter retention of information and limited application and transfer of what is learned. This would make sense if we consider that students who adopt this approach may often do so with the intention of learning in order to produce what is minimally necessary for assessments. Some of the learning outcomes of those who employ the deep approach include: the ability to transfer the knowledge and use it more broadly, to teach it to others; and an awareness that the learning is not finished, that is, there is more to learn or that learning can be deepened or extended. Again these outcomes would seem to make sense with the characteristics of the deep approach. Interacting with knowledge in such a way

that it "responds" and relates to experiences and previous knowledge would make it more likely that such students would be better equipped to assess the logic of arguments and putative claims rather than simply accepting them, and see gaps in their current learning and realise that there is more to be learned. If students can also see the relationships between principles and examples, for instance as opposed to seeing either the principle or the example as the only point of the learning material or text they are studying, then one might say they have understood *how* the example and the principle relate to each other. If they understand this, they are also more likely to be able to explain the relationship or teach it to someone else.

The theory of deep and surface learning in general is not without some criticism of course. There are standard questions challenging methodology: for example, critics such as Haggis point out that interview questions are presented in such a way that responses elicit socially desirable answers, which may not reflect the truth. Further, the original study by Marton and Säljö also presented six "qualitatively different" ways that students were believed to conceptualise the idea of learning, some of which lack clarity. These were the six ways:

> (starting at the lowest level) as a quantitative increase in knowledge; as memorisation; as the acquisition of facts for subsequent use; as the abstraction of meaning; as a process aimed at understanding reality; and finally, as 'developing as a person' (Marton & Säljö, [1984] 1997; Marton et al., 1993) (qtd. in Haggis 90).

So for example, criticisms were fielded against the conception of "meaning" as used by Marton and Säljö, because meaning is "non-specific" and could refer to finding the right links between knowledge within the subject area, or to personal meaning for the student, as in: links made between their subjects

and other aspects of life which are not linked to learning. As Haggis writes, “it is conceivable that studying may only be a small part of whatever 'meaningful' activities a person is engaged in.” (94). A related concern is with the interpretation of “understanding”. Haggis states that:

> 'Understanding', like 'meaning', is non-specific, and therefore inherently problematic. Like meaning, what it signifies varies according to discipline, subdiscipline, and tutor. 'Assessment for understanding' tends to imply that understanding is a state that is attainable, and demonstrable. (95)

Whether or not “meaning” and “understanding” are “non-specific” or “attainable” and “demonstrable” are certainly up for debate. Over the years, researchers participating in this debate have attempted to address these concerns by offering more specific accounts of these six ways, or by moving away from them to produce descriptions of deep learning that are true to the original research but not hemmed in by them. For example, Noel and Abigail Entwistle have offered one of the clearer and more complete lists detailing the characteristics of deep learning, focusing with greater precision on the experiences related more specifically to learning *processes*, and in particular to understanding. As such the wider issues with regards to personal meaning and change do not complicate the discussion and we have a little more insight into what understanding, as a crucial component of deep learning, is meant to achieve. In light of this, I have chosen to use the Entwistles’ list drawn from a range of their publications, as a starting point for the discussion going forward.

The characteristics of deep learning according to the Entwistles are:

(1) understanding material for oneself
(2) being able to engage vigorously and critically with material

(3) relating ideas to one's previous knowledge and experience
(4) discovering and using organising principles to integrate ideas
(5) relating evidence to conclusions
(6) examining the logic and plausibility of the content or arguments

I go into greater detail about each of these characteristics in Chapter 4, and not here, because I think it is useful to compare them, each in turn, to the characteristics on another list based on the research by philosopher Alison Hills, that I suggest offers us a very good account of understanding, and through that, a clear perspective on what deep learning looks like. However, what I would like to point out here is that the Entwistles' supporting literature, though offering more clarity than others on the topic of understanding, still has also not quite nailed down the phenomenon of understanding as robustly as one might like. For instance, the concept of "understanding" in the first characteristic "Understanding material for oneself" is not explained fully or satisfactorily, so one is unclear as to what it actually means to "understand", or when one might be certain that one has actually "understood" something. My position on this matter is that the philosophical research on "understanding", particularly the work by Hills, might help to address some of these concerns about whether understanding is attainable and demonstrable, showing that indeed understanding can be attained and demonstrated. This is something vital that philosophical research is able to do to support and elevate the important work that educational psychologists like Marton and Säljö, as well as the Entwistles, have done.

I think it is also worth clarifying here that surface learning *is* important and valuable too. There are times when rote learning and memorising, or even regurgitating facts could be useful, and enjoyable. Take for example subjects like law or medicine where memorising basic facts or laws is essential in order to master the subject. However, it is also clear that as one progresses in one's learning, and one is required to apply the facts one has acquired to different

situations, surface learning is no longer sufficient and deep learning clearly becomes the better approach.

One way in which we can account for the roles that both surface and deep learning can play in learning is to suggest that the appropriate approach to learning be used at the appropriate times, depending on the situation and requirements.[8]

To summarise the key differences between surface and deep learning, here is a table I have adapted based on the original by Steve Draper, an educational psychologist:

[8] For example, in "Promoting Deep Learning through Teaching and Assessment" Entwistle has suggested applying a "strategic approach" to learning within the contexts of school-based learning that culminates in examinations (11). Strategic learners are those who decide which approach to use and how to organise their time based on marking rubrics and requirements as well as reflection on their own learning methods and outcomes. Entwistle points out that the interest of strategic learners in academic content is typical of deep approaches but that the reasonable intention to score well in systems of assessment and examinations does indicate that a more strategic approach could be ideal (11).

Table 1: Examples and Features of both Surface-based and Deep learning approaches.

Deep Learning	Surface Learning
Relates topic and ideas to past knowledge and experiences	Unreflective approach; facts usually not elaborated on
Thinks critically about newly learned material	Little or no interaction with content or ideas
Ties in information from other sources	Concentrates only on memorisation
Creates new arguments and understands logic based on new information	Underlying argument seldom comprehended
Recognises a structure in the content	Tends to be more monotonous and does not seek to present structures
Motivation from within, wants to learn	External incentive, based on demands of a test
Aims to understand the meaning behind the material	Aims to recite and regurgitate material inactively

In the next chapter, I explore how deep learning has roots in the works of philosophers as far back as Plato, and then Rousseau and Dewey.

Chapter 3: The 'Origins' of Deep Learning

The philosophers I consider here, namely Plato, Rousseau and Dewey, have all robustly defended what modern educational theorists and psychologists now refer to as deep learning. In that sense, they were the forefathers of this contemporary theory that distinguishes between different approaches to learning and singles out one, deep learning, as superior. Since their theories have helped shape modern theories and highlight what is valuable about taking approaches to learning that are very similar to deep learning, I believe these philosophical theories can help illuminate the characteristics of what we now call deep learning and offer invaluable reasons as well as invaluable groundwork for new arguments that support the crucial role of understanding in learning.[9] I begin with Plato.

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[9] I am aware that there are methodological differences across subject areas and where necessary I either carefully interpret empirical findings or present them alongside arguments and suggestions as additional support. This method is not uncommon in the field of the philosophy of education. Philosophers of education often present empirical findings alongside theories as a way to encourage conversation between educational theory, educational psychology and philosophy. Some of the key researchers in this area, including Burbules, Arcilla and Cholbi, present educational psychology and pedagogical theory alongside philosophy, and many also do so while attempting to foreground the value and importance of philosophy as the historical basis for many of these newer theories. Other notable philosophers of education, such as Christopher Winch acknowledge the significance of work done by psychologists and scientists but hold that purely psychological, linguistic or scientific approaches tend to pay less attention to the social, affective and religious aspects of life, thereby providing an incomplete picture (The Philosophy Of Human Learning 2).

3.1 Plato

Why Plato?

Plato's work on education is foundational and pioneering. Any research that explores the roots of deep, transformative learning cannot sidestep Plato without the risk of missing out on some of the origins of the most insightful and influential ideas about learning. Plato championed the importance of learning as a transformative process. In Plato's' dialogues, Socrates is presented as someone who responds to the undefended and inconsistent logic of his peers and political rulers by showing them that their views fail to distinguish actual patterns and principles, that their arguments and conclusions are unreflective (characteristics of surface learning approaches) and even invalid, when they should ideally reflect an understanding of past experiences and knowledge and be relatable to actual evidence that one has carefully considered (traits of deep approaches).[10] The hope here is that Socrates' interlocutor might come to view things differently, that is, more deeply, reflectively and with genuine understanding, and change his mind. And even if not his interlocutor, then at least his reader would do so. As I have alluded to above, these Platonic criticisms of the superficial engagement with knowledge are also distinctly similar to criticisms of surface approaches by educational psychologists.

We see further Platonic encouragement towards the transformative powers of learning and the deep approach to this sort of learning in the well-known allegory of the cave in *The Republic.* The allegory tells us of prisoners chained

[10] As an example, refer to *Apology* (21c-22d) for how Socrates uses elenchus to reveal these superficialities of his interlocutors.

in a cave who think that the shadows they see on the walls are real, that is, they are not aware that there are real, actual things that cause the shadows. One of the prisoners escapes and leaves the cave and when he encounters the light of the sun, he is shocked by what he sees outside the cave. As he adjusts to these new surroundings he realises that the idea of reality that he and the others in the cave had was wrong. When he returns and tries to explain this to the other prisoners, they do not believe him and Plato suggests they may even prefer to kill him. This allegory is an important one for Plato's ideas about knowledge and understanding as it demonstrates the value of seeking out knowledge in a critical and engaging way, in contrast to passively accepting what one is presented with – a crucial difference between deep and surface approaches and as we shall see in Chapter 4, a key advantage of exercising cognitive control.[11] It also shows how one might become especially vulnerable to ostracism by coming to learn that something their "tribe" believes is actually false – I consider this sort of vulnerability in more detail in Chapter 6.

The Allegory of the Cave

This allegory is complex and layered because through it Plato makes many observations about many things, such as knowledge, perception and politics. The aspect of it that is relevant to the point I want to make here is that Plato could be read as distinguishing those who challenge what they are presented with, who are willing to question what they know and have learned, who examine the logic and likelihood of what is presented to them and seek out real knowledge, from those who simply accept what they are presented with

[11] Not all surface learning approaches are entirely passive of course, as even rote learning could involve elements of engagement. So this point refers to the more basic iterations. However, surface learning, by definition, is not the sort of learning that involves understanding, reflection or interaction with the ideas.

passively and fail to reflect on deeper possibilities. In the *Republic,* Plato says of the freed prisoner, describing how he pieces past and new knowledge together to come to new conclusions:

> At that point he would work out that it was the sun which caused the seasons and years, which governed everything in the visible realm, and which was in one way or another responsible for everything they used to see (516b-c).

The escaped prisoner has now learned that the shadows are caused by the sun, as is everything else that he sees. The escaped prisoner's experience can be considered in the frame of deep or transformative learning, while the other prisoners' experiences show us the potential dangers of a purely surface approach.

The "unfreed" prisoners are portrayed by Plato as ones who are in fact satisfied with passively accepting what they are presented with and who are unwilling to free themselves from the binds of this sort of blind acceptance. The very fact that they ridicule the freed prisoner, who Plato describes as being more enlightened now that he has left the confines of the cave, could suggest that they are so comfortable in believing the superficial that the very idea of it being questioned could lead them to think the freed prisoner is the blind and insane one (*Republic* 517a). The cave then can be seen as the place which symbolises the sort of learning environment for those who take surface approaches and the sun on the outside can be seen as the representation of the sorts of attitudes and approaches that allow one to be truly educated; that is, to question what they see, make deep and astute connections and see the world around as it more truly is.[12] Plato continues with an argument that is

[12] Not everyone who takes surface approaches to learning would be necessarily wilfully blind to the truth or unwilling to consider other

compelling and also one that seems to support my claim that the argument for approaches to learning that reach beyond the superficial were pioneered by philosophers. Here is what Plato says,

> Education is not what some people proclaim it to be. What they say, roughly speaking is that they are able to put knowledge into souls where none was before. Like putting sight into eyes which were blind…Whereas our present account indicates that this capacity in every soul, this instrument by which each person learns, is like an eye which can only be turned away from darkness and towards the light by turning the whole body. The entire soul has to turn with it…Education…would be the art of directing this instrument of finding the easiest and most effective way of turning it round. Not the art of putting the power of sight into it, but the art which assumes it possesses this power – albeit incorrectly aligned and looking in the wrong

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perspectives. The allegory of the cave, owing to the fact that it is an allegory, presents a particularly harsh and dangerous scenario for those who prioritise surface learning and neglect or avoid a deeper approach. Additionally, Plato's distinction between the two types of prisoners and those people they symbolise can sometimes be read to carry particularly harsh and even elitist tones. I discuss some of the concerns with this elitism later on, but here I want to clarify that I do not subscribe to any prejudice of that kind. In the spirit of allegories, I wish this allegory to be taken as an exaggerated version aimed at, as I have mentioned, representing perhaps the worst outcomes of the sort of superficial acceptance, reproduction and rote learning that surface approaches tend to encourage, as such, for example, learners who take a surface approach are not necessarily equivalent to chained prisoners.

> direction – and contrives to make it look in the right direction (*Republic* 518c-d).

Here Plato seems to criticise the idea that education is "putting" knowledge into people. Conceiving of learners as a vessel inside which information is poured is not the version of education that Plato holds in esteem. Instead he seems to be advising that education is about guiding the learner to "align" her entire self with the right attitudes and beliefs. Again, this is very similar to the deep approach, which I recommend as the ideal one when it comes to learning. This passage from Plato that we have just looked at is also rich in offering perspectives on how we might understand ability and aptitude and how educators might approach teaching with this in mind. The line "Not the art of putting the power of sight into it, but the art which assumes it possesses this power" references the general point that one approach to teaching and learning is to assume that all learners already have potential and that true education (as opposed to surface education) is about "contriving" the learner to "look in the right direction."[13] This means offering the appropriate support and guidance to learners so that they learn independently, and ultimately, according to Plato, develop wisdom.[14]

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[13] More precisely, what Plato is most likely referring to here is the belief that knowledge is essentially the act of recollection. This is not a point I want to delve into as it is not relevant to my thesis; however, the wider argument here could be seen as one that diminishes the value of imposing facts and information onto the learner as if she were simply a vessel. I say more about this in the Chapter 4.

[14] Reading the *Republic*, it would be fair to say that Plato values learning and knowledge extremely highly. His argument is that true learning, and in fact, love for every kind of learning produces expertise, knowledge of ethical matters and virtue. Interestingly (and predictably), Plato's exemplary learner is

Problems with Plato's views on learning

One of the main concerns with Plato's educational theory is that it is considerably elitist. In the *Republic*, while we find that he discourages the sort of learning that simply pours knowledge into the soul (518c) and instead encourages a transformation through "directing" and "turning around" the

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the philosopher. While I do not argue that the philosopher is the model learner, I do agree with some of Plato's descriptions of the model learner and genuine seeker of wisdom – while to Plato these are uniquely characteristic of philosophers, to me, they reflect the values and characteristics of deep approaches to learning. Earlier on I mentioned the learning traits of critically engaging with knowledge content, examining the logic and validity of arguments and relating ideas to one's previous knowledge and experience; all of which Plato encourages through the escaped prisoner in the allegory of the cave. While I think these traits are something that philosophy as a subject could be said to strongly demand, these characteristics of deep learning could hold true regardless of whether the learner is a philosopher or not; it so happens that deep learning approaches are usually essential for learning certain subjects, like philosophy. Additionally, Plato argues that philosophers love every kind of learning (*Republic* 474c-475c) and that no one else loves every kind of learning (*Republic* 475c-480a), so only philosophers are capable of being experts in ruling, ethics and virtue. The question of *expertise* in ruling, ethics and virtue is not a claim I wish to pursue in my thesis and there is not enough room here to give adequate attention to whether the claim that philosophers love every kind of learning is true. However, as this question is mostly relevant as a justification for why only philosophers should be rulers, and that is not a claim I want to make, I do not pursue a discussion on this matter here.

soul (518d), we also see that this sort of teaching and learning is aimed at the upper echelons of Plato's societal hierarchy. It is the gifted students that should be exposed to these methods while others lower in the hierarchy ("children and people with no judgement" (598c)) should be banned from reading certain books, mostly poetry, because they would be too easily swayed by the content; content deemed to be valorising imitation and falsity and that encouraged the indulgence of the appetites. Plato also seems to suggest that most adults are unable to critically understand the knowledge that they are engaging with and incapable of examining the logic of that which they are presented. One of the main tensions in Plato's educational theory arises from the fact that he seems to want a city of blindly obedient citizens, who do not question the authority or critically engage with the wisdom of the wiser guardians and rulers of the city (414e) but at the same time he is fully aware of the value of the sort of education that encourages thinking, analysis and critical interaction, because it is this kind of learning that, as he says, results in good ruling, good moral theories and virtuousness. So it seems that the way Plato deals with this to some extent is to reserve this sort of deeper teaching and learning for those who have the potential to be philosophers, while the rest are told his "noble lie" so that his ideal city can function optimally.[15]

In the *Republic*, Plato envisioned his ideal city as one where everyone belongs to specific social classes, and each class is assigned to its own roles and carries them out obediently (415b-c). Social mobility for bright and gifted children of the bronze and iron classes, while possible (415b-c), is not something Plato

[15] Plato recommends that citizens be told a lie, or a myth which suggests that all of them sprang fully grown from the earth and as such either have gold, silver, bronze or iron mixed into their souls. As such it is the gods who decide their position in the city prior to their "springing forth". Any memory of childhood or education is simply a dream (*Republic* 414b-415d).

actually fully explores. He certainly does not seem to have any plan in place for how these bronze and iron children may be identified and offered the education given to the gold and silver classes. The growth, development and happiness of individuals is not Plato's priority, they are treated more like non-distinct parts of a wider mechanism that needs to be kept functioning well, rather than as unique individuals.

While Plato's educational theory has "hit the nail on the head" when it comes to the right conception and approach to learning itself, the underlying idea that individuals from certain classes are meant to do their given tasks and no more or less is something that the best contemporary educational theories and practices now rightly shun. Although modern social, political and educational systems are not able to altogether avoid the correlative effects between social classes and access to good education, when students from any background do have access to good education, there is an ever-increasing push to give them opportunities to develop the sort of deep approaches to learning that Plato seems to have reserved only for the higher classes.

In his book *Learning to Teach in Higher Education*, Paul Ramsden writes that all students can be orientated towards one or the other approach (that is, surface or deep) depending on the clarity of their goals, the degree of choice they have over what they are learning, and their perceptions of teaching, workload and assessment (39-47). In "Styles and Approaches In Problem Solving", Diana Laurillard points out that research has also found that the same students can switch between learning approaches depending on their interest in the subject, the nature of the task, their understanding of the demands of the task, which suggests that these approaches are not personality traits and certainly not something that is innate (134).[16] If we return

[16] Though we must remember that by referring to it as a noble lie, it would seem that Plato himself was aware that the explanation for social position and

to the allegory of the cave and compare Plato's description of the chained prisoners to this research, we might see that perhaps not all those who remained chained, that is, who have been used to taking surface approaches will necessarily respond with mistrust and hostility when asked to question their beliefs and attitudes towards knowledge. This is where Plato's allegory assumes that the "unenlightened" are unable to change the way in which they approach learning, which is not necessarily true. I show later on in Chapter 4 that there is a set of skills, called cognitive control, that characterise deep learning - these skills are certainly teachable and very likely to improve with practise, as evidence has shown. Therefore the idea that only certain classes of people are capable of this sort of learning (in so far as we agree that deep approaches are better approaches) cannot be justified.

We have seen thus far that some of the key features of the best contemporary approaches to learning according to educational psychologists and pedagogues is very similar to some of the key features of Plato's ancient educational theory; contemporary research shows that the students who take this approach conceive of the process of learning as an abstraction of meaning, an interpretive process aimed at better understanding the world they live in and independently applying what they have learned to living their lives.

It is evident from what we have seen that Plato's perspective on learning is that learning is best understood as a process that importantly includes features very much like those of the deep approach. As I pointed out earlier, we see this very evidently in the way Socrates is represented as the sort of person who challenges those who display characteristics of a very surface approach;

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intellectual promise was only a myth created to keep his ideal city functioning well and not something he necessarily believed was innate.

confronting interlocutors who simply rely on anecdotes and who fail to reflect on and adequately defend their positions. Plato would hold that deep learning (as we call it now) is valuable because it is the sort of learning that is more likely to lead a person to examine their beliefs and not take them entirely as a given. Relying entirely on belief that is unexamined can lead to falsehoods, errors and importantly, to a life that is not virtuous; and this would be inconsistent with Plato's fundamental aim of education – to make us virtuous. While this final aim of learning is not one that I share, it is clear that Plato highly regards the abilities to question, challenge, and think critically and independently. Exactly how a person might do this is modelled by Socrates. I believe that apart from being an excellent tool for teachers, the Socratic method is useful for independent reflection too. Socrates applies the dialectic technique with his students and opponents. He uses probing questions to go beneath the superficial, encouraging his students and opponents to defend their beliefs and perspectives – often this challenge leads them to realise that their beliefs are problematic in some way, that they are misinformed or illogical, prejudiced, partial to something or the other, or that they have not thought deeply enough or believed something without sufficient justification. This method is presented with Socrates as the teacher or opponent; but I believe that deep learning approaches can help us to apply this sort of challenge to our thinking and beliefs independently, as an exercise in reflecting on and synthesising what we have learned.

Platonic philosophy has had significant and valuable contributions to make towards how we conceive of learning today, but Plato is neither the only philosopher to present a form of educational theory, nor the only one to propose and argue for features of learning that resemble the deep approach. Other philosophers have championed an understanding of learning as something defined not simply by how much information a student is able to passively acquire from their teachers and appropriately regurgitate for the purposes of assessment, but by the students' ability to think critically, better

understand the world around them and themselves. Next, I assess some of the ideas associated with the theories of Rousseau and Dewey. Each has characteristics that are very similar to deep approaches to learning. Some of the methods suggested by Rousseau and Dewey have shaped contemporary approaches to deep learning. Others face challenges that we should consider carefully: some of these challenges are justified and should be recognised, while others can be accommodated with enhanced clarity or better re-interpretation in line with more contemporary attitudes and practices. Where possible I attempt to address the concerns that are relevant to my thesis taking into account both the spirit of the original views and current attitudes and practices.

3.2 Rousseau

Why Rousseau?

The 18th century philosopher Jean Jacques Rousseau's contributions to what we now refer to as the deep approach are significant. He argued against rote memorisation and in its place, he encouraged discovery, independent thinking and a problem-solving approach to learning, by which I mean that he strongly advocated for students to engage with the world, and especially with nature, to explore and discover things for themselves and to learn by solving problems on their own, rather than by being taught the solutions. Rousseau wrote:

> Put the problems before him (child) and let him solve them himself. Let him know nothing because you have told him, but because he has learnt it for himself. Let him not be taught science, let him discover it. (Émile 131)

These characteristics are very similar to those listed in deep approach theorists Entwistle and Entwistle's list (for example, discovering and using organising principles to integrate ideas, and relating evidence to conclusions, are skills very much in line with those Rousseau as we can see from the quote above) as well as to the skills on the list for cognitive control. This indicates that Rousseau had a clear grasp on the value of cognitive control at a time when force-feeding knowledge through rote learning and punishment was the norm in formal education.[17] He also advocates for teachers to apply teaching methods that encourage discovery and independent learning – these are the sorts of teaching pedagogies that are aligned with contemporary deep learning approaches. For this reason at least, Rousseau's views are worth considering because they offer us an insight into the origins of deep learning and what continues, to this day, to be valuable about it.

Rousseau also advocates for the value of disruptions and "pain" when one is learning, the experience of discomfort is not something Rousseau shies away from and this is aligned with my own contributions on vulnerability in learning in Chapter 6, and how this can be valuable if appropriate.

The importance of independent learning and critical engagement

Most of Rousseau's views on learning are contained comprehensively in his work *Émile* originally published in 1762. The eponymous Émile is a fictional pupil who Rousseau schools according to his theory of learning. This theory focuses very much on the student's understanding and relationship with the

[17] Iheoma writes "Traditionally educators have tended to swing from one end of the pendulum to the other. Before Rousseau's time the practice was to emphasize the need for control to the exclusion of any concern for respect and caring." (74)

world he lives in. Rousseau was highly critical of learning that was aimed at preparing children to enter into an adulthood where they thought and acted on the basis of what society expects of them. He was very much concerned with what he considered to be the corruptive role of society. Peter Lindsay writes that this was a particularly valid concern in his time because learning involved directing existing human motivations into socially acceptable behaviour rather than transforming them altogether (2), which essentially meant that behaviours were not authentic but simply conformed to fit with social expectations. This was presumably problematic because it meant that behaviour was not motivated by genuine understanding and desire but by societal pressure and fear of social alienation. The goal for Rousseau was to ensure that Émile, "he uses his own reason not that of others, for there must be no submission to authority if you would have no submission to convention" (169). He wanted his student to be able to think independently, interpret and understand what he was learning for himself, rather than deferring to authority or societal norms and expectations. As this stands, it seems to be a good goal. When we think of the outcomes of a good education, we think of students who are able to intelligently and thoughtfully question what they are told to believe, assess the logic of claims and conclusions so they are not misled, and make independent decisions based on knowing, understanding and wisely interpreting the world they live in, even when the "crowd" is doing or pressuring them to do otherwise. These are all characteristics of people who conceive of learning as far more than just a quest to collect information and reproduce it when necessary, and so we see here that Rousseau's understanding of learning is as a process of understanding and interpreting the world in line with one's own experiences and previous knowledge.

As we saw earlier, according to Marton and Säljö and other researchers such as Entwistle, the way in which we perceive the world and how circumstances appear to us are what principally influence our approaches to learning. If this is indeed the case then we can see why Rousseau pays such intense attention to

the circumstances and environment of the student. Let us consider what Rousseau has to say about this and what we might be able to learn from this about creating learning environments that encourage students to engage in deep learning.[18]

A discussion of this must begin with his views on 'nature'. Nature is an important concept in Rousseau's theory of education. He writes about nature:

> We are born sensitive and from our birth onwards we are affected in various ways by our environment. As soon as we become conscious of our sensations we tend to seek or shun the things that cause them, at first because they are pleasant or unpleasant, then because they suit us or not, and at last because of judgments formed by means of the ideas of happiness and goodness which reason gives us. These tendencies gain strength and permanence with the growth of reason, but hindered by our habits they are more or less warped by our prejudices. Before this change they are what I call Nature within us (Émile 7).

From this we see that for Rousseau, sensation is the source of our knowledge and following this, the mind judges these sensations. The activity of judging is based to some extent at least on a combination of character and reasoning abilities. These can develop for better or worse, and looking at Rousseau's

[18] Rousseau's work covers education from early childhood onwards, whereas in this thesis I apply my theories on love for learning to students who are already capable of self-reflexivity when it comes to learning. As such, young children are not my focus. However, to fully understand Rousseau's views we will, on occasion, have to discuss aspects of his theory that are also related to young children.

conclusion that we are best off going with our original inclinations, or our nature, we can assume he does not have much faith in that stage of development where we might start forming our opinions, especially if they do not conform to our original nature.

Rousseau was a believer in what is rather confusingly called “negative education”. It was something that he believed best preserved our nature. Eugene Iheoma explains “negative education”:

> The philosophical assumption which underlies Rousseau's idea of negative education is his famous proposition that man is naturally good. Taken at its face value and understood in the context of Rousseau's (1911) belief that "all that we lack at birth, all that we need when we come to man's estate, is the gift of education," (p. 6) it seems quite logical to conclude, as some critics have done, that Rousseau's meaning is that whatever evil we find in man is due to faulty education or to the corrupting influence of society. Good education will therefore consist merely in the protection of man's natural goodness from corrupting social influences, and thus protected, the child's natural good self will be free to develop of its own accord (Dent, cited in Rousseau, 1911, pp. xiv-xv). This is the usual interpretation given to Rousseau's directives on education in the early years: "The education of the earliest years should be merely negative. It consists, not in teaching virtue or truth, but in preserving the heart from vice and from the spirit of error" (Rousseau, 1911, p. 57). (70)

Rousseau’s desire for his students to conform to their natures can be explained by considering Rousseau’s concerns about authority and influence. He argued

that education comes from three sources, namely "nature, from men, or from things" (Émile 6). Later in the same text he writes,

> There are two kinds of dependence: dependence on things, which is the work of nature; and dependence on men, which is the work of society. Dependence on things, being non-moral, does no injury to liberty and begets no vices; dependence on men, being out of order, gives rise to every kind of vice, and through this master and slave become mutually depraved (49).

His ideal world was one that was as close as possible to the natural state in which reasoned, natural inclination ruled behaviours in place of societal norms. Rousseau repeatedly states in both *The Social Contract* and *Émile* that man is born good. When man is in touch with this natural state of being, only then is he truly free and happy, and Rousseau's main aim is to make Émile, his student, happy, self-sufficient and free. According to Winch, Rousseau believes that certain social interactions, specifically ones where there is an imposition of one's will over another's, would be extremely detrimental to the student's development, and it is essentially the chance of this that he wishes to avoid at all cost (Strong Autonomy and Education (SAE) 25).

It is clear that Rousseau is much concerned about students lacking the ability to think critically and independently resulting in them being influenced by corruptive elements of society. This was no doubt a legitimate concern in his day, but arguably even more so now, when students have access to so many more sources of information (a significantly worrying amount of which is fake) and influence than they ever did before. Thinking critically and independently are skills of crucial importance now, and deep approaches to learning which foreground understanding over the acquisition of facts tend to prioritise these skills. Rousseau famously wrote "God makes all things good; man meddles with them and they become evil." (Émile 5). It would be fair to say this is a

rather extreme view, but it is one that Rousseau held to be largely true. "Man" refers to a society that corrupts man's essentially good nature by encouraging in him vice, misery and most importantly an inflated sense of self-worth. Rousseau was extremely sensitive to how students might be influenced by others' perceptions and judgements of the world we live in and his fear was that these influences were often not positive. In fact, he was so concerned about it that he even argued for safeguarding the student from the teacher – believing that any explicit authority or will by the teacher will result in failure; this explicit authority and will was something he felt tends to manifest itself in standard curriculum set out by the teacher.

To explore this idea further, let us consider two tendencies that Rousseau calls *amour de soi* and *amour propre*, which he says all of us possess. These tendencies must be carefully managed in students in order for them to be free and happy. By "free" here Rousseau means that the student is not under constraints or pressures imposed by society. The first, *amour de soi*, references a sort of survival and preservation instinct that is aimed at our own well-being. This instinct for the self's well-being is reserved only for the self and not applied to others. *Amour propre* on the other hand is the tendency we have that references our relationship with other human beings. It can be described as the desire to be recognised by other human beings as an equal and to be treated with respect. Winch writes that at its most fundamental it is nothing more than a wish to be properly recognised as a human creature by other human creatures (SAE 29). However, Riley and Welchman write that Rousseau wishes for *amour propre* to be developed beyond just this most fundamental level and to essentially inspire citizens to be civically and morally motivated (97). Since *amour propre* relates to our interactions with others, and learning is an activity that involves us relating to others, the development of this tendency throughout the learning process is what Rousseau is especially concerned about. For *amour propre* to be healthy, students must neither have their wills dominated by others, nor seek to subjugate others. Since the

development of personal judgement was thought to be subject to the influence of others, it was important for Rousseau that *amour propre* be developed correctly so that the students' judgement is sound.

A positive reading of Rousseau would hold that he attempts to bridge the tensions between nature and society – one stays in touch with one's original nature (which according to Rousseau is good) but through one's various stages of development, one must, from relying on one's nature (and tutor's guidance) gradually grow and change from being concerned mainly with *amour de soi* to being able to balance *amour de soi* with that which becomes the more important, *amour propre*. Riley and Welchman refer to Rousseau's educational theory as "radically transformative education" because

> For Rousseau, the ''Great Legislator" (more accurately the great civic educator) must, over educative time, "change the nature of man" by turning self-lovers into "Spartan mothers" (who ask not whether their own sons have survived battles but whether the "general good" of the city still lives) (96)

The aim of Rousseau's education then, is that the student develops through his own interpretation of the world around him, and acquires learning and knowledge that he is able to transform into support for his own change from a self-loving creature to a robustly civic-minded one. This is arguably the only transformation that Rousseau would "allow" because it is in line with his view of "natural" development: that is, the originally good nature changing from one that focuses on its own development and well-being to that of others, which is what it would naturally do anyway. For Rousseau, change is not acceptable if it diverts from natural inclinations.[19]

[19] Remember here that Rousseau already assumes that our original nature is good. The question of whether or not we are "born good" is a very complex

The use of the term "Spartan mothers" is of course a loaded one. Rousseau does use Spartan analogy and he does prioritise the well-being of society over that of the individual, and it is a fair criticism that at times Rousseau can come across as rather extreme and cold in his approach. But I do also believe that he shows genuine concern that students are treated with respect and dignity and holds that their flourishing is important too. I will point to evidence of this as we go along.

How then does Rousseau intend to provide his student with an environment that protects the natural state and one where *amour propre* can be correctly developed? Rousseau divides up the developmental stages of a person and advises as to how they should be taught appropriately at each of these stages. In books one to three of *Émile*, we see that shielding the child and keeping him as isolated as possible is encouraged so that his *amour propre* can be properly developed. It is only when the student is at the appropriate age to reason that the teacher is invited to find ways in which the child can discover reasoning, but even then, the teacher is required to be careful about exerting her authority over the student in any way. Rousseau argues that reason is the last stage to develop and so should never be the medium of instructing a student. He writes:

> Of all man's faculties, reason, which is, so to speak, compounded of all the rest, is the last and choicest growth, and it is this you would use for the child's early training. To make a man reasonable is the coping stone of a good education, and

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one that the limits of this thesis do not permit me to explore. While this is an important aspect of Rousseau's own theory, it is not a necessary condition to the points I am interested in for this thesis.

> yet you profess to train a child through his reason! You begin at the wrong end, you make the end the means. (Émile 53)

In Émile's case, the first signs of reasoning appear when he is older and gets lost in the woods of Montmorency and has to use astronomy to find his way back, combining "reason of the senses" with "intellectual reason" in an independent way (65). As mentioned earlier, the teacher or caregiver should not tell the student what to think or do but provide carefully orchestrated opportunities for the student to learn and come to conclusions through self-exploration. In *Émile*, Rousseau provides many examples of how this can be achieved. One such example pertains to teaching a child about the concept of property. Rousseau suggests that children, although they may have a very basic idea of what it means to own something, such as "his clothes, his furniture, his playthings" (62), have no real understanding of the concept of ownership. To effectively teach a student about ownership, Rousseau suggests that one needs to "go back to the origin of property" (62). So he takes Émile to some unclaimed fields and they plant beans there and care for the land and the beans. After some time of doing this, Rousseau then tells Émile,

> We water the beans every day, we watch them coming up with the greatest delight. Day by day I increase this delight by saying, "Those belong to you." To explain what that word "belong" means, I show him how he has given his time, his labour, and his trouble, his very self to it; that in this ground there is a part of himself which he can claim against all the world. (63)

Rousseau's point here is that Émile eventually learns about ownership through the direct experience of owning and caring for the land, by facilitating Émile to feel for himself the sense of ownership, and not by being told the meaning or definition of ownership or property. Rousseau is very much against the

approach to teaching where children's heads are over-filled with words that have no meaning within their reach while teachers believe they have instructed them very well (76). This way the correct *amour propre* is also developed because Émile understands that he has claim over the land because he himself has worked hard on it.

What Rousseau wants to model here is the process by which a student is allowed to engage directly and naturally with an experience. He is able to relate experiences to one another and integrate them in such a way that he better understands something about the world around him and how to relate to it. The deep approach also calls for the understanding of material for oneself, discovering (for oneself) and using organizing principle to integrate ideas and relate them to one's own previous knowledge and experiences. One of the many positive outcomes of this kind of attitude and approach to learning, for both Rousseau and those who apply the deep approach is in the fact that such attitudes towards learning enable the student to come to understand something and form ideas about things in a way that is less influenced by someone else. We can certainly see that Rousseau attributes value to ensuring that students are able to explore, examine and think about the world and what others tell them in a thoughtful and critical way, so as not to blindly believe something simply because someone has told them it is true or right, or on the basis that others believe it. It would be fair to say that one of the key aims of learning is to equip students with the ability to think critically and for themselves, this is a crucial skill that is cultivated and encouraged in Rousseau's theory as well as in contemporary theories that centre on deep approaches.[20] Surface approaches on the other hand, because they focus predominantly on acquiring and retaining information through rote

[20] It is also worth noting that Rousseau references "joy" in the quote above. The role that pleasure plays in learning, and particularly in cognitive control and independent learning is something I consider in Chapter 5.

learning methods, do not foreground skills pertaining to understanding and critical thinking, so the development of these are not prioritised.

Criticisms of Rousseau's view

Rousseau's solution to the problem of untoward influence was to ensure that students are critical, independently minded thinkers who rely on their own discoveries and reasoning. This seems to me a good solution, however one of the significant criticisms that Rousseau faces is with how he suggests that this can be achieved. He has been criticised for being overly cynical and overly protective of children to the point that it seems he is advocating for the isolation of children, particularly from the city environment, including schools, and from other people (who are not part of his immediate learning experience). Relatedly, he has been disparaged for seemingly promoting the idea that reasoning is dangerous, and should not be taught to students, and that learning should always be pleasurable and painless. He has also been criticised for his view that disruptive or distressing moments inhibit learning, therefore leading to teachers, even in contemporary settings, overly protecting their students from challenges and useful learning experiences believing that these are necessarily harmful. There is also the claim that he diminishes the role of the teacher, making the teacher's contribution to learning insignificant, thereby leading teachers to adopt a *laissez faire* attitude to their students. In contrast to this accusation is another one that criticises him for encouraging teachers to control and manipulate their students. I consider each of these criticisms briefly below and conclude that Rousseau's writings can be confusing and even overly-dramatic at times, but that at the heart of it all, he values independent learning that concerns itself with both cognitive and reasoning skills as well as civic/humane development. He emphasises a careful balance between pain and pleasure in learning; he holds the teacher in very high esteem; but he often expects a lot from the teacher, making it a difficult role to successfully fulfil in an education system that is poor

on resources and does not usually allow for adaptive or one-to-one teaching. The manipulation factor is an interesting one, and I show that although Rousseau does encourage that situations be "set-up" for the student to learn, to call this "manipulation" in as negative a sense as it has been by some critics is rather ungenerous.

Isolation and Reasoning

Rousseau condemns the city life and educational institutions as being corrupt, and suggests that children be taken away to the countryside where they may be kept separate from the city life and social institutions until they are of a suitable age to re-join society. At the start of *Émile*, Rousseau describes such institutions as "ridiculous", teaching children to become "hypocrites, always professing to live for others, while thinking of themselves alone" (8). Rousseau believed that more intimate communities allow parents to shield their children from these "vile morals of the town" (59) and that children should align themselves with their natural inclinations to be good. Even if we assume these naturally good inclinations to be true, there is no reason to believe that opinions different to those aligned with one's original nature would necessarily be corrupting or evil. It is possible that our experiences of the world around us, even if this immediate environment is "the town", could, at least sometimes, offer positive and useful perspectives to our natural inclinations. They could perhaps refine those inclinations, and even add contexts to our natural inclinations that might help us to understand them better, thereby guiding us to better and more effective or efficient decisions and actions. As someone who believes that learning should be a process by which the student discovers and independently interprets the world around them, for Rousseau to show disdain for personal opinions that are shaped and can be changed by real world engagements and experiences does indeed seem inconsistent – but is it really?

To answer this we need to note that Rousseau held a developmentalist view of education, namely that timing is very important in education because people develop in specific ways at different stages in their lives; they go through phases of development and learning should serve these phases of development. Throughout the early phases of the student's development, in order for *amour propre* to develop correctly, the student should be kept isolated from society so as to ensure that his or her will is not dominated by another's. This separation was not limited only to the city but also to materials thought to exert too much influence on young minds. Rousseau also had strong views against young children reading books. Like other influences, he felt reading of books mediated what was "natural" and caused young children to only '"know" what someone else decided was worth knowing and even went so far as to say that "I hate books" (Émile 147). Elsewhere, he wrote,

> . . .our first teachers in natural philosophy are our feet, hands, and eyes. To substitute books for them is not to teach us to reason, it teaches us to use the reason of others rather than our own; it teaches us to believe much and know little. (Émile 90)

Like Plato's disdain for certain poetry and art that he considered to be influencing the youth to hold highfalutin or pompous ideas about heroism and reality, Rousseau held disdain for books, at least in the early developmental stages of a student, because he felt that the ideas in books would corrupt their minds and give them a sense of reality that was mediated, as opposed to real. One of the reasons Rousseau finds books problematic is that he simply does not seem to have much faith in the role of others (other than the teacher, and even then he is cynical) in the education of the child. Like Plato, he was worried about the student being manipulated, brainwashed and shaped by a society that does not have the right moral and civic attitudes.

Noddings writes that for Rousseau, education was given the task of transforming students into self-reliant, compassionate, civic-minded people who were able to reconcile their true nature as free and good creatures with living conjointly in society (14). So, at the same time as believing that schools, institutions and the city were corrupt, Rousseau also believed that all education is aimed at one very specific sort of transformation: from self-loving child to civic-minded person.

In light of this, the question of isolation seems especially concerning to critics. They may argue that there is no reason to believe that *amour propre* can only be successfully developed through this isolation. To be properly integrated into civic life, would not engagement with civic institutions and the civic life of the city be important? Additionally, if Rousseau is suggesting that we should heed what is "natural" then could he also see learning as a transformative process? If we agree that learning involves genuine understanding, then we must be open to the fact that learning might, and often does, lead us to question our own views, and sometimes this results in us changing our minds and even changing fundamental views that may bring about personal transformation. This is the value of being "open" to the world and to various perspectives, which I explore as an argument in itself in Chapter 6. Worries that Rousseau may seem to have about his students being vulnerable and getting "hurt" or influenced by "corrupted" views and personalities are of course legitimate, but does the answer lie in seeking to over-protect students and make them as invulnerable as possible? How can we make sense of Rousseau's views that we should be in touch with our natural state but still be transformed into a civic-minded member of society, and that we should avoid significant aspects of civic life and environment but know how to live conjointly in society?

Critics may also point out that one can imagine exposing one's children to books and them still developing views of their own, "unsullied" so to speak by

the views of authors in books. In fact, books, and even fiction, can be an incredibly useful tool to get students to challenge their own assumptions, learn about the world they live in, acquire information and facts, and change their minds about things. This can be done successfully, for example if the teacher facilitates the reading process by asking thoughtful and probing questions.

I think the response to these critics lies in a more careful reading of Rousseau, one that acknowledges that "negative education" is part of a pedagogical process that spans the many years of a child's learning – from early childhood through to early adulthood – and that has many stages, each different and planned as a progression from the next when the child is ready to move on. As such, isolation from potentially corruptive or highly influential people and materials, be it the city, schools or books, is not for life, but for the early developmental period of a child's life. This means that exposure to the city life and to books of all sorts is permissible, and even to be encouraged when the student is old enough to make up her own mind. The concept of "negative education", according to Rousseau, is only really reserved for the earliest stages of a child's education. He writes:

> Therefore the education of the earliest years should be merely negative. It consists, not in teaching virtue or truth, but in preserving the heart from vice and from the spirit of error. (Émile 57)

Rousseau's "negative education" makes sense within the context of his views about how we receive our education. He says we do so from three sources, namely nature, men, and things (Émile 6). Nature educates us about our biologies – that is, our organs and our faculties. Men teach us how to put our biologies into use – that is, how to utilize our organs and exercise our faculties. Things educate us by offering us the physical environment with which we

interact, using our senses. The first of these "teachers" should be nature, says Rousseau. His reason for this is that nature is the "teacher" we cannot control in any way. Teaching methods, he holds, should be aligned with the child's developmental stages. He writes:

> Nature would have them children before they are men. If we try to invert this order we shall produce a forced fruit immature and flavourless, fruit which will be rotten before it is ripe… (Émile 54)

By "invert this order" Rousseau meant that children should not rely on reasoning to teach them what to think or how to be at this early developmental stage as the child's development would not be at a stage where actual, intelligent reasoning would be possible. This was perhaps the key reason why Rousseau seems to have despised the city life for young children. He felt that the social settings and pressures would compel parents to teach their children to blindly conform to societal pressures. Not being able to reason like adults do, children, who are more "innocent", vulnerable and naturally "open" to the world will then adopt certain beliefs, attitudes and practices without fully understanding the reasons for doing so. In *Confessions*, Rousseau talks about the "intimate" setting and community style of living that was characteristic of the countryside, making life there simple (24). This simplicity would allow parents better control of the environment, making it an ideal environment for teaching them first about their faculties and how to use their senses, before then slowly progressing to teaching them how to reason via means of experiences rather than commands.[21] He felt that rushing this

[21] It is evident in today's context that packing our children away to country homes with private tutors reeks of privilege. In the context of the 18th century it did too and Rousseau keeps advocating it because his personal experiences of time spent in the countryside as a child were remarkably positive and nurturing in ways that city life was not. If we excuse Rousseau this oversight,

stage would do more harm than good, and that a child should be around twelve before reasoning is taught to some basic degree. He writes:

> A child knows he must become a man; all the ideas he may have as to man's estate are so many opportunities for his instruction, but he should remain in complete ignorance of those ideas which are beyond his grasp. My whole book is one continued argument in support of this fundamental principle of education. (Émile 141)

We now know better that children in general are capable of reasoning before they are twelve, we also know that all children do not develop at the same rate, so ascribing an age, like twelve, at which a child is capable of intelligent reasoning is inaccurate. So the suggestion that they should remain in "complete ignorance of those ideas which are beyond their grasp" seems unhelpful as what is within children's grasps at different ages is much more varied than Rousseau seems to have understood. Matching learning outcomes to a child's developmental stage is perhaps the most difficult task at hand here and Rousseau has been too prescriptive in attributing a specific age range to this development. Or, rather, it is clear to us now that adopting Rousseau's advice on age suitability, as some progressivists continue to do, in the world we now live in, would be misguided. If for example one were to time the period of isolation wrongly and keep one's student in isolation for a significant

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what we can take very usefully from his imploring to take our children away to the countryside is that it is worth being mindful of how much our environment can affect our learning and shape our beliefs. In fact, Rousseau can be credited with bringing this observation about the influence of our environments to our learning, to the fore at a time when people naturally fell into the belief that schools were necessarily the best place of learning for every child.

period of time after she is "ready" to "progress" into society, the isolation and excessive shielding could diminish her ability to abstract meaning, relate new ideas to previous ones, challenge the logic and validity of beliefs and arguments – because the student struggles to develop her thoughts and beliefs alongside the experience of seeing different approaches to problems and hearing different views. This is essentially the opposite of what Rousseau desires. In light of this, I think what is useful to retain from Rousseau's views on isolation is not so much the exact age suitability for different levels of progression in learning, but the more fundamental position that aligning what we teach with what a child's mental development will yield success.[22] This is now an elemental principle of curriculum planning (though curriculum planners cannot always get it right either), so it is not a contentious position to hold. We realise how crucial timing is to imparting knowledge and skills but also to maintaining and developing a child's confidence in learning. In further support of this reading of Rousseau's position, consider the following quote:

> I am far from thinking, however, that children have no sort of reason. On the contrary, I think they reason very well with regard to things that affect their actual and sensible well-being. But people are mistaken as to the extent of their information, and they attribute to them knowledge they do not possess, and make them reason about things they cannot understand. (Émile 72)

[22] This is a fair interpretation because Rousseau advises strongly against forcing lessons and activities on to children before they are ready – the age range therefore might be seen more a guide than a rule if we are being generous. He writes "Mankind has its place in the sequence of things; childhood has its place in the sequence of human life; the man must be treated as a man and the child as a child" (Émile 44).

Rousseau is clearly addressing the fact that he believes children are capable of a certain level of reasoning, but not capable of reasoning like an adult. This seems to me a fair observation and one that clearly does not, as some opponents argue, diminish the value or position of reasoning in learning. What Rousseau is claiming seems to be quite clearly that what we teach children should be in alignment with their growth and development.

Pain-free Learning

The claim that Rousseau promotes over protectiveness and a pain-free education is not entirely accurate.[23] While it is true that Rousseau held that "the age of gaiety passes amidst tears, punishments, threats, and slavery,'' and that one must avoid the:

> What is to be thought, therefore, of that cruel education which sacrifices the present to an uncertain future, that burdens a child with all sorts of restrictions and begins by making him miserable, in order to prepare him for some far-off happiness which he may never enjoy? (Émile 42-43)

Rousseau also believed that happiness was more than just pleasure, meaning that when he talks about happiness and gaiety in these quotes, he means well-

[23] Reese writes that progressivism, for which Rousseau has been widely held as the founding father, has been described as "part and parcel of wider reform movements in the Western world that sought the alleviation of pain and suffering and the promotion of moral and intellectual development'' (3).

being and something more akin to "flourishing".[24] For Rousseau, well-being lies in keeping one's desires and faculties in balance. He wrote,

> … True happiness consists in decreasing the difference between our desires and our powers, in establishing a perfect equilibrium between the power and the will. Then only, when all its forces are employed, will the soul be at rest and man will find himself in his true position. (Émile 44)

This balance was not achieved by ensuring that learning was always and only ever pleasurable. In fact, quite oppositely, Rousseau clearly advocated for some pain and suffering in learning too. He says of Émile's learning, that ''if you take too much pains to spare [children] every kind of uneasiness you are laying up much misery for them in the future'' (50). He also writes - in praising Montaigne – that the more a child is able to cope with suffering the stronger his "soul" becomes (95). Surely this is not a person who seeks to remove all suffering from learning. Avi Mintz writes:

> Rousseau conceded that children should be protected from the extreme dangers of their environments, but he also required that appropriate dangers should be sought out. Jean-Jacques would keep Émile from a rocky area where he would need to be protected from falling, for example; instead, however, he would take Émile to a field so that he may run and fall without the need for protection by adults. (256)

[24] Consider also this quote from Rousseau: "…the pleasantest habit of mind consists in a moderate enjoyment which leaves little scope for desire and aversion." (Émile 191).

It is clear then that Rousseau does not require that suffering be removed from learning but rather that appropriate suffering should be experienced and these experiences should be contextualized and guided by the teacher. It is also useful to note that the kinds of suffering to be experienced differ with the development of the student. These first encounters are with the physical environment and nature, as in the example above. Following this, students learn about suffering when they encounter the unfamiliar or failure. For example, in the scenario we saw earlier, where Émile learns about property by planting beans in a field, it is the case that Émile plants these beans on property that is not his - this is something planned by his tutor to guide Émile through the process of learning about ownership, loss and perseverance – as such the owner of the garden uproots Émile's beans, destroying the efforts of Émile's diligent labour. Realising this has happened Émile becomes very upset. Rousseau writes:

> The young heart revolts; the first feeling of injustice brings its sorrow and bitterness; tears come in torrents, the unhappy child fills the air with cries and groans. (63)

The destruction of the beans has taught Émile about property rights, about the loss of something treasured, and the fact that sometimes, hard work does not see its just fruition. In later coming to a happy compromise with the owner of the garden, Émile also learns about relating to others. Mintz writes:

> Émile is interested in the fate of his beans and the lesson he learns is presented as more meaningful, more productive, more likely to have a lasting effect and be remembered because of how much it pains him. In addition… Rousseau valued disturbing, unexpected events in learning. It is the unexpected destruction of the beans, an event for which Émile had no preparation, that causes the pain that Émile experiences. (260)

The extent to which distressing moments and disruptions are valuable to learning is something I explore in greater depth in the chapter on vulnerability. I think that they are valuable if appropriate and if one is well-equipped to engage with the world in this "open" way. As Rousseau suggests in this example, I hold that openness could bring about some distress and disruption to one's ways of viewing the world, to one's self-confidence and to one's emotions, but in some of these instances, one could stand to gain more than one might lose in the process. The point to convey here, at this point though, is that it is clear that the criticisms leveled against Rousseau about being over-protective and concerned only with happiness and ease for his students, thereby diminishing the scope of their learning experiences, are not justified. Crucial to Rousseau's advocacy of an education in suffering is that the particular types of suffering that Émile experiences are of utmost importance. In the context of the preceding examples, Rousseau advocated letting children suffer the various pains and discomforts that arise in their interactions with the world and others around them, but that these be carefully thought through, even orchestrated so that the lessons can yield the learning points that are necessary and that the teacher be of critical guidance in the whole process. Which brings me to the puzzling criticism that Rousseau does not value the role of the teacher.

Manipulation and the Role of the Teacher

As we have seen, some of Rousseau's views betray a rather strong contempt for the role that others can play in one's learning – according to Timothy O'Hagan, Rousseau even held that schools were "unsound"(56) because they essentially corrupted students and compelled them to turn away from their naturally good natures. Rousseau has also standardly been categorised with a variety of other educationalists (such as Pestalozzi, Froebel and Neill) who held that teachers should play as much of a noninterventionist role in learning as

possible, leading to the conclusion that the role of the teacher was no longer as essential as was once held. However, I think this is a mistaken "lumping together" of Rousseau with other progressivists or a misreading of Rousseau from the onset.[25] It seems to be the case that Rousseau's position was that a teacher should not command or coerce the students, and it is not impossible to see why Rousseau was concerned with the role of figures of authority in learning. Students often trust their teachers and as such, teachers have a significant role in shaping how students learn and understand learning. Rousseau was undoubtedly more cynical than we should encourage our educators to be. His belief that schools were "unsound" was derived from hostility towards the methods used there to coerce students into being complicit in society's corrupt ways. According to Mintz teachers in these schools were deemed to be part of a system of:

> … 'traditional' education by which the child is made miserable because they subject him to ideas and practices that inhibit, compromise, and destroy his natural interests, desires, and joys. (53)

This as we know was something Rousseau was strongly against. However, there is enough evidence to suggest that Rousseau did not only value the role of the educator, but valued it greatly. Iheoma writes that Rousseau felt that the quality of a child's education depended crucially on the teacher's ability to "follow nature's lead" and such was the significance of this role that not being adept at understanding the child's development and needs could result in the

[25] Mintz points out that various influential progressivists, including Herbert Spencer, either refused to read Rousseau or misread him. In his footnotes he points to work by William Kessen, ''Rousseau's Children,'' as well as Jürgen Oelkers' ''The Reception of Rousseau's 'Natural Education'' as evidence. (252)

child's ruin (73); that over and above intellectual ability, a teacher must possess mastery over the "science of humanity", meaning that the teacher must be extremely skilled at understanding human development and nature, and be able to pass on these crucial, but extremely difficult to "teach" skills to the student without commanding, coercing or indoctrinating – as Iheoma says "a tall order indeed" (77). This does not suggest a diminishing of the role of the teacher – quite the opposite.

This establishes, I think, that Rousseau was not non-interventionist when it came to the role of the teacher. He advised not that the teacher "step aside" but that her methods of teaching are based on helping her student to discover rather than be taught *at*, explain rather than regurgitate, question and reflect, rather than blindly accept what they have been told. LF Claydon writes:

> We can understand Rousseau to be saying not that the tutor may not teach, but that he may not teach in certain ways. Today we may learn from Rousseau the valuable insight that the 'role of the teacher' is inclusive of more things than the activity of teaching and that these things may exercise a considerable influence upon the manner of teaching. (23)

By this, I think Claydon means that the teacher is not just the provider of information, but someone who is in the important role of guide. Guidance is different from traditional methods of teaching, which tend to involve more focus on directly communicating content than assisting students to acquire understanding, or, as I explain in this thesis, cognitive control. The "teaching" of cognitive control requires that a teacher put emphasis on the students' ability to explain and apply what has been learned, with a focus on equipping them to learn and problem-solve independently; as we have seen, this is also

exactly what Rousseau has in mind.[26] This involves finding teaching methods that ensure that skills rather than content are imparted. Rousseau's suggestion is for the teacher to orchestrate situations that will help the student discover learning points independently, and for the teacher then to help guide the student in making sense of or grasping this learning point. It is this suggestion that has been met with concerns about the teacher being encouraged to be controlling and manipulative. As I explained earlier in Chapter 3, concerns are also felt about Plato's manipulation via the "noble lie" but in the case of Rousseau, unlike Plato, the criticism is not particularly strong, as we shall see shortly.

Critics such as John Darling and Robin Barrow, for example, argue that Émile is manipulated by his tutor. Darling writes that "Émile's tutor may, to a great extent, remain in the background but his aim is to achieve and maintain total control" (173-185) and that the manipulation is significant enough that "Rousseau's approach to the growing child is crucially defective" (182). Barrow believes that Émile's tutor is manipulative and uncaring and he writes "there is little warrant for seeing Rousseau as the precursor of those who see a loving relationship or even respect for persons as crucial to the business of education" (37-38).

The main problem with these criticisms of Rousseau is that they fail to take into account that the aim of Émile's education is to make him independent, and to equip him with precisely the sorts of skills that will alert him to attempts to manipulate and control him and his thinking. This is not the case for Plato's "noble lie", which is designed to keep those of the silver and bronze classes

[26] Iheoma writes that Rousseau's "teacher must not play the pedant or the dispenser of wisdom" (77) and Rousseau himself writes that the teacher "must not give precepts, he must let the scholar find them out for himself (Émile 19).

permanently in their supposed place. The setting up of teaching scenarios in advance, and the attempt by the teacher to control the factors of these scenarios so that Émile learns the planned, "appropriate" lessons, can be seen as a maneuvering of the setting and circumstances; but to refer to it as manipulation seems unfair mostly because we tend to understand manipulation benefitting the manipulator and not the manipulated, and, in this case, the benefactor is clearly meant to be Émile. Also, it is clear that Rousseau expects the teacher to stop maneuvering such situations after a certain period in Émile's education - at a time when Émile will be able to reason and reflect independently enough that parity can be achieved between the teacher and Émile. Émile's tutor acknowledges the gradual change in their relationship towards this goal. He says,

> …the time is coming when our relations will be changed, when the severity of the master must give way to the friendliness of the comrade; this change must come gradually. (138)

At the end of the learning journey with his teacher, Émile says that he feels truly free from the shackles of money, prejudice and other non-necessities because he has learned to reason and think independently and as a result developed wisdom (436).

This is of course an ideal outcome. We can certainly think of counter-examples where a student realizes at some point that their teacher is maneuvering situations and creating contexts to appear real when they are in fact not. A discovery like that could easily engender mistrust and erode the relationship between teacher and student, especially if it does not go as planned. It is also an approach that seems to take it for granted that circumstances and students can be "set up" in this way, that there is a constant level of "controllability" in all these situations, which is rather naïve. Moreover, predicting, establishing and maintaining learning scenarios like this requires great skill and stamina by teachers and this is difficult enough to achieve in a one-to-one scenario, let

alone in the most common setting in contemporary education – classrooms of up to forty students. However, all good teachers think ahead about their lessons – in the preparation of curriculum, materials, teaching points, methods and approaches. So, planning ahead and prearranging are in themselves not problematic. The issue lies perhaps in the extent of the prearranging and the measure of control exerted by the teacher unbeknownst to the student.

In conclusion, while we may defend Rousseau from some of the less just criticisms of his pedagogy, we may have to concede that these expectations are idealistic, and therefore can be seen more as an ideal model from which to draw inspiration rather than as one to reproduce. As there in no opportunity to discuss ideas to put into actual classroom practice in this thesis, some of the fundamental "tenets" we might take into consideration when thinking about approaches and curriculum are that:

i) learning should be focused on (progressively, and at a rate that suits their abilities) teaching students skills that nurture independent thinking and skills associated with cognitive control – a crucial reason for this is so that potentially corruptive or damaging influences can be noted and challenged by the students themselves, to more astute and higher standards as their own reflective and reasoning abilities mature and become honed
ii) lessons, activities and learning points should be thoughtfully planned and executed with respect and versatility, and teachers need not shy away from appropriate levels of difficulty and challenge

While these approaches may sometimes involve pre-planning and pre-setting learning scenarios, the teacher should always be mindful that students are vulnerable when learning and be careful about maintaining the fine balance between respect and control (both of which are crucial in a teacher-student relationship, particularly in a classroom setting). I now move on the discussing the work of John Dewey.

3.3 Dewey

Why Dewey?

The 19th century philosopher John Dewey's contributions to the philosophy of education make him significant to any historical review of the subject. Dewey's ideas have been used by academics and practitioners in every conceivable field of education – from moral and peace education to teacher training, vocational and community education, as well as outdoor education, and his works are accessible in over 35 different languages. It would be remiss to consider the history of the philosophy of education without discussing Dewey. It is worth noting, though, that his work is both ground-breaking as well as highly controversial. Nel Noddings writes that he has:

> been hailed as the saviour of American education by those who welcome greater involvement of students in their own planning and activity [but also] he has been called 'worse than Hitler' by some who felt that he infected schools with epistemological and moral relativism, and substituted socialisation for true education (22).

His inclinations towards giving students autonomy in their own learning, the democratic principles he applied to classroom teaching, as well as his vision of the ideal teacher, have been considered by some to be inspirational and worth reviving. Others have found his ideas to be far-fetched and impractical; some of his philosophical views are arguably vague and therefore problematic, and some have accused him of unacceptable social engineering on the basis of his views on the relationship between science and political practice.

Dewey is neither a saviour nor even remotely comparable to someone as atrocious as Hitler. His work on education surfaced at a time of great debate between those who held that education should be child-centred, generally meaning that education should be based on children's interests, and those who argued that a curriculum-centred approach, where content was key and mastery of this content the fundamental pursuit of education, was ideal. The former, also sometimes called the "progressives", favoured creativity and believed that children should be active agents in their learning; and the latter, the "traditionalists", favoured discipline, which usually manifested itself in book-based learning, memorisation and recalling facts. Dewey was not a progressive, and believed that children should not be the sole and only starting point when it came to education. But he was very much against traditional approaches to learning that exalted memorisation and regurgitation. He held a more balanced perspective than the progressives: one that respected and prioritised children's active agency and autonomy in their learning, but which held that other social groups such as family and community had an important role to play. I believe Dewey's thoughts on education are worth considering because he took a strong and successful approach against purely surface approaches to learning. As we saw earlier in this chapter, applying only these approaches, or prioritising them, which many educational institutions continue to do to this day, has not proven to be successful in engaging learners, sustaining their interest and curiosity and preparing them for a workforce that is more creatively demanding than that of the industrial revolution, when national curriculums first came into play in such ways that we are now familiar with. Dewey spent his lifetime producing a tome of innovative work that suggests that education should be built on human experience and be part of the wider context of self-discovery, growth, personal and intellectual maturation, as opposed to what it often was – an automaton-like experience for the student who was "fed" copious of amounts of historically sanctioned knowledge and patterns, often without relevant context, to be stored for future use. There is value in his argument for why

students should be allowed autonomy and ownership over their learning and why the interests and experiences of the learner should be given due consideration.

I am particularly interested in Dewey's ideas about 1) active and passive learning, 2) the importance of the learner's agency and 3) the value of past experiences, contexts and future aims and goals to the process of learning. I believe these are significant contributions towards highlighting the value of deeper approaches to learning. Consequently, these three ideas have important bearing on what it means to truly "understand" what we learn.

These three ideas, like many of his ideas, are frequently discussed in relation to Deweyan "experience", which has long been a contentious and problematic area of Dewey's philosophy. So, to begin with, I offer a brief discussion of Dewey's concept of experience. I present his thoughts in his terminology, sticking to the use of the word experience because it is so widely used in his own writings. Where relevant, I point out how his thoughts on experience are clear and accurate or where they might be confusing or problematic. I suggest that in some cases, if we permit ourselves to be generous, it is possible to extract astute observations from even some of Dewey's more convoluted ideas, and kernels of truth and wisdom that are worth paying attention to. Where that is the case, I offer a suggestion of how we might be inspired by Dewey to re-think some of the educational practices we continue to keep in place today.

Deweyan "Experience"

Like others, I too have found that the lack of clarity in Dewey's conception of "experience" makes his work liable to confusion and misinterpretation. As his theory of "experience" is one of the most fundamental theories underpinning his educational philosophy, it is problematic that it can be vague and

confusing. Scholars in support of Dewey's theories have attempted to explain what he means by "experience" but even amongst his supporters, there are disagreements. I have come to the conclusion that the general principles he is championing are important and still relevant to contemporary education, and can helpfully point us in the direction of solving some of the major problems we continue to face as a result of over-focusing on rote-learning and other surface approaches to learning; I believe Dewey was "on to something" in a way that no one else was in his time, and as such, he opened our eyes to new ways of perceiving of learning and teaching that are inspirational even today. However, I also conclude that his theory of experience is confusing and too far-reaching, or all-encompassing, to give us a meaningful sense of what it means to experience something. As such, it is difficult to pin down what an experience actually is and to identify when we might be "experiencing" something. While I keep the term experience in this discussion (because so much of Dewey's work references it) I also suggest that instead of trying to untangle Dewey's theories on experience in itself, it might be useful to draw advice about learning from some of his ideas about how experience relates to learning. Taken in this more contextual way, much of Dewey's otherwise confusing thoughts on experience might offer us some useful suggestions for how to perceive learning. As such, my suggestion is to draw from Dewey, the helpful idea that experiences *of learning* should ideally localised within one's past, present and future experiences and personal contexts (which might include one's social and community contexts).

Now, to exploring Dewey's ideas about experience: In familiarising oneself with Dewey's work, one will find that that there are constant references to experience as the central point from which one makes sense of, and organises, the knowledge and information one gathers. Dewey writes in his seminal work on education, *Democracy and Education (DE)*, about what education is:

> (the) reconstruction or reorganisation of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience (81-2).

"Experience" emerges three times in this definition and as such, to understand Dewey's perspectives on education, we must first appreciate what he means by experience.[27] However, to do complete justice to this requires exploration of multiple major works, including but not restricted to *Experience and Nature (EN)*, *Art as Experience (AE)* and *Experience and Education (EE)*, so for the purposes of this project, I summarise some of Dewey's key ideas about experience.

The quote above suggests that the nature of experience is self-referencing, possible to restructure, and continuous. This means that the re-forming and reordering of our experiences, presumably in reference to other experiences we have had, both gives meaning as well as guides our following experiences. The experiences that follow then are again restructured in relation to the experiences past and so on and so forth. There is something to be said here for the idea that experiences are not entirely "stand-alone"; that experience is informed and understood in relation to our past experiences and context. This

[27] Dewey believed that understanding and defining "experience" was fundamental to understanding everything about humans and nature. He was heavily influenced by the work of Darwin (who held that interactions in nature were constantly changing and transactional), James (whose work on perspectival experience was studied closely by Dewey), and Hegel (who argued that the self was constituted through transactional experiences). In studying Dewey's explanations of experience, the transactional, constitutive and never-ending nature of experience is evident and it is possible to see that his aim was to carefully stitch together the views of experience of these three thinkers he greatly admired.

seems entirely plausible if we recall some of our own experiences, and how engaging in them might have been affected by previous experiences or life contexts. Take this simple personal example of one way in which past experiences can sustain learning: previously joyful experiences with reading and literature as a child most certainly had an impact on future encounters with literature; I came to see literature lessons at school as worth sticking with, in spite of regularly boring and repetitive lessons, because as a child I had always had wonderful experiences with books and stories – being read to, reading, making up new characters and alternative endings for stories and re-enacting fairy and folk tales in my grandmother's garden with my sister and cousins. An additional contextual aspect was that reading was a "big deal" in my home, as was performing versions of the books we had read – and we would be praised to no end if found engaged in either of these activities. We came to generally associate experiences with books as experiences that were pleasurable and that made us feel good. At secondary school, my experiences of literature lessons were informed by those joyful past experiences and even when lessons got tedious, I could 'hang in there' because my previous pleasurable experiences with literature informed me that there was fun to be found in these stories: if the teacher could not provide the fun, I could do so independently as I now had experiences that had been fun that I could adapt. This then informed my decision to read literature at A Levels, where I had a fantastic teacher who fancied himself Richard Burton, and then I read literature again at university – in spite of some tedious instances of learning, past pleasurable experiences of learning sustained me and provided me with some of the skills, learned through experience, to independently find pleasure in my learning of literature. It makes sense that paying attention to, and "tapping" into past experiences can be useful when it comes to learning as we can draw on past experiences to inspire our learning.

Teachers too can draw both on their student's past experiences and their own to inspire pleasure, help cope with stress, encourage patience, perseverance

and creativity. So here Dewey does offer us a very useful way, at least in the context of learning, to think about experience as having a continuous effect.

However, some ambiguity is also immediately evident in the quote referencing the "reconstruction and reorganisation of experience". For example, what is meant in the quote by "adds to the meaning of experience" – does "add to" here mean enhance and improve, or does it mean contribute? How much does it enhance, or contribute? How does it enhance or what does it contribute? How do we reconstruct and reorganize? Do we all do this in the same way or is this reorganizing subjective and subject to past experiences as well? Dewey does not shy away from exploring and explaining the notion of experience, in fact he acknowledged that it was a historically "loaded" term and considered substituting it for various other terms, such as "culture", "life-behaviour" and "life-activities" but decided to keep the term because he believed it held theoretical value that was worth preserving (*EN* 361–62). David Hildebrand writes that in a draft of a new introduction for EN, some 26 years later, Dewey apparently wrote: "my growing realization that the historical obstacles which prevented understanding of my use of "experience" are, for all practical purposes, insurmountable". Richard Rorty also argued that Dewey's notion of experience was vague and in *From Philosophy to Post-philosophy: Interview with Richard Rorty*, said, "I regard [Dewey's theory of experience] as the worst part of Dewey. I'd be glad if he had never written *Experience and Nature*. (2)

Throughout his career, and because of these concerns, Dewey offers explanations of 'experience' frequently and in almost all his works. Perhaps one of the most comprehensive quotes on experience comes from Dewey's "notorious" *EN*, where he writes,

> Experience includes what men do and suffer, what they strive for, love, believe, and endure, and how men act and are acted upon, the ways in which they do and suffer, desire and enjoy,

> see, believe, imagine – in short, processes in experiencing. 'Experience' denotes the planted field, the sowed seeds, the reaped harvests, the changes of night and day, spring and autumn, wet and dry, heat and cold, that are observed, feared, longed for; it also denotes the one who plants and reaps, who works and rejoices, hopes, fears, plans, invokes magic or chemistry to aid him, who is downcast or triumphant. It is 'double-barrelled' in that it recognizes in its primary integrity no division between act and material, subject and object, but contains them both in an unanalysed totality. (8)

This is a beautiful and rousing passage, but again, it is difficult to appreciate exactly what experience is if it is all these things. Dewey seems to suggest that experience is every process and every person who undergoes or engages in these processes. Perhaps what Dewey is striving to show here by this quote is that experience is deeply rooted in everything that we do – if we relate it back to the earlier quotation above we might understand Dewey to be trying to communicate that every experience is affected by all the factors that play a part in that experience, whether they are actions, people, objects and so on – the experience itself, past experiences that informed this current experience, the outcomes of this experience and those past, the people involved and each of their perspectives which in turn are based on their own experiences and values (which in turn are shaped by experience), the physical environment and so on. Again, I think there is something of value in this for learning, but I am less certain that it helps us understand experience itself as it is so widely encompassing that there are too many unanswered questions. For example, questions about how each of these aspects are necessary, how they operate, how they combine in their operations and transact with one another to produce an experience.

Perhaps what we could draw from this quote on experience is wisdom about how we might best inspire people to learn and to see learning as something deeply meaningful. Rather than prioritising memorising facts and model essay answers, could we take what Dewey describes about experience and use it instead to describe an ideal way to think about learning – seeing learning as being related to one's awareness of and interaction with one's environment, where the environment is a combination of the physical context within which one lives, the relationships one has with others, one's society, one's beliefs, the tasks and activities one is involved in, the hopes one has, one's past and even one's imagination. This environment is ever-changing and as one interacts with it and becomes more aware of it, that is aware of both the material objects and non-material thoughts and feelings that one is engaged with or in, these dynamic engagements contribute to one's perception of how the past, present and future of one's unique circumstances are interrelated and shape how one then continues to find and make meaning.

Although unclear at times, Dewey's perspective on experience is a unique one and it is not surprising that it gained so much attention. Unlike traditional notions of experience which view experience as relating distinctly to the past or present, or which define experience as something entirely confined to the private inner-state or mental-space of an individual, Dewey's notion of experience takes into account a flow between the past, present and future and a constant interaction with the world outside ourselves. This idea is applicable to learning because learning, if engaged with meaningfully, will often involve referencing past knowledge and experiences and require us to engage with the world around us as well as our own future aims and intentions. It therefore starts to become quite clear why Dewey values the role of experience in education so greatly and draws strong links between the correct understanding of experience and good education. Even before publication of the famous DE, Dewey was steadfast in his ideas about the role of experience. In 1897, Dewey presented a short manifesto called *My Pedagogic Creed*. The

creed was essentially inspired by Dewey's apprehensions about traditional education. It had five articles. These were, "What Education Is" (Article 1), "What the School Is" (Article 2), "The Subject Matter Of Education" (Article 3), "The Nature of Method" (Article 4) and "The School and Social Progress" (Article 5). Across these five articles, his sentiments about the traditional education process are made very evident as are his own views on how important experience is to education. In Article 3, he writes, "… education must be conceived as a continuing reconstruction of experience...". He also says in Article 2, "(The School) is a psychological necessity, because it is the only way of securing continuity in the child's growth, the only way of giving a background of past experience to the new ideas given in school". Again in Article 3, he writes about subject matter,

> In reality, science is of value because it gives the ability to interpret and control the experience already had. It should be introduced, not as so much new subject- matter, but as showing the factors already involved in previous experience and as furnishing tools by which that experience can be more easily and effectively regulated.

As we can see, the value of experience is undeniable for Dewey because it is what gives context and meaning to the new material that is being taught to students. Again from this quote we see that the link between experience and learning is explicit for Dewey. So, yet again I suggest that some of these learning-related outcomes that Dewey discusses in light of his theory of experience could be considered very beneficial as advice for how best to teach and learn, if we apply a simplified but clearer understanding that learning happens best when we can reference, or help our students reference, their past experiences and contexts, as well as keep in mind their future goals. I think this is a plausible way to draw something useful from Dewey's descriptions of experience without necessarily "buying into" Dewey's whole

conception of experience itself. We can helpfully look to Dewey's work for insight not into what experience itself is, but rather, how we should be thinking about curriculum, teaching, and sustaining long-term interest in learning in relation to our personal histories and hopes for the future.

It is clear that Dewey prizes deep learning approaches as fundamental to learning. If we look back to the start of the thesis and to discussions about deep and surface learning, we see that some of the crucial characteristics of deep learning are that it is an interpretive process aimed at understanding the world we live in, and that it facilitates our transformation over time. The fundamental role of experience in Dewey's philosophy is to aid our transformation as people and enable us to become active members of society, by helping us to reshape and re-form what we learn through our past experiences, present contexts and future hopes and goals. The ability to do this requires that we take a deeper approach to learning; one that encourages the development of cognitive control over superficial methods of knowledge acquisition.

Like Rousseau's Émile who learns about property by first growing and tending his own patch of garden, Dewey's student will best make sense of what she is being taught because it coincides with her experiences. An additional advantage of drawing connections between past experiences and present learning is that what is newly learned can clarify and refine our understanding of past experiences just as much as past experiences can illuminate new learning. The making of these sorts of connections are very much in line with Dewey's thinking and with contemporary deep learning approaches.[28]

[28] We will also see how this sort of learning is aligned with cognitive control. Dewey clearly prizes "know how" over "knowing that" something is the case, and this is a distinction I elaborate on in the chapter on cognitive control. It is also worth noting that clarifying and refining our understanding is also most

One of the most persistent reasons for early school-leaving and for the pervasive problem of boredom in the classroom is the fact that students perennially complain that what they study in school has little value in real life. Dewey was very aware of this and sought desperately to correct it by emphasising the importance of interlinking what is learned in school with what students are likely to experience outside of school. David Hansen writes,

> This problem is exacerbated when the student cannot ascertain the relationship between what takes place in school and what is meaningful and important for the student outside the school (a point often made in Democracy and Education, and in most other of Dewey's writings on education). Unable to make a clear connection between experiences in and out of school, the student constructs, if you will, a separate mental "space" for schoolwork. That is, what takes place at school, at least in many academic subjects, may be so discontinuous with other aspects of the student's life that he or she cannot usefully employ inside-the-school experience to explore, corroborate, falsify, extend, or illuminate outside the-school experience. Given such discontinuities, the student quickly comes to understand that it is better to "wall off " the academic world of school, learning its language, rules, and customs as a separate undertaking. (103)

The problem that Hansen refers to in the first line is that of teachers believing that they are equipping students with necessary and functional skills to extend learning beyond the classroom when in fact students perceive of their teachers as equipping them to score high marks and achieve the various "accolades"

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successful we are vulnerable or "open" in our learning and willing to have our existing views challenged.

that the educational system seems to prize over the actual empowerment of students to learn confidently and independently. This incongruence between teachers' beliefs and students' perceptions is not a problem if the ultimate test is passing exams with flying colours, but that is not often the case. The use of the phrase "the outside world" suggests that the "world of the school" is separate and perhaps even "interior" and this strikes me as characteristic of discussions about the transference of skills beyond the schooling years. This is one of the reasons that I think Hansen's description here of the way that the school environment is thought of – as a "separate mental "space" for schoolwork"- is very astute. The ingrained perception of the divide between the school environment and the "outside" world perpetuates the belief that what is learned in school is confined to the school environment and for the purposes of fulfilling expectations, such as tests and exams, within that environment. Employing purely surface approaches to learning reinforce these unnecessary divisions by supporting the idea that one can only be successful in school-based learning if one excels in surface approaches such as memorization and fact-regurgitation.

As we have seen, Dewey rejected learning as a solely school-based, school-environment led process characterised by surface approaches to learning such as objectively collecting facts for regurgitation, or blindly absorbing historical signs, symbols and patterns without active engagement and agency, much like a machine being programmed. Essentially, Dewey rebuffed the prioritising of surface-learning approaches that were designed to encourage and support the stockpiling of information. Instead he emphasized the importance of deeper approaches to learning that foregrounded inquiry and critical thinking. The latter, he believed, encouraged participation in society, and prompted societal change, which was a crucial purpose of education for Dewey. Paul Fairfield explains,

> As Dewey often pointed out, what takes place in the classroom is, or ought to be, continuous with life outside it. Questions regarding curriculum, techniques of instruction, and so on must not be approached as if the mind of the student were an ahistorical mechanism of some kind, a computer to be programmed or a producer-consumer in training. Nor should the question of development be approached in quasi-objective fashion, apart from phenomenological description of our lived experience. The transition that education brings about is a rising up to humanity, a cultivation of the self as an intellectual agent and active participant in the life of its society. It does not merely prepare the young for later life but transforms their perspective on the world and puts them in the role of questioners, inquirers, and participants in dialogue. (8)

It is clear from this that Dewey saw learning as a developmental process, a constant progression towards active and intelligent agency and participation in wider life and society. Unsurprisingly, Dewey was highly critical of what he referred to as "traditional education", which essentially prized surface-learning approaches over deeper learning ones. This was where teachers would transmit knowledge to their students without any awareness or attentiveness to the students' interests, their experiences or individual contexts.

Agency and the roles of the Active and Passive

Dewey was very precise that learning should make all learners dynamic thinking and questioning members of society. Students should understand subject matter in terms of their surroundings and personal contexts and use it to navigate and participate in their environments in ways that facilitate personal development and positive contributions to society. The way to achieve this was not to "force feed" facts but to acknowledge the learner's

experiences. Acknowledging the learner's experiences recognizes another very crucial aspect of the learner – her agency.

Agency for Dewey is not just a rational faculty, it is linked crucially with the capacity to act and with activity itself – in both the cognitive and physical sense. Cognitive activity would involve thinking, and, in particular, thinking in response to something and critically assessing and reflecting on ideas. Physical activity would involve the acts of doing, changing and making which involve physical engagement with the subject matter of learning. This broader definition of agency, which takes into account cognitive and physical activity, is crucial because it serves the purpose of highlighting that Dewey was very much against the sort of learning that involved sitting in the classroom, inert and absorbing copious amounts of information.

He writes in Article 4 of *My Pedagogical Creed,*

> I believe that the active side precedes the passive in the development of the child nature… that conscious states tend to project themselves in action. I believe that the neglect of this principle is the cause of a large part of the waste of time and strength in schoolwork. The child is thrown into a passive, receptive or absorbing attitude. The conditions are such that he is not permitted to follow the law of his nature; the result is friction and waste.

By "active side precedes the passive", I think what Dewey means is that children are active in an embodied sense, that is, they function in a more bodily and physical way before they are receptive to simply acquiring

knowledge.[29] I think Dewey wants to emphasise this because he wants to alert us to the fact that traditional classroom learning ignores a child's inclinations to be physically active. Believing that the active side of the child is her first nature, Dewey believes that the prioritising of passive modes of teaching and learning are counter-intuitive. The result of being denied the natural inclination to be active in the classroom, a place where many children spend a great deal of time, leads to "friction" or frustration and "waste", in the sense that the child's potential is wasted. As such Dewey argued that learning must be engaged and not solely impassive or inert. For him, learning is a dynamic activity and being inertly receptive is not dynamic. In DE, Dewey further discusses the nature of the active and passive. The active aspect is linked with "experimenting", and involves action, such as doing, making or changing. The passive aspect refers to receiving or having something "done to" one. This is not to say there is no role for passivity, but for Dewey, the ideal of passive receptiveness is in response to the active "doing", and not just inert absorbing of facts being fed to one. He writes in *DE*,

> We do something to the thing and then it does something to us in return: such is the peculiar combination. The connection of these two phases of experience measures the fruitfulness or value of the experience. (145)

[29] In *DE*, an entire chapter, "Experience and Thinking", is devoted to this. He discusses how schools often see the body as an "interference", an impediment that comes in the way of education. He also points out that the dualistic way in which "the mind or consciousness" and "the physical organs of activity" (146) are discussed highlights the problematic fact that the mind and body are seen as separate entities, when in fact both are equally important for successful learning.

Here we see that both the active and passive are equally valuable and it is in the witnessing and understanding of the potency of their connections, that is, to understand the relationship between what is done and what occurs as a result of what is done, that true learning occurs. Dewey writes,

> Two important conclusions for education follow. (1) Experience is primarily an active-passive affair; it is not primarily cognitive. But (2) the measure of the value of an experience lies in the perception of relationships or continuities to which it leads up. (*DE*, 146)

It is evident by the use of the term "measure" that Dewey appraises the value of experiences in learning according to the extent to which one sees the interrelatedness between the active and the passive components. By asserting that experience is not "primarily cognitive" Dewey indicates that experience is not purely intellectual in nature but rather a relationship between action and consequences that result from engaging with one's environment. Of course cognitive processes are crucial to recognising that actions and reactions are linked and cognitive processes play a significant part in understanding how they are related. But Dewey's point here is to emphasise the error in underpinning our understanding of the role of experience in learning as predominately cognitive. By failing to acknowledge experience as a unit of action, perception and cognition, teachers bolster the negative impression of school-based learning as something that is overtly intellectual and disengaged from the real world.

"The passive, receptive or absorbing attitude" that a child is "thrown into" by an education system that fails to see how the active and passive aspects are connected and how the active precedes the passive is a system that over-emphasises what Dewey calls "symbols". Richard Pring writes that Dewey felt that traditional education "treated knowledge as something …organised in

textbooks, "stuck on" without connections to existing ways of understanding" (273). This kind of knowledge, the outcome of purely surface learning methods like funnelling facts into student's heads or encouraging them along rote learning paths such as memorisation often unhelpfully replaces true understanding. These overtly formal, textbook-based approaches leave students with words they can string together or numbers they can add and subtract but they are unable to reason or make judgements based on genuine understanding, or transfer of what they have learned to practical, manual life. This immediately diminishes the value of learning, and as we noted earlier from surveys conducted even in the last decade, rote learning leads to students not seeing the correlations between school-based learning and real life, so they feel that what they learn in school is effectively useless in terms of practical, manual life. Echoing Dewey's contrasts between the active and passive components of the experience of learning, Pring writes, "'Knowing how" is as demanding as "knowing that", and the former might be said to logically precede the latter" (273). There are interesting contemporary debates between scholars about the differences between knowing-how and knowing-that which I consider in greater detail in the next section – the conclusion I come to is very similar to Pring's and Dewey's, which is that fundamentally, knowing-how, which is facilitated by deep learning approaches, is crucial to understanding and therefore, to learning. This is principally why I think Alison Hills' account of understanding as a type of "know-how" called cognitive control is especially relevant to this discussion, which we have seen has its roots in the work of Plato, Rousseau and now Dewey too.

Dewey writes in Chapter 18 of *DE*, "How shall the individual be rendered executive in his intelligence instead of at the cost of his intelligence?" (*DE*, 256). The implication here is that traditional models of education were effectively diminishing the individual's capacity for learning and intelligence by depriving them of opportunities for exercising their agency; that is, their ability

to make choices and play a role in directing their own learning was being hampered. The cost of this ends up being precisely what one hopes education will achieve, increased intelligence. While Dewey does not spell out what is meant by intelligence, we can perhaps fairly deduce that intelligence is not the ability to repeat or mimic facts but the ability, for example, to use facts appropriately and effectively when making a point or solving a problem. Encouraging learners to passively absorb facts therefore does not contribute effectively to the development of intelligence.

Furthermore in *DE* Dewey writes:

> In the strict sense, nothing can be forced upon them or into them. To overlook this fact means to distort and pervert human nature. To take into account the contributions made by the existing instincts and habits of those directed is to direct them economically and wisely. . . (30)

The idea of "force-feeding" learners with information is a futile undertaking according to Dewey because this goes against human nature. Presumably what Dewey is referring to here is the idea that human beings are curious and interested by nature. They are active in making choices and are naturally inclined to exercising agency; they are not blank slates or empty vessels that take well to being forcibly filled. To ignore or wilfully mislead ourselves about the human instinct to be an active participant in discovery is ultimately to pervert human nature. Taking into due consideration this human instinct to be an active agent in one's own life, and paying heed to one's "habits", which in the context of Dewey's theories is likely to mean one's past experiences, personal histories and beliefs, would be the best way to guide learning.

In the same vein, he emphasises in a later chapter of *DE*,

> All education forms character, mental and moral, but formation consists in the selection and coordination of native activities so that they may utilize the subject matter of the social environment. Moreover, the formation is not only formation of native activities, but it takes place *through* them. It is a process of reconstruction, reorganization. (76)

It is clear that Dewey wishes to highlight the fact that learners should be encouraged to exercise their agency. In this second quote, the point about agency is made when Dewey indicates that education is "a process of reconstruction, reorganization". This re-forming of what one has learned is an active endeavour that requires the learner to take charge of what they have learned, to make choices about how their learning applies to their lives and to make meaning from it by relating it to their past histories, previous learning and lived experiences.[30]

While the point about activity and agency is clear, the rest of the passage is rather ambiguous. It is problematically unclear what Dewey means by "native activities".[31] He could mean three things: a) the natural, as in physiological and

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[30] We will see some these skills being named as significant ones for cognitive control in the next chapter.

[31] I was unable to find a precise definition for 'native activities' but I was able to find in Hoy the claim that "natural activities mean native activities" but no explanation of "natural activities". However, on the same page and as part of the same discussion there are references made to "native structures" and "native powers" which are linked to the "body, organs and their functional activities" (63) so it might be plausible that Dewey is referring to the activities of the brain when he says native activities.

functional activities related to learning such as the use of the brain b) mental and moral character as he begins by saying "all education forms character, mental and moral" and then follows by saying "*the* formation is not only the formation of native activities" – the "*the*" could be referencing the formation of mental and moral character' he discusses prior or c) activities that are intrinsic and especially meaningful to a person because of their personal histories, experiences and attitudes. It's difficult to know which Dewey means as all three could potentially fit this passage. I think it is perhaps most likely that Dewey means (b) or (c) rather than (a) because firstly, he sees learning as more than a functional process or brain activity. Also the use of the word "formation" suggests it cannot be (a) because the brain and any other organs that he might have believed were related to learning are already 'formed'. Also the phrase, "through them" suggests that Dewey is discussing something that is re-shaped and re-structured via the natural activities, and we already know that the re-structuring of experience for Dewey happens on the basis of his idea of experience; that it is something that is continuous and extended, as opposed to temporally limited: as such it is unlikely that he is referring to something that the natural organs do. "Through them" is also rather vague. I think Dewey means that the environmental "output" and a student's experiences are transformed in the moment that the student experiences them because the student brings to them her own context, past experiences and future hopes. The "material" that the student encounters is therefore possibly something that is re-shaped by her and 'through' her interaction with it.

Vagueness of some of the terms aside, I still think it is possible to take from this quote the useful idea that learning can contribute to shaping our mental and moral characters best when the learning references the sorts of things that are uniquely pleasurable, important and meaningful to each of us. We will see in Chapters 5 and 7 when we discuss pleasure and then wholeheartedness respectively that these are important factors in facilitating pleasure in learning as well as in encouraging wholeheartedness about learning. These things are

uniquely personal and part of our personal histories, and while these might be established within our psyche, what we learn can take on fresh meaning and fit in differently within our structures of knowledge and understanding if we learn by actively referencing them. It is also clear from these quotes that it is agency that facilitates this Deweyan sort of deeper learning, because restructuring and reorganizing one's knowledge and understanding on the basis of both past as well as fresh and present encounters with learning requires deep reflection, questioning and thinking critically – all of which are active pursuits that require one to meaningfully engage, make choices, form intentions, identify possibilities and purpose.

Further explication of Dewey's views on agency can be found in the article "Dewey's Conception of Growth Reconsidered," by Daniel Pekarsky, who writes,

> …the ideal of growth is an ideal of human agency. That is, it characterizes the life of human beings insofar as they are engaged in making sense of their situation, deliberating, acting, and then using the results of their actions to confirm, expand, or refine the understandings, dispositions, and skills that guide their intellectual and practical lives. (291)

What this indicates is that the agent's, or in this context, the learner's ability to deliberately and actively synthesise their knowledge and experiences, to fine-tune these in relation to their understanding of the situation at hand and then to intelligently adapt and transform these to provide the solutions or know-how for that situation, their problems and tasks, is what is key. These features of an active agent are very much in line with the activities involved in deep approaches to learning, and to cognitive control as well, as I will show in the next chapter. To ignore the role of active agency would result in a situations where one might have access to a copious amount of information stored in

one's memory, but struggle, for example, to select and integrate appropriate pieces of that information to fit the context and/or fail to understand nuances or ways in which the information one has stored might be adapted and applied because one has prized the passive, receptive modes of learning such as memorisation.

Further evidence of the importance of agency and active engagement in learning comes from the significance Dewey places on the idea of inquiry in learning. To think critically and to question are deep learning approaches that require one to consider the information one is acquiring, to relate it to what one already knows and has experience of, to consider the function and value of this information, to interpret, question and challenge. It is clear to see how Deweyan "experience", active engagement and inquiry are interrelated, and why Dewey would hold all these in important regard for his pedagogical philosophy. Describing the Deweyan relationship between inquiry and experience, Richard Pring writes,

> One makes a choice (formulates a hypothesis) and takes a particular route (tests the hypothesis). If that reaches a dead end (if the hypothesis is falsified), then one tries another route (having reformulated the hypothesis). And so on ad infinitum. Therefore, as is argued in Experience and education (1938, p. 25), there is 'an organic connection between education and personal experience'. Education is part of that 'search for meaning – that 'trying to make sense' as one seeks to solve a problem through inquiry. (276)[32]

[32] Deweyan 'experience' makes an appearance here again, but the point here is not compromised by confusions in the meaning of 'experience', so this quote is worth considering for the insight it offers about activity and agency.

Pring is suggesting that Dewey believes we can learn from the mistakes and successes of past experiences. These experiences and what we learn from them are "organic" because the interactions are different each time, and depend on the specific set of circumstances of each situation. There is no fixed formula for what or how much one might learn. Whatever one learns will have some effect on the next experience of learning. This process is what helps us work through problems and find solutions and both the searching for solutions, which is what Dewey calls the process of inquiring, and the solutions themselves, when we find them, make meaning of our learning and our lives.

I think this makes a lot of sense but could be explicated more in terms of agency. Inquiring is an active process that involves making choices and acting on those choices so as to ascertain the outcomes and their suitability for whatever our purposes are. Learning from past mistakes and successes when we make choices is a process that requires active engagement with what we have learned. We need to reflect on our choices, on the paths we chose and how and why these were successful or unsuccessful. This reflecting, critical awareness and analysis are active engagements that require us to act with agency, and this activity and agency are what make a process of inquiry possible. It is only through doing this kind of thinking and activity that we create the connection between learning and experience.

Paul Fairfield writes about thinking,

> It is a process that never loses connection with experience, arising from a doubtful situation within it and ultimately returning to it with an enhanced knowledge of the connections between events or ideas and the significance of the original situation. (103)

It is interesting to note that in both these quotes from Pring and Fairfield, thinking and learning stem from identifying a problem or a "doubtful situation". Learning is the process, and sometimes a long process, of eliminating doubt and solving problems. Learning presented in this way immediately highlights its active and agential aspects. Solving is very much a process of active engagement, that requires assessing, questioning, thinking and experimenting, skills very much aligned with those of cognitive control, as we will soon see.

We know already that for Dewey, learning is as an exercise in reshaping and reconstructing. So, when faced with doubts or a problem in our present experience, by engaging with this problem or doubt through the processes of observation, critical questioning and relating back to previous knowledge and past encounters with learning and experimenting, we return to the present problem or doubt with improved knowledge of the links between what baffles us now in our current situation and what we already know with confidence from past experiences, and this offers us new possibilities for acting in our current situation. This in turn means that the education system would need to facilitate occasions for students to exercise their agency by creating opportunities for them to encounter doubts and problems in their learning, and encourage them to seek answers to these through inquiry and critical thinking, drawing from their past learning experiences and experiments and actively trying out various possibilities instead of being spoon-fed the answers by their teachers.[33]

[33] Rousseau suggests something similar when he talks about teachers orchestrating learning scenarios for their students. Orchestrating these scenarios could be a useful teaching tool if teachers are mindful of the fact that their students are vulnerable and take this into careful consideration. I say more about vulnerability in Chapter 6 of this thesis.

Traditional models of education, according to Dewey, do not offer these opportunities for exercising agency. My own experiences as a teacher and student indicate this to be true as well. Extensive volumes of curricula, limited time, old-fashioned methods of training teachers, and the assessment system, are just some reasons why creating opportunities to actively solve problems through experimentation continue to be a pipe dream. In "The Psychological Aspect of the School Curriculum", Dewey writes,

> The humble pedagogue stands with his mouth and his hands wide open, waiting to receive from the abstract scientific writers the complete system which the latter, after centuries of experience and toilsome reflection, have elaborated. Receiving in this trustful way the ready-made 'subject', he proceeds to hand it over in an equally readymade way to the pupil. The intervening medium of communication is simply certain external attachments in the way of devices and tricks called 'method', and certain sugar-coatings in the way of extrinsic inducements termed 'arousing of interest'. (76)

Rather scathingly, Dewey points out that traditional learning resembles a staid cycle of teachers accepting information unquestioningly from scientists and then "spoon-feeding" this to their students, in the most efficient methods they can manufacture, with copious information that is divorced from their students' realities. These methods are referred to as "tricks", "devices", "sugar-coatings" and "extrinsic inducements" because the methods trade on artificial "carrots" such as teacher's approval, good-grades and being the top student, and "sticks" such as disapproval from parents and teachers and threats and fear-mongering about their future. According to Dewey, the interests "aroused" by these incentives are not genuine ones: genuine interest should be aroused by the student's motivation to learn. This motivation comes from encountering problems that the students are motivated to explore and solve

by referencing their experiences and trying out different options, which in turn inform their next attempts and so on. This kind of active learning is what empowers students with true understanding and the ability to use what they learn independently; this in turn further activates their sense of agency, giving them the confidence that what they have learned is useful and meaningfully connected to their lives.[34]

If further evidence is required for the concerns Dewey has about passive learning or "cold-storage" ideals of knowledge (that is, collecting facts and storing them for future use) and the import he gives to deep learning, we might consider what he says in *EE*:

> There is, I think, considerable danger that this phase of social study will get submerged in a great flood of miscellaneous social study. When the subject was first introduced, I think there was a good deal of evidence of faith in the truly miraculous power of information. If the students would only learn their federal and state Constitutions, the names and duties of all the officers and all the rest of the anatomy of the government, they would be prepared to be good citizens. And many of them – many of us, I fear – having learned these facts went out into

[34] While I agree with Dewey that teachers should not rely solely on these extrinsic- reward-led methods to motivate their students to learn, and they should not encourage their students to be interested in learning exclusively because of the chance of good grades and approval, it seems plausible to me that a student may genuinely be interested in learning because of extrinsic motivations such as good grades, awards and approval. So these inducements could in fact be arousing genuine interest in learning. As such, there is no need for Dewey's insinuation that this is not really the case.

> adult life and became the easy prey of skilful politicians and the political machines; the victims of political misrepresentation, say, on the part of the newspapers we happened to read. (12)

Accumulating facts, gorging on content that is then passively and mindlessly absorbed as opposed to actively thinking and questioning, is being blamed here for the fact that supposedly "educated" people, even in their adulthood, have been trained to thoughtlessly accept what they are told so long as it is presented as facts. Dewey is rightly concerned here about cunning politicians who hide behind a façade of meaningless information and data for the purposes of confusing and deceiving the general public, many of whom probably think themselves to be educated and intelligent because they have been successful within a school system that has rewarded surface learning. People such as those in this example believe themselves to be exercising agency when in fact they have been brainwashed by a system that equates mindless acquiring of information with intelligence.

Problems with Dewey's conception of activity and agency

One of the criticisms levelled against Dewey is that in presenting his views on active engagement and agency in learning he relies too heavily on the model of the scientific method. Pring's quote which references the process of learning in terms of testing hypotheses certainly draws from Dewey's preference for modelling the scientific method in discussing learning experiences. Paul Fairfield also discusses this:

> For Dewey, the paradigm of thought is scientific experimentation in the sense that here we find the same method of inquiry that is properly followed in any field of study in an explicit and 'intensified form'. While he would never

> embrace any form of positivism, nor maintain that procedures proper to the natural sciences can be simply transferred to the social sciences and humanities, Dewey did hold a decidedly optimistic view of science and of what the scientific method might accomplish in refashioning thought in general. One finds throughout his writings not any simplistic or naive adulation of science – although there are passages that do approach this – but a somewhat more measured optimism that 'the scientific habit of mind' is generally applicable to human affairs. (107)

Fairfield is pointing out that one of Dewey's aims in using the scientific method as a model was to highlight the significance of inquiry and its relationship to experience. Given that Dewey felt the important need to remind educators that activity, agency and experience are crucial to learning, it is evident why he paid attention to the ideas of inquiry and experimentation. As Fairfield says, it is in science more than other fields of study that the concepts of inquiry and experimentation are given the most attention.

For critics however, one of the problems of such heavy reliance on the scientific method is the fact that it potentially diminishes the value of the arts and humanities and the methods of inquiry unique to them. A stronger worry is that Dewey is essentially suggesting that the arts be eradicated in favour of scientific method. RS Peters for example points out that the emphasis on the scientific method could potentially lead to a lack of arts and literature in the curriculum and the use of the scientific method as the sole approach for eliminating doubts, solving problems and engaging with the world (106).

Emily Robertson writes:

> Dewey did not argue that "the scientific method" as used in the natural sciences should be applied directly to human affairs, but

> that "intelligence" or the "scientific attitude" should become part of human life. The scientific attitude involves a willingness to suspend action in the face of a problematic situation and an inclination to engage in inquiry in trying to decide how to resolve the problem. (339)

Critics of Dewey might not agree with Robertson's "softer" reading of Dewey's preference for the scientific method of inquiry as being essentially a tool for educational inquiry in general. One of the problems with the scientific method informing educational inquiry in general is the conflation of "scientific temper" and "scientific technique", which are two rather different attitudes. Inspired by Bertrand Russell, JW Garrison draws a distinction between "scientific temper" and "scientific technique". Russell is cited in Garrison as saying,

> The scientific temper is cautious, tentative, and piecemeal; it does not imagine that it knows the whole truth, or even at its best knowledge is wholly true. It knows that every doctrine needs emendation sooner or later, and that the necessary emendation requires freedom of investigation and freedom of discussion. (490)

The worry is that "scientific technique" represents "a temper full of a sense of limitless power, of arrogant certainty, and of pleasure in manipulation of even human material" (qtd. in Garrison 490). Scientific temper, according to Garrison would then be crushed under the oppressive powers of scientific technique, which favours and devotes itself to the authority of scientific products over scientific process.

Given that Deweyan educational philosophy is aimed ultimately at democratic social reform, this is not an insignificant concern. If students are encouraged to

apply scientific methods to inquiry in all areas of learning, and if this process of inquiry in turn encourages an attitude of "arrogant certainty" where certainty is not truly possible then this would contradict the democratic education that Dewey had hoped for. RS Peters also worried that Dewey was encouraging the rise of "technological man", whose ascent would encourage the view that nature was under man's control and could simply be exploited to serve man's purposes (120).

However I think there is enough in Dewey's educational writings to suggest that this criticism is unfairly harsh. For Dewey, an approach informed by the scientific method is ideal for inquiring and critical thinking not because he believes them to accord certainty, but because they are the sorts of learning dispositions that Dewey holds to be ideal as they present opportunities for exercising agency and actively engaging with *further* inquiry and experiences, which in turn aid the student's overall growth.

In explaining why the scientific method, Dewey writes in *EE*:

> By science is meant . . . that knowledge which is the outcome of methods of observation, reflection, and testing which are deliberately adopted to secure a settled, assured subject matter. It involves an intelligent and persistent endeavour to revise current beliefs so as to weed out what is erroneous, to add to their accuracy, and, above all, to give them such shape that the dependencies of the various facts upon one another may be as obvious as possible. It is, like all knowledge, an outcome of activity bringing about certain changes in the environment. (27)

Dewey acknowledges here that science is meant as a metaphor for certain ways of thinking and engaging in learning – a methodological process

requiring active engagement by the inquirer with the object of inquiry and aimed at persistently drawing from past experiences to refine one's hypothesis. He also declares that science is "like all knowledge" in that it is the result of actively creating change in the environment. As such, it does not appear that Dewey thinks science should replace the arts and humanities, nor does it suggest that he thinks science and technology are superior. What he does seem to consistently value as superior in learning is active thinking and engagement with the subject matter. In his essay "Why Reflective Thinking must be an Educational Aim", Dewey writes:

> The great reward of exercising the power of thinking is that there are no limits to the possibility of carrying over into objects and events of life, meanings originally acquired by thoughtful examination, and hence no limit to the continual growth of meaning in human life. (128)

Thinking is therefore what makes it possible for our lives to have limitless meaning and possibilities, and is therefore a vital part of a person's education, if we understand education to be a process that equips and prepares us to be active social agents who are committed to growing and flourishing. To perceive learning as continuity, to expand one's horizons and see endless possibilities and opportunities to find meaning and value in life's learning experiences, is characteristic of Dewey's educational philosophy and what he perceived to be genuine growth; and this is why agency, activity and inquiry play crucial roles in Deweyan philosophy. The suggestion of a method similar to the scientific one therefore strikes me more as a call to adopt an inquiring nature similar to Russell's "scientific temper". Perhaps here, Dewey is simply guilty of over-enthusing about the scientific method and being too vague in his description of the ideal method of inquiry rather than reinforcing social engineering.

Another concern, already touched on briefly elsewhere, is that Dewey's emphasis on the learner's agency made his philosophy too student or child-centric. Dewey sanctioned teaching methods that took the focus away from authoritarian instruction and encouraged teachers to guide students based on their interests and an awareness of their experiences, personal histories, and context. As we saw earlier, a similar criticism was rather unfairly levelled against Rousseau. Critics argued that such a shift promoted "permissiveness" and mayhem in the classroom because teachers would no longer have authority and lessons would be disorganised and lack substantial, tangible objectives. In "Anti-Intellectualism in American Life", Richard Hofstadter offers the example of teachers failing to offer direction and guidance under the misled belief that they would be imposing their authority on the students and compromising their agency. His main concern was that educational environments would no longer serve the purpose they were meant to (374). Hofstadter blames Dewey's unclear and open-ended accounts of experience among other Deweyan concepts for this sort of possible confusion.

It is apparent from Dewey's own writings that he is not advocating for the instincts or agency of young learners to be allowed to wantonly burgeon like weeds. Views that suggest that Dewey believed that students should not at all be influenced or moulded in some way are rather unjust. He wrote in *EE*,

> Since freedom resides in the operations of intelligent observation and judgment by which a purpose is developed, guidance given by the teacher to the exercise of the pupils' intelligence is an aid to freedom, not a restriction upon it. (46)

Dewey held that teachers have a crucial role to play in shaping mental and moral character, and guidance and structure have an important function in the learning process. As the quote shows, he would have believed that appropriate guidance would have aided agency as opposed to hampering it.

Contrary to the cut-and-dry perspective that influencing and shaping would be at odds with a learner's nature, it is possible to appreciate that shaping a learner's character can be done with attention to, and respect for, that learner's personal nature and circumstances. We see a similar line of thinking in Rousseau too. Martin Jay writes,

> Many people— including many educators— misunderstood Dewey to mean that instead of a traditionally institution - centred aim, education should become child -centred. Although this interpretation served the purposes of teachers in a democratic society, Dewey insisted that education be society - centred, for children are destined to become not isolated individuals but members and citizens of society. (199)

For learning to be engaged, students need to be kept interested and involved. Helping them achieve this and become active social agents requires a teacher to be skilled at understanding her student, her student's context and experiences. The teacher must be sensitive and committed, desiring to build a trusting relationship of support and guidance, so that her student allows her access to her experiences. Dewey writes in Article 4 of *The Creed*:

> …only through the continual and sympathetic observation of childhood's interests can the adult enter into the child's life and see what it is ready for, and upon what material it could work most readily and fruitfully.

Again we return to the fact that teachers and educators working independently of their students, crafting a one-size fits all curriculum are not going to be effective at knowing what their students are ready for and what they would engage in with interest and productivity.

A good teacher would help shape her student's mental and moral character by using her student's past learning experiences, her personal history and context, and her aims and goals as a vehicle for teaching – and then by facilitating the student to exercise her agency in actively adapting and applying her learning in ways that best fit her needs and her personal, unique development. This process is not as vague or "airy-fairy" as some might contend. This is because the end goal is a practical and substantial one: to be an independent thinker and questioner, to be active and involved in one's own personal growth, and for that personal growth to contribute to the growth of society.

Dewey's contributions to "deep approaches" stem from his revolutionary work that suggests learning should involve an active engagement with past learning experiences, personal histories and future goals and aims. In spite of the vagueness and open-ended nature of some of his concepts, Dewey highlights the fact that the world has an effect on our learning and that choosing to actively consider that effect in our experiences of learning will imbue our learning with greater meaning and relevance and by virtue of this facilitate problem-solving, sustain our interest in learning and empower us to make decisions about how learning can transform our lives

3.4 Summary

I suggested earlier in this chapter that work in both educational psychology as well as educational philosophy prizes deep learning approaches over surface learning approaches because genuine understanding cannot occur if all learning involves merely surface approaches. I have considered the contributions made by Plato, Rousseau and, Dewey to this philosophical canon of work on deep learning approaches. None of these philosophers referred to their ideas about educational methods and approaches as "deep" or "surface" approaches, but all of them highlighted the utmost value of

characteristics such as abstracting meaning, reflecting on experience, critically thinking about, questioning and interpreting information - all of which are contemporarily referred to as deep approaches to learning – so that this information can be used independently, relevantly, usefully and creatively to ultimately help us become wiser, more capable and efficient, and more engaged and involved members of society. In the next chapter we will see how these skills and characteristics are similar to those of someone who possesses cognitive control.

Chapter 4: Understanding

4.1 Introduction

To cultivate and encourage a love of learning, experts tell us we need to pay close attention to deep learning, which, as we have seen, and will continue to see, is characterised strongly by understanding.[35] Yet, much of the literature on deep learning does not dedicate concentrated discussion around what understanding actually entails; what are its features and why it is uniquely valuable. As such, a convincing account of understanding is a crucial starting point as it is required in order for us to better understand what deep learning entails and what it can offer us that is more valuable that other kinds of learning. In fact, I hope to show that a robust account of understanding is sufficient as an account of deep learning because all the requirements of deep learning can be fulfilled if a learner understands what they are learning.

An equally important reason to give time to developing a robust theory of understanding is owed to the fact that I believe that understanding is an important condition for fostering and perpetuating a love of learning. This is because understanding has uniquely valuable features that can help learners

[35] Surface learning, such as acquiring content knowledge, be it simple content or more sophisticated content knowledge, can also be enjoyable, motivating, inspiring and useful. However, as we have seen in the last chapter, generations of philosophers, as well as recent data have shown us that it is not the acquiring of more and more facts that sustains our interest in learning and staying in school, or pursuing further education or engaging in lifelong learning, but the special value we find in understanding.

to sustain an interest in learning in school and throughout their lives, contribute to their independence and ability to navigate in the world, and give them a sense of satisfaction and achievement, amongst other advantages.

As such, the primary focus of this chapter is the concept of understanding. (1) My main aim for this chapter is to make the case that understanding is about having cognitive control, and particularly, cognitive control of the sort that Alison Hills discusses in her paper, "Understanding Why" (2016). My intention is to show that it is understanding that helps to achieve deep learning by allowing the learner to exercise cognitive control. I then go on to show that cognitive control is a crucial contributing factor to fostering a love of learning.
(2) I also dedicate a section to drawing a distinction between knowledge and understanding. Why is this relevant? A common objection to projects like mine is that an account of understanding is pointless because it is no different from an account of knowledge (some contenders may also specify that it is no different from *more sophisticated* knowledge). I want to suggest that an account of understanding is valuable because understanding has unique features that offer us value, value that knowledge, even "more sophisticated knowledge" alone cannot offer. Making this distinction also has the more practical benefit of helping educators see the difference in both these concepts, so they do not conflate them and as a result, believe they are supporting genuine learning by focusing on, or prioritising content knowledge transfer through surface learning approaches. Ultimately, as I have stated, I hope to show that understanding is valuable because it has a unique role to play in encouraging a love of learning.

In presenting reasons for why understanding is different (and as such has different value) from knowledge, I consider the role of testimony, firstly as it is especially relevant to teaching and learning, and secondly, testimony is a characteristic of knowledge that is **not** a characteristic of understanding. This is

important because it highlights one of the most crucial differences between the two: that understanding cannot be passed on to others in the same way that knowledge can, and this is one of the fundamental things that makes understanding both distinctive and valuable.

(3) I also consider the specific value of understanding defined as cognitive control. Here I show that understanding has unique instrumental and intrinsic value and that these values can support the cultivation and encouragement of the love for learning.

4.2 Defining Understanding as Cognitive Control

There is a wide range of theories about what understanding entails and how it can be best explained. One such method of explication is by paraphrasing understanding. That is, explaining understanding as "getting it" or "having a grip" or "having a grasp". Such metaphors are meant to hint at the meaning of understanding and are often useful, at least as a way of developing intuitive ideas we might have about what understanding is. In order to go beyond just this intuitive awareness of what understanding involves, many philosophers aim to explain what it actually means to "grasp" or "to get it". Their opinions here are varied too. For example, efforts to define understanding as grasping have led to various attempts to define exactly what the nature of grasping is. An often-quoted explanation of grasping is one offered by Linda Zagzebski in "Recovering Understanding". According to Zagzebski, the connections between things or how things hang together are internal; they are visible to our "mental view"; she says, "Understanding is a state in which I am directly aware of the object of my understanding, and conscious transparency is a criterion for understanding" (247) and also "Understanding…not only has internally accessible criteria, but is a state that is constituted by a state of conscious transparency…" (246). The idea here seems to be that grasping p means "seeing", both consciously and internally, how various parts of p come

together to make p. Suggestions that grasping involves "seeing" how connections hang together has raised criticisms about what "seeing" actually involves and therefore has not resulted in an especially robust account.

The notion of grasping as presented by most philosophers has encountered similar problems and furthermore, non- ability-based accounts of grasping have been offered by a number of philosophers, again with little consensus being agreed upon amongst them, which makes it difficult to account for understanding as simply "grasping". For example, Kareem Khalifa claims that the grasping involved in genuinely understanding a phenomenon is simply having true, justified beliefs about the true or best available explanation about that phenomenon (6), while Schurz and Lambert say that grasping simply involves becoming aware of how certain informational units fit into relevant domains of one's already existing system of thought (65-120).

Another theory on what understanding entails suggests that an account of understanding can be provided by first considering the objects of understanding, and, through this exercise, ascertaining something about what understanding is. One of the problems with this is that the objects of understanding are potentially limitless, making it difficult, practically impossible, to defend any one coherent account of understanding. Furthermore, attempts to categorise objects of understanding into groups of similar types result in concerns about whether these categories are accurate.

Another ability or know-how based theory is centred on the idea of cognitive control. And this is the theory that I base my own views on. The case presented by Alison Hills, though it references "grasping", circumvents some of the usual problems by virtue of the fact that it is abstract and broad enough to encompass a range of characteristics of understanding while not succumbing too readily to criticisms levelled against it. By virtue of that, Hills' theory is a strong theory to consider in its own right.

In addition to this, Hills' theory has the value of fitting in very well with the educational theory and psychology-based literature on deep learning that I presented earlier. Therefore it offers this thesis a strong account of understanding in-and-of-itself (understanding as we have seen is a fundamental characteristic of deep learning) as well as an account that has the added benefit of cohering with and improving on widely accepted research in other non-philosophical disciplines that study education.

I begin with a brief description of Hills theory on cognitive control, and consider it in relation to the Entwistles' theory on deep learning (which is the theory we looked at in Chapter 2). Both theories offer us a good foundation for exploring what understanding might look like – the Entwistles' theory offers us an inspirational starting point for thinking about the sorts of abilities that are involved in understanding and Hills theory adds philosophical robustness, clarity and breadth to the Entwistles'. I find that most of the Entwistles' account can actually be subsumed under cognitive control and I will explain how so later on. As such, I conclude that cognitive control is the better contender for a theory of understanding.

Hills' theory argues that understanding why refers to a special kind of "intellectual know-how" that is different from knowledge that p and knowledge how p (663). She explains this know-how using the familiar metaphor of "grasping" but her argument stands out amongst other descriptions of "grasping" because she goes on to give a fuller and more convincing explanation of what exactly is involved in "grasping". She writes,

> When you grasp a relationship between two propositions, you have the relationship under your control. You can manipulate it. You have a set of abilities or know-how relevant to it, which you can exercise if you choose (663).

> "Grasping" here is described not just as "seeing" connections but also as the broader ability to control and direct those connections. She then goes on to list six abilities that one will have if one is indeed able to understand why p and calls these abilities cognitive control.[36] Here are the six abilities she provides (663)

(i) Follow some explanation of why p given by someone else.
(ii) Explain why p in your own words.
(iii) Draw the conclusion that p (or probably that p) from the information that q.
(iv) Draw the conclusion that p' (or that probably p') from the information that q' (where p' and q' are similar to but not identical to p and q)
(v) Given the information that p, give the right explanation, q.
(vi) Given the information that p', give the right explanation, q'.

Let us now revisit the list we had earlier that laid out the characteristics of deep learning as provided by the Entwistles. The list offered by them captures the phenomenon of deep learning in a useful and intuitively accurate way. However, as I suggested earlier, their supporting literature has not quite "nailed down" the phenomenon of understanding as robustly as one might like. For instance, the concept of "understanding" in the first characteristic "understanding material for oneself" is not explained fully or satisfactorily, so one is unclear as to what it actually means to "understand" and when one might be certain that one has actually "understood" something. So to begin with, let's recap the list offered by the Entwistles. The characteristics of deep learning are:

[36] Hills clarifies that she would not rule out the possibility of further abilities not mentioned here (667).

(1) understanding material for oneself
(2) being able to engage vigorously and critically with material
(3) relating ideas to one's previous knowledge and experience
(4) discovering and using organising principles to integrate ideas
(5) relating evidence to conclusions
(6) examining the logic and plausibility of the content or arguments

It is fair to say that most of us have a working sense of what "understanding" refers to but for the purposes of building as strong a theory as possible on what it means to learn, it would be useful to carefully spell out the more fundamental terms and explain what they mean. Additionally, "understanding", as we can see from the list, appears to be presented as one of the six characteristics. However, it would seem that understanding is not just one of the characteristics of deep learning but rather a certain amount of understanding needs to be in place to fulfil (2)-(6) on the list. All the abilities (i) to (vi) on Hills' list (HL) demonstrate the ability to understand material for oneself, which is (1) on the Entwistles' list (EL). Hills describes her six abilities as cognitive control and says that these abilities are those that a person will have if they are able to understand why p (663). So we see that Hills is able to offer us a much more detailed account of what it is to understand material for oneself by explaining understanding via the list of abilities linked to cognitive control.

This leads us to one of the main problems of EL: that we are unable to tell from the list precisely how one would demonstrate that one is engaged in deep learning. For example, how does one know that someone has engaged vigorously and critically with material? We would need to see some demonstrable evidence of this to ensure that deep learning has taken place. Where EL does not suggest how (2) is demonstrable, HL does. We can reasonably assume that someone has engaged vigorously and critically with material if they are able to at least do (iii), (iv), (v) and (vi) as described on HL.

We can also reasonably assume someone is able to relate evidence to conclusions (5) on EL) if they are able to do (iii), (iv), (v) and (vi). We might be able to tell that someone is relating ideas to previous knowledge and experience if they are able to demonstrate (i)-(vi). We would also be able to tell if someone has the ability to do (6) on EL if they are able to do at least (iii) and (iv) on HL, given that drawing the right conclusions would suggest the content or argument makes sense. If one is not able to draw the right conclusions it might mean that one has not understood some relevant information, process or relationship or that the content or argument is not logical. One could then return to steps (i) and (ii) and check one's understanding.

The ability to do (4) on EL could manifest itself more concretely in being able to do (ii) to (vi) on HL. For example, one would use organising principles to categorise and draw links between pieces of information we already have and new information we receive, or if we were using language, then use these principles to help us paraphrase with words and concepts we already have, accurately, in order to explain why p in one's own words. Organising principles would also likely be required to draw conclusions about p or apply what we know about p to similar situations.

Then there is the additional issue of characteristics of deep learning that are not on EL. For example, HL lists the abilities of "drawing conclusions that p from the information that q" (iii) and "drawing conclusions that p' from the information that q'"(iv). While EL offers the characteristic of "relating evidence to conclusions" (5), Entwistle's characteristic (5) does not clearly state whether *relating* evidence to conclusions includes *drawing* conclusions from the information and being able to draw conclusions from different but similar information. Being able to draw conclusions suggests the ability to deduce from information as opposed to matching information to conclusions. Both deduction and matching in these cases cannot usually be achieved through

surface learning approaches such as memorisation, but rather involve being able to see how pieces of information relate to each other. However, deduction suggests the additional ability to infer from information something that may not be immediately apparent. So it would seem that HL covers an additional characteristic of deep learning, the ability to make plausible inferences.

Another possible characteristic of deep learning not on EL is the ability to gain greater understanding about the self and other. For example, by having the ability to follow explanations and draw the right conclusions and give the right explanations for why p, learners could also practice and develop empathy, humility, care and so on. For example, I might be better able to empathise with someone if I could truly understand their reasons for behaving in a particular way, that is, follow their explanation about why they behaved in that way and draw a plausible conclusion about them or their motivations from what they have explained about why they behaved that way. In being able to understand why this person behaved in this way, I might even get better insight into why I do or do not behave in particular ways given similar circumstances.

So HL is able to offers us a broader and more abstract account of understanding via cognitive control that can account for characteristics that we might reasonably consider to be those of deep learning, that are not on EL. In light of this, it would seem that although EL has offered a useful and inspiring starting point for a philosopher like me to think about the concept of deep learning, HL offers us an account that is a more robust candidate for describing deep learning. As such, I use HL going forward.

As we will be using HL as the basis for the following discussion, it might be worth considering the definitions of some of the terms Hills uses. Most of the terms used by Hills in her list and in her explanations are straightforward but it

would be useful to clarify what she means by "explanation". We will also clarify what Hills means by being able to "manipulate" the relationship between p and q, as she refers to this ability when she writes, "if you understand why p (and q is why p) then you have cognitive control over p and q and thus you can (in the right circumstances) manipulate the relationship between p and q." (663).

Here is Hills' account of "explanation":

> An explanation is an answer to the question: why p? It's possible to answer that question in a more or less full and detailed way, using more or less fundamental terms… There may be— perhaps usually there is—more than one adequate answer to the question "why p" and hence more than one explanation why p. Different kinds of explanation are to be expected from different subject matters, for instance, many scientific explanations are likely to be causal explanations, but explanations in mathematics and morality will not be causal, or not typically causal in any case. (664)

The literature on explanation is varied and incredibly dense. This is one of the reasons I believe Hills does not go into much detail here other than to point out that essentially, an explanation would be the answer to the question "why p?" It would be sufficient for the purposes of understanding Hills' list here to take "follow some explanation" to mean be able to keep on track with reasons that are being offered for why p, where the reasons may be causal or otherwise, depending on the context. For example, I would not be able to follow the explanation for why the green colouring of plants is crucial to the wider ecological food chain if I had lost track of the explanation at the point where someone was discussing the function of chlorophyll, the substance which makes leaves green (and thereby contributes to their nourishment,

which in turn contributes to the nourishment of animals that consume plants and which then feeds the predators that consume the animals that eat plants). Explaining why p "in your own words" is the ability to express the reasons, via paraphrasing, as to why the green colouring of plants is crucial to the wider ecological food chain. Why is paraphrasing important? Paraphrasing is a way of using different words and phrasing to present the same ideas. Substituting the words and phrases in an explanation for other words and phrases that communicate the same ideas show that it is more likely that one has not just memorized the reasons and that one is not simply regurgitating them with little idea what they mean or how they are relevant.[37]

Hills explains "manipulate" like this:

> "I understand cognitive control to require that you have a grasp that can manipulate the relationship between p and q, and I take that to mean that *if* you have formed a true belief that q',

[37] Explaining why p in your own words may not always indicate that you have truly understood why p, or understood it fully, but it will go some way in indicating that you have not simply learned the reasons by heart with little or no sense about how the relationships between propositions come to be. The ability to offer explanations in one's own words is important in the school context because this is often one clear way in which one can identify if the learner has simply memorised the words used by the teacher in a lecture or found in a textbook. Such memorisation may indicate that the learner does not understand why p and only knows that p is the case. In light of that, in order to ensure that deep learning is taking place, it would be important to include in any account of deep learning, the requirement of the learner to explain what they have learned in their own words.

> you can correctly draw the right conclusion p' and similarly, *if* you have formed a true belief that p', you can give the right explanation, q'." (674)

Manipulate, then, seems to mean the ability to exercise control over the relationship between p and q. If we were to think about what is involved in manipulating an object, we might think it involves handling it, maneuvering and directing it. We could "pull an object apart" and see its components and how they fit together, we can use the object for unique and novel purposes by perhaps re-shaping it or re-constructing its parts in ways that serve our purposes, for example. In the case of intellectual "know-how", this manipulation might involve seeing how propositions relate to each other and fit together, which would result in being able to work out reasons, connections, conclusions and challenges for yourself if you encounter similar relationships.

Hills' account, while promising, is not safe from objections. The main objection that arises from including explanation in the list is that explanation requires linguistic abilities that some people may not adequately possess or possess adequately enough to show that they understand why p, even though they may understand why p fully well. Especially problematic is perhaps the use of "own words" in the listing "Explain why p in your own words" in her list of abilities of cognitive control. Hills offers two responses to this by saying firstly that she concedes that this objection may hold some weight and so in light of that, she distinguishes between explicit and implicit understanding. She states that the understanding she outlines is "explicit" understanding but that when one implicitly understands, one correctly believes that q and on that basis draws the correct conclusion p, without having to represent q as the foundations for p (667). By represent here, I think Hills is referring to the ability to articulate the relationship between p and q in one's own words. If this is correct, then in instances of implicit understanding, the abilities on her list

requiring explanation would be void. This distinction might answer the objection in cases where there is no need for someone to know if someone else has understood.

However, in the teaching-learning context, understanding would necessarily have to be of the explicit kind because teachers need an indication, through the learner's ability to explain p in their own words, if they have correctly understood p. One way to get around this objection of linguistic ability is to use non-linguistic or non-verbal methods of explanation alongside verbal ones. Some educational institutions allow students to use visuals to aid their verbal explanations (common examples of this are graphs, charts, tables and other images) or offer non-verbal reasoning tests alongside other more mainstream types of assessment.[38] These are intended to take into account the fact that there might be some learners who are limited in their linguistic abilities or have specific learning disabilities.

Hills second response to the objection is perhaps more aligned with the educational context. She suggests that cognitive control comes in degrees. In this case, one can be better or worse at any of the listed abilities, including explanation (665). This then does not eliminate the explanation abilities from her list but rather makes room for the fact that a learner simply does not have full cognitive control if they cannot articulately explain p in their own words. In the school context, learners are sometimes given partial marks if they answer a comprehension question by "lifting" the answer from the passage instead of putting it into their own words. The reasoning is that the student has not fully understood the question or the relevant part of the text but perhaps has understood enough of the question and the text to find the "correct" answer.

[38] The University of Kent, for example, uses non-verbal reasoning to test understanding on the basis that verbal explanations disadvantage non-native speakers or those with particular learning difficulties.

Therefore, while not eligible for the full mark, the student is given at least some marks to indicate their level of understanding. This also suggests that understanding comes in degrees. One can have more or less of it, that is, satisfy the abilities in Hills list to a greater or lesser extent, and what is minimally required to count as understanding might be determined by particular circumstances and contexts.

So far, in this section, I have considered what understanding might entail and paid specific attention to Hills' account of understanding as cognitive control. I have shown that this is a strong account on the basis that it is clear and able to withstand some of the criticisms leveled at it. I have also shown that it offers a better account of deep learning than the Entwistles' account, and as such should form the basis for our understanding of deep learning going forward. By way of this I have also shown that philosophy can make some significant contributions to educational theory. However, there is still more work to be done. Hills' theory about understanding being a matter of cognitive control rests on the belief that understanding is not reducible to knowledge. So in the following section, I present a case, following Hills, for why understanding is not reducible to knowledge.

4.3 The distinction between knowledge and understanding: the role of testimony

In the current philosophical literature, there is significant debate as to whether knowledge and understanding are two different states or whether they are reducible to one state – namely that of knowledge.

The standard *philosophical* conception of knowledge has a list of specific and defining characteristics. Most philosophers will agree that for something to count as knowledge: it needs to be factive; it needs to be inconsistent with certain types of "luck"; it cannot be based on defeated evidence; and can be

transmitted by testimony (Hills 662).[39] I consider mainly the testimony characteristic here, as it is most relevant to teaching and learning.

Earlier in this thesis, I said that my aim is to advocate for instilling in students an understanding that effectively amounts to cognitive control. This broadly involves being able to explain information in their own words, see how pieces of information connect, how the information fits into a "bigger picture" and draw applicable conclusions as well as apply the information in similar cases.[40] I also stated that one of the likely objections I might face is one that argues that understanding, and in the case of this particular thesis, cognitive control, is reducible to knowledge, so knowledge is sufficient for deep learning. To successfully maintain my claim that understanding in the form of cognitive control is unlike knowledge and therefore has uniquely valuable features, I need to explain why cognitive control cannot be reduced to knowledge. My main point of defence here is that cognitive control cannot be reduced to knowledge because unlike knowledge, cognitive control cannot be transferred via testimony.

That knowledge can be acquired via testimony is not a particularly contentious claim and as such I will not be making a case here for why we should accept this claim.[41] In evidence of the above, Hills writes,

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[39] Again there is debate on whether the standard conception of knowledge is right, but for this paper, I assume it is.

[40] Teachers may not always aim to satisfy all these criteria and it may not always be possible to do so in a classroom setting due to limited resources. The point remains though that this, as opposed to cramming information, should be their intention.

[41] Philosophers who have explored the justifications for knowledge acquisition via testimony include Jennifer Lackey and Peter Graham.

> And though there is a lively debate about exactly how knowledge can be passed on by testimony, it is very widely recognized that it can. Knowledge has a very important social epistemic role: much of our knowledge comes "second hand" and testimony is a very common way of sharing the knowledge that we have. (662)

The "social epistemic" aspect that Hills mentions here refers to the fact that knowledge can be passed on to us by other people; there is a social dimension to it and testimony is a significant way in which this social dimension is recognised. While it is generally accepted that testimony has an important and valuable role to play in acquiring *knowledge*, I will argue that *understanding in the form of cognitive control* cannot be acquired solely via testimony, and therefore cannot be reduced to knowledge.[42] This view has been held by many philosophers, most famously, Gilbert Ryle, but also Zagzebski and Hills. For example, in *On Epistemology*, Zagzebski writes,

> Knowledge can be acquired by testimony, whereas understanding cannot be. A conscientious believer can obtain a true belief on the testimony of another, and given the right conditions, can thereby acquire knowledge . . . Understanding cannot be transmitted in that way. (145–146)

Yet, our personal experiences of understanding suggest that someone else who has more insight on a subject can help us to understand something by clarifying it or explaining it – in clarifying and explaining, "second hand"

[42] In the classroom setting, an obvious source of testimony is the teacher who shares knowledge and information with her students. Other sources of testimony used in classrooms are textbooks, journals and news reports. Educators who encourage surface approaches and learners who learn superficially most often rely solely on testimony.

knowledge would be passed down, and this could count as testimony. While testimony may not help one acquire understanding, it would be fair to say that testimony can facilitate understanding or help to foster it. So it would be fair to concede that testimony can aid understanding, but it would be inaccurate to suggest that understanding can be acquired solely via testimony, thereby making it unlikely that understanding is reducible to knowledge. Like Hills and Zagzebski, I hold that testimony alone, however good, is normally not enough to ensure understanding is taking place. It is therefore the case that in order for understanding, and thereby deep learning, to be taking place, testimony alone is not enough.

Let's begin by looking at Hills' argument and then at some of the objections levelled against her and how these may be addressed. Hills argues that understanding is different from the standard philosophical conception of knowledge because it cannot be (easily) transmitted by testimony. Knowledge, by this standard account, can be transmitted by testimony (Hills 662). This is because one can know why something is the case by having relevant propositional knowledge, which can be transmitted via testimony.

Following Hills, my claim is that understanding requires something other than only propositional knowledge. It requires the agent's ability to grasp, or cognitively control what the agent knows, and as Hills says this cannot be easily transmitted via testimony. She says that you cannot normally pass on the ability to draw conclusions or give explanations about similar cases simply by telling someone that q is why p (or even telling them that, plus that q' is why p' and so on). Cognitive control is something that typically comes with reflection and practice. Hills writes,

> Hardly anyone learns how to swim or ride a bike by reading a textbook or listening to an explanation of how to do so. Guidance from an expert can certainly help, but that help does

> not necessarily take the form of assertions passing on standard propositional knowledge; or even if it does, that only works if it is combined with practice. Testimony alone is not normally enough. (670)[43]

These examples would seem intuitively correct to most of us. If my uncle, who taught me how to ride a bike, had done so by thrusting a manual at me, I suspect I would have landed up in the drain by the corner of my street many more times than I did. Learning how to ride a bike by reading a book or sitting across the table from someone who describes riding a bike to you, regardless of how clear the descriptions and instructions might be, is not the best way to learn to ride a bike. I suspect this claim would not be a controversial one. If gaining cognitive control requires practice then cognitive control involves characteristically, some sort of know-how. Thinking of other examples of know-how, it is plausible to assume we cannot learn them by testimony, which leads to the assumption that we cannot gain the know-how for cognitive control through testimony. And given that we gain knowledge on testimony, we can conclude that understanding why cannot be fully reduced to knowledge. However, proponents of the view that understanding is reducible to knowledge argue that even in examples such as those above, understanding can be achieved solely via testimony.

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[43] Some of these examples are about more manual learning, but what is involved in terms of the learning in these examples is not dissimilar to what goes on during the more intellectually based cognitive control. As swimming, cooking and riding a bike are very commonly shared experiences of learning, they act as a good way of explaining why cognitive control cannot be passed on via testimony.

Federica Malfatti argues that the reason why we find examples such as riding bikes and learning swimming by testimony alone to be problematic is because the examples themselves are of the wrong kind. She writes, "The reason why most of us are reluctant to give it up, I suggest, is that it draws once more on the wrong kind of examples"(14). Malfatti does not explain here what she means by "wrong kind of examples" but I think what she means is examples of skills that are particularly difficult or complicated. I suspect that she means that using these examples makes it much easier for us to accept that understanding, at least in so far as understanding results in "know how" or ability, cannot be achieved via testimony alone. So, she suggests another type of example:

> I recently texted an Israeli friend to ask how to make the great shakshuka I had tried at her place. Here is what she texted back:
>
> Cook the tomatoes and the onions until tender, add salt, pepper and cumin, then break the eggs above, do not stir, put on low heat and wait until the eggs are cooked.
>
> Have I gained know-how (to make a shakshuka) on the basis of my friend's testimony? The shakshuka turned out all right (you will have to take my word for it, but in case you do not, follow the instructions yourself!), so I tend to say that I did. If I am right, contrary to what we might initially think, we gain abilities and know-how all the time in our everyday testimonial interactions. (14)

In citing this example, Malfatti wants to show that testimony, by way of a text message from her friend, was sufficient to gain the ability to or know-how to make shakshuka. I think this claim is problematic because the ability to make the shakshuka was arguably based on more than testimony. (1) Malfatti had

tasted a correctly prepared shakshuka before she attempted making it; she had also seen how a shakshuka that has been cooked correctly should look and how it should feel (since texture is an important component of cooking). These would surely have contributed to her ability to follow her friend's instructions to some degree of success. Neither of these experiences would be considered testimony as they are her own first hand experiences of seeing, tasting and feeling the shakshuka which would have contributed to her following the instructions given by her friend. (2) Relatedly, I am not sure I could successfully follow Malfatti's friend's instructions, meaning that some prior knowledge that Malfatti is in possession of has helped her follow these instructions. For example, had I seen this recipe in a cookbook, I would have been confused by the instruction to "wait until the eggs are cooked" because, from what I know, the yolks in shakshukas should not be fully cooked. So, does the instruction mean the whole egg, including the yolks are cooked? Presumably this instruction did not confuse Malfatti because either she already knew the yolks should not be cooked or she had seen and eaten the shakshuka her friend cooked and gathered that "wait until the eggs are cooked" meant that she should wait only until the whites are cooked. Again, this shows that it is not only testimony that is involved here.

Let us say, to really test the merits of this defence, and to really test cognitive control as an account of understanding, that Malfatti's friend had not sent her a text message, but instead sent her a copy of the page of the recipe book, complete with a high definition image of a perfect shakshuka, which shows the ideal texture of the dish as well as that the egg yolks should be runny. There is, also included, as good as humanly possible, a written description of the ideal taste of the shakshuka. Let us also say that there are detailed reasons given for why each step of the recipe has to be the way it is, that is, an explanation is given for each step. So we still have testimony, this time from the author of the recipe book. But this time, because of the photo of the shakshuka, Malfatti need not have seen the shakshuka in person to follow the

instructions correctly because the photo would suffice. Essentially, Malfatti would need no personal experience of the shakshuka and would be relying entirely on the testimony in the recipe. Would testimony then be sufficient for the know-how required to make the shakshuka?

To answer this, why don't we see if the making of the shakshuka via testimony (by virtue of the cookbook recipe and photo) alone stacks up against Hills' requirements for cognitive control? After all, there is room for intellectual know-how in this example in so far as understanding the recipe requires cognitive work.

Here is the list Hills provides again (663):

(i) Follow some explanation of why p given by someone else.
(ii) Explain why p in your own words.
(iii) Draw the conclusion that p (or probably that p) from the information that q.
(iv) Draw the conclusion that p' (or that probably p') from the information that q' (where p' and q' are similar to but not identical to p and q)
(v) Given the information that p, give the right explanation, q.
(vi) Given the information that p', give the right explanation, q'.

Based on the testimony in the copy of the recipe, Malfatti could do (i) in terms of following the instructions in the copy of the recipe. She could do (ii) as well – if she followed the explanation in the recipe well, she could use her own words to explain it. She could also potentially also do (iii) and (v) if the recipe was thorough in offering details and explanations and her ability to follow of all these details and explanations was very good. However, the main problem with relying on testimony for acquiring know-how, even in the second case when there is a more detailed recipe, explanations and photographs is that there is no guarantee that she could do (iv) and (vi). If now asked to make the shakshuka with some missing ingredients that she would have to substitute,

could she do it? Could she give the right explanations for why she was using these ingredients and for the steps she was changing or omitting? As Hills writes, "You cannot normally pass on the ability to draw conclusions or give explanations about similar cases simply by telling someone that q is why p (or even telling them that, plus that q' is why p' and so on)" (670). For know-how in these similar cases, one would likely need personal experience, practice and reflection, which are not in the domain of testimony.

Granted, it is true that Malfatti can make the shakshuka in the recipe, following the testimony in the recipe. We might be hard-pressed to argue that testimony cannot result in know-how, at least in the second case where the recipe comes with photos and details. However, it is still the case that testimony alone cannot fulfil the requirements of cognitive control. So, even the more generous version of the Malfatti example falls apart when understanding, or know how, is characterised by cognitive control. And cognitive control provides us with a fuller account of understanding than the other versions of grasping or know how we have put forward because it covers something we would normally expect understanding to be able to help us do: that is, use or manipulate what we have understood to help us respond independently in other similar situations.

There is further criticism of Hills' account of testimony in Paulina Sliwa's paper "Understanding and Knowing", where Sliwa argues that "all instances of understanding why, what and how ultimately bottom out in propositional knowledge" (67). Again, if this were true, it would render a non-reductionist account like Hills' as unnecessary because all that is required for understanding is propositional knowledge and nothing more. It is Sliwa's view that cognitive control is just an acquiring of more propositional knowledge. She says,

> Recall that according to the non-reductionist, when two agents differ in whether they understand why p this is because they

> differ in the cognitive attitude that they bear towards the answer to the question why p. The understanding agent 'grasps' the answer, while the merely knowing agent 'assents' to it. In contrast, the reductionist maintains that agents differ in what they understand in virtue of differing in what they know…Better understanding is simply a matter of more knowledge…(it) is a difference in the content of what is known. (69)

This is an objection about cognitive control. On Sliwa's account, cognitive control is just an expansion of propositional knowledge. In other words, intellectual "know-how" is ultimately reducible to propositional knowledge. The point of this sort of claim is to suggest that understanding why p is really just a matter of having extra knowledge such as, for example, in order to understand why p, all one has to do really is know that q is why p and so on. According to Sliwa, it may seem that one person has more of a "grasp" on some subject matter but really this is not the said person understanding it, but simply having more knowledge about it.

One problem with Sliwa's claim is again, that no amount of propositional knowledge can guarantee that the person with the propositional knowledge would know exactly when and how to use that propositional knowledge in the right way in every context, particularly one which they have not experienced before. The question comes down to whether, or to what extent, propositional knowledge ensures the ability to make a suitable decision about when and how to use which pieces of knowledge one has. The ability to helpfully and appropriately judge what pieces of knowledge to use and how to use them cannot always come from propositional knowledge, especially if the context is completely new, different to anything one has experienced before or is unpredictable. Note that this objection does not discount the value of more propositional knowledge in aiding understanding. It would seem reasonable to suggest that understanding could be improved if indeed one had more

propositional knowledge, but it seems incorrect to suggest that simply acquiring more and more propositional knowledge, even of the relevant kind, is sufficient to count as understanding why. The reason for this is that understanding, if we accept that it is a matter of cognitive control, requires certain abilities which acquiring propositional knowledge, even relevant knowledge, cannot fulfil. For instance, without an awareness of how pieces of knowledge relate to each other, how cause and effect work in the right order, and without being able to, or at least having the awareness that one would be able to, "disassemble" and "reassemble" pieces of knowledge in appropriate ways, given particular and perhaps unique observations and conclusions that we might draw in unique contexts, one cannot say that one understands, let alone that one's understanding is of any quality. This renders Sliwa's claim that know-how or understanding is ultimately a question of more and more propositional knowledge questionable.

One famous argument against the claim that know-how is reducible to propositional knowledge comes from Gilbert Ryle. Ryle wants to show at least that know-how does not always consist of propositional knowledge. This famous argument is known as the "regress argument". It goes:

> The consideration of propositions is itself an operation the execution of which can be more or less intelligent, less or more stupid. But if, for any operation to be intelligently executed, a prior theoretical operation had first to be performed and performed intelligently, it would be a logical impossibility for anyone ever to break into the circle. (31)

The argument is that if we want to perform some act of know-how intelligently, this needs to be preceded by a prior, intelligent consideration of a proposition. The consideration of a proposition is also a (mental) act and therefore needs to be something we know how to do, and so if intelligently

executed, will also count as know-how. If Sliwa and others who hold her view are right, then this too needs to be preceded by another intelligent consideration of a proposition, which will be again, an exercise of know-how. And so, if we hold that know-how is just a matter of having more propositional knowledge then we will have an infinite regress.

Ryle's argument faces objections particularly on the basis that knowing-how can be a matter of having propositional knowledge even if they are not preceded by acts of mental consideration. Stanley and Williamson are famously known for challenging Ryle's argument. They want to show that know-how does always consist of propositional knowledge. For example, they argue that digesting food is not an action that one knows how to do or that is preceded by an act of mental consideration (414). Here is their representation of Ryle's argument:

(1) If one Fs, one employs knowledge how to F
(2) If one employs knowledge that p, one contemplates the proposition that p." …Ryle's argument is intended to show that, if premise (1) and premise (2) are true, then, if knowledge-how is a species of knowledge-that, doing anything would require contemplating an infinite number of propositions of ever-increasing complexity. (413-414)

So according to Stanley and Williamson (1) is falsified by the example of digestion because a person does not know how to digest food. For (2), it is also possible that one may act without contemplating any proposition. John Williams gives the example of someone manifesting and employing her knowledge that the phone is ringing by automatically and unreflectively picking it up (112).

Further interpretations of Ryle, for example by Stephen Hetherington, suggests that Stanley and Williamson have misinterpreted Ryle and that the

regress argument stands against their rebuttals if one reads Ryle to mean that that one's know-how-in-action always involves putting one's knowing-how to apply propositional knowledge to action, into action. Ryle writes:

> According to the legend, whenever an agent does anything intelligently, his act is preceded and steered by another internal act of considering a regulative proposition appropriate to his practical problem… Next, supposing still that to act reasonably I must first perpend the reason for so acting, how am I led to make a suitable application of the reason to the particular situation which my action is to meet? . . . [T]he absurd assumption made by the intellectualist legend is this, that a performance of any sort inherits all its title to intelligence from some anterior internal operation of planning what to do. (31)

Hetherington explains that what Ryle means here can be reconstructed along the lines that one's know-how-in-action always involves putting one's knowing-how to apply propositional knowledge to action, into action. Ryle's regress can be explained in Hetherington's reading like this: if one already knows a particular way in which to execute an act, and one knows how to apply this knowledge in order to execute that act, and one then does apply this knowledge in order to execute that act, then this would be a new instance of executing an act while knowing how to do so and so on ad infinitum (74). On this reading, it would seem that Ryle's regress problem is still salient.

Yet another common rebuttal by reductionists takes this form: A dancer loses both her legs in a heartrending car accident but still knows how to do a pirouette even though she does not have the ability to. Stanley and Williamson cite similar example of a master pianist who has lost both her arms but still knows how to play the piano (416). In these cases, there is know-how without ability, so the claim that know-how requires ability is dubious. I do not

think this necessarily poses a problem for my account because to varying degrees, the ability to follow and give applicable explanations in one's own words, and to draw suitable conclusions from the information available, would already be sufficient to indicate cognitive control. If the dancer is able to exercise cognitive control, even if she herself is unable to now dance, she can be said to possess intellectual know-how or understanding. It might also be argued that the question of ability is relevant only in circumstances when that ability is a possibility. The dancer would have had the ability to do a pirouette, as well as the know-how when she had not lost her legs in a car accident.

I have argued so far that understanding is akin to intellectual know-how in the form of cognitive control, which rests on the ability to consciously and explicitly grasp and manipulate the relationship between propositions and pieces of knowledge in order to explain and draw the right conclusions. I have argued that such abilities cannot be passed on easily via testimony and as such, the claim that understanding is reducible to knowledge cannot stand. There is therefore *something other* than propositional knowledge that accounts for deep learning, and this *something other* is understanding in the form of cognitive control. This makes it possible for me to make the important claim that love of learning needs to be grounded in cognitive control and not in the acquiring of propositional knowledge, because the two are different, and because cognitive control has value that contributes uniquely to cultivating a love of learning.

I return now to the classroom environment to look briefly at the relevance of the discussion on cognitive control and testimony to the classroom setting. Testimony is of special relevance to our discussion because a lot of learning, as it currently stands, still relies on testimony. In classroom situations, teachers often simply pass on information to their students. A lot of information is learned in this way through the testimony of teachers and also through textbooks by experts in the subject, who often pass on not just propositional

knowledge but also interpretations and opinions. Good providers of testimony also do more than state information. They attempt to explain how pieces of information are connected to each other and even how we can use or apply this information, perhaps to predict something or to make something. Excellent providers of testimony may even explain or "model" how we can acquire and hone the skills required to make sense of connections, spot errors in arguments and spot instances where we can apply what we have learned. Good *educators* however are not satisfied with simply providing testimony, even if it is testimony that involves teaching, as best as they possibly can, methods one might use to hone cognitive control. Instead good educators want to ensure that their students are able to do something more with this testimony: that is, that the students are able to use the testimony to improve their cognitive control and fulfil the sorts of abilities that Hills lists. However, as we have seen, cognitive control is not something a teacher or a textbook can easily pass on to a learner. What the teacher can give her students is "knowledge", and then perhaps advice or tips on how one might then take these pieces of knowledge and interact with them so as to create understanding, but they will not often be able to pass understanding in the form of cognitive control on to their students via pure testimony.

It is also often the case that students who resort only to testimonial knowledge tend to be more superficial learners. They are often unable, when that testimony has not predicted certain circumstances, to explain why and/or to apply what they know in these different circumstances. There seems to be no way of knowing conclusively all the ways in which you might be expected to use the information you have at various times in the future. What prepares one for this, more than just testimony, is often intelligent deductions, informed trial and error, practice, and then reflection on what worked and what did not and why. This is also why surface learners, who rely almost solely on testimony for their rote learning, are less likely to be able to achieve the abilities and outcomes set out by cognitive control. When educators are able to

acknowledge that education should stop focusing solely or primarily on knowledge transfer and instead consider methods that help facilitate the development of understanding, or, more accurately, cognitive control, they will have a better chance of producing less "machine-like" learners who are instead equipped to deal with unpredictability and change.

Earlier, and again in this chapter, I said that experiences of learning consist at different times of different permutations of surface and deep learning and that both are important components of learning. Surface learning and surface learning methods often focus on knowledge acquisition because they are usually geared towards information reproduction. I want to reiterate that this does not make surface learning, or knowledge acquisition, inferior.[44] In fact, knowledge acquisition is vital to learning and I think it is fairly uncontroversial to say that in both instances of surface and deep learning, or whichever combination of the two one might be engaged in, one usually needs to acquire some knowledge.[45] Even if this was not the case, the point I wish to make here is about what one does when one acquires knowledge. If one were learning in a more surface way, one would probably memorise the information and store that information in order to reproduce it, as it is, at a later time. A classic example of this would be sitting in your mathematics classroom, being taught that $a^2 + b^2 = c^2$ is the Pythagoras theorem, and that this can be used for determining the length of the sides of a right-angled triangle given the measurements of the other two sides, and then memorising the formula, so

[44] My "issue" is not with knowledge acquisition but with the methods employed in this acquisition, which, as data has shown, tends very often to feature surface-learning methods.

[45] Hills, Kvanig and Pritchard more controversially make the claim that knowledge is not required for understanding why. Though very interesting, this claim is not something I consider in this thesis as it is not relevant to the claims I'm making.

that in a test where you had to give the answer for one of the sides, you could recall the memorised formula and use it. In this case there is no attempt to understand why this formula is as such, or how this theorem might apply to any other information you might have or be useful in a situation outside the maths class or the test, which would be some of the things you might consider, and attempt to do, if you were learning more deeply. This suggests that when one is learning "more" deeply, one at least intends and attempts to exercise cognitive control over the information and ideally one is prepared to apply this knowledge that has been obtained as and when it may come in useful.

I began this chapter by saying that my intention was to show that it is understanding that helps to achieve deep learning by allowing the learner to exercise cognitive control. One of my contributions to this area of research has hopefully been to develop a more thorough account of deep learning by bringing together the philosophical research, especially in cognitive control, and the educational and psychological research on deep learning. In the following section I discuss the value of cognitive control.

4.4 The Value of Cognitive Control

In this section I set out to show that if cognitive control is valuable then understanding is valuable. Cognitive control, I argued, depends on the ability to consciously and explicitly grasp and manipulate the relationship between propositions and pieces of knowledge in order to explain and draw the right conclusions both in a particular case and in similar cases. In this section, I will consider both the instrumental and intrinsic values of cognitive control.[46]

[46] When I refer to understanding henceforth I mean it to be understood as cognitive control.

Instrumental Value of Cognitive Control

The instrumental value of cognitive control can be readily witnessed in cases where one is presented with a new question or a new problem. Earlier I referenced the use of the Pythagoras theorem in real life situations, where the abstract mathematical concept, if understood well, could be used to solve a practical, real life question, for example, what size computer I should buy to fit into the space that I have. One might argue that more knowledge could do the same, that is, more or more sophisticated knowledge might help one successfully answer new questions or solve new problems. This is a concern I discussed earlier; it is not often the case that propositional knowledge alone can guarantee this. Relatedly, cognitive control can be exercised independently, meaning that if one is faced with a problem or novel situation and there is no access to further knowledge or information, then someone can potentially rely on their cognitive ability to draw reasonable conclusions by knowing how to piece together relevant components from previous knowledge and experience, in order to arrive at correct explanations and draw the right conclusions.

Why are these outcomes valuable? They are so because they reduce our reliance on knowledge only, knowledge which often requires testimony of some form, or sensory perception; this is of value because the former may not always be readily available, and the latter, not always possible or helpful. Exercising cognitive control could mean that we are more likely to be able to solve or deal with more new and different circumstances and problems, even those we encounter in settings where we are unable to acquire new knowledge, making us more self-sufficient.

The ability to exercise cognitive control, that is, to use the abilities of cognitive control, also equips one with the capacity to check whether arguments, claims and conclusions being made by others are accurate, and one can do this for oneself. Alison Hills also points out that being able to exercise one's understanding is what allows one to "make judgements, including forming the beliefs that are part of understanding why p" (678).

It is of course not always the case that one has to exercise cognitive control to verify information; one could simply ask an expert, if one had one handy. However, in an era when false news is widespread and more and more seemingly trustworthy sources are discovered to have their own agendas, being able to draw one's own conclusions and matching these with "supposed" conclusions can be a very useful skill to have - so that one can verify information, and is not "hoodwinked". Here is a very timely anecdote: I am writing this thesis at the height of the Covid-19 pandemic – the virus spreads very quickly from an infected person via droplets when they cough, sneeze or talk. One of the ways to prevent catching the virus is to practice personal hygiene in the form of cleaning your hands regularly. Alcohol-based hand sanitisers and hand washes are deemed effective at killing the virus. So as one would imagine, within hours of Covid-19 cases being reported, these were sold out in many places, leaving people who did not plan ahead or stockpile, extremely anxious about what they could do. At the time of this panic, people were being told that normal soap, the kind our grandmothers used, would be just as effective. At the same time, I received an article via social media stating that oil-based, ordinary soap was not effective in killing viruses and that only alcohol-based soaps and sanitisers would work. I had a moment of blind panic (as I did not have these items) and then I began to wonder how accurate this article was. So I exercised cognitive control, like this:

I knew from previously learning in chemistry that viruses consist of three key "building blocks": ribonucleic acid (RNA), proteins and lipids. A virus-infected

cell creates many of these building blocks. These blocks then spontaneously self-assemble to produce the virus. Most importantly for us to note is that these units are not held together by strong covalent bonds. Because the bonds are strong, it is not usually the case that you need strong chemicals to then break the bonds. I was also taught at a soap making class that soap contains fat-like substances known as amphiphiles, which compete with other similar lipids and "loosen" and "dissolve" the other lipids – this is how soap is able to clean our hands.

From both these pieces of information, which I already had, as a result of testimony and then memory, I drew the conclusion that it would be unlikely that harsh alcohol-based soaps and sanitisers were the *only* products that could kill the virus because viruses do not normally require such harsh chemicals to break their bonds. Furthermore, a quick check on some reliable scientific sources online provided me the information that the lipids in viruses are very similar to amphiphiles, applying this information to what I had already worked out confirmed that it is very likely that grandma's soap would work to loosen and dissolve the "building blocks" in the virus. I came to the conclusion that the article I received via social media that claimed that ordinary soap was ineffective was probably not true. I then ceased the desperate search for alcohol-based antibacterial hand wash that had already taken up most of my day and was beginning to cause me a lot of stress, and pulled out the bars of old-fashioned soap I had stashed under my bathroom sink.[47]

[47] Now, whether or not this exercise of cognitive control was, give or take, actually more valuable than typing into Google 'does ordinary soap kill viruses?' and then reading through a few generally trusted sources, is open to debate. Perhaps the time it took me to exercise cognitive control was much longer than simply looking for testimonial knowledge. This might have then made the exercise in cognitive control less efficient, thereby making it overall, less valuable. But arguably, it would only be less valuable for someone who

Another benefit of cognitive control is that having it entails the increased ability to predict and control the world around us (Woodward 7).[48] Having cognitive control offers us the ability to manipulate information because cognitive control involves accurately piecing together information, or becoming aware of how information is pieced together, to draw the right conclusions. We can then identify that changes to these pieces of information are likely to cause changes to the conclusions. This can be practically applied to our understanding of how things in our world are connected and depend on one another, allowing us to manipulate these connections in ways that can benefit our environment and us.[49]

Additionally, an understanding of how things in our world are connected can make it possible for one to come to appreciate the seemingly insignificant, hidden or oft-forgotten parts or components of bigger schemes or projects. Having cognitive control entails the awareness of unique and sometimes vital roles that various things play, but which may otherwise be ignored or veiled in the bigger scheme of things. This entails appreciating these parts in light of how they fit into, or function within, a bigger picture or scheme of things to

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deems efficiency to be of greater or utmost value. Either way, rebuttals like this tend not to get very far because time and effort expended is usually subjective. The question of whether value can come in degrees is something I discuss later in the section on achievement.

[48] Woodward's focus is on the nature and value of explanations, but the benefits of manipulation are very similar in both the arguments Woodward proposes and in those presented here about cognitive control.

[49] Woodward writes, "Descriptive knowledge, by contrast, is knowledge that, although it may provide a basis for prediction, classification, or more or less unified representation or systemization, does not provide information potentially relevant to manipulation" (10).

make that bigger picture or scheme possible, better, or more interesting.[50] It may seem odd at first to think of "appreciating" a small component of some larger system or grander scheme, since appreciation conjures up ideas of gratitude and esteem, but this may only seem strange because we may not realise how some seemingly insignificant things have important roles. We generally believe that appreciation is a positive thing because we believe that it is good not to take things for granted and to recognise (by drawing conclusions that lead us to see) how things come together successfully through various parts playing their important roles. This sort of understanding if nurtured and developed will also illuminate *our* roles and the parts we play. This in turn could serve to motivate and galvanise us to take more active roles in our communities, to bring about change, whether to our personal lives or to society. Understanding can equally make us aware that we are one small part of an enormous and complex world, reminding us to exercise humility and respect.[51]

Yet another valuable outcome of cognitive control, or exercising it, is that it can give us enjoyment. A number of philosophers have explored this idea in a variety of ways - some focus their discussion on "enjoyment", while others talk about the same response as "pleasure", and some refer to it as a feeling of "satisfaction", but it would seem that the general view is similar; that

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[50] And on the contrary, perhaps in some instances, seeing how things fit together as part of this bigger picture could help us identify those parts that fail to add any real value, or which are actually irrelevant, confuse or complicate our understanding.

[51] There are potentially interesting arguments to be made for how gratitude and humility could be additional candidates for the intrinsic value of cognitive control. However I do not have the space to explore these in the detail they would require.

exercising understanding is enjoyable.[52] Many of us would identify with the feeling of enjoyment that comes from trying to make sense and piece information together to come to a coherent conclusion, or the challenge of applying information we have to answering new questions or solving problems. Of the same view, Hills writes, "We take pleasure in following arguments and drawing conclusions. This enjoyment is both a sign of and a contributor to the value of understanding" (678). This indicates that the very exercise of understanding brings about pleasure. Some may even attest to the claim that the harder something is to understand to begin with, the more reward and pleasure one gets when one finally grasps it. There is something to be said here about how this sense of reward and pleasure comes about from feeling well remunerated for the effort one puts into following an argument or a chain of thought, and for then being able to draw suitable and likely conclusions for oneself. I explore the role of pleasure in learning later on in this thesis and also present some thoughts on reward and remuneration in the following section on achievement.

Further to this enjoyment, I think it is also the case that one's ability to exercise cognitive control gives one self-confidence or perhaps more precisely, an intellectual confidence. This is the confidence that one is capable of following arguments, giving explanations and drawing conclusions. In turn, this confidence supports the extent to which one is willing to seek out further understanding (since we said earlier that understanding can come in degrees), to participate or venture into in new experiences or situations that are unfamiliar. Concerns that one will not be able to meet new challenges are frequently a reason for avoiding new or different situations, unfamiliar environments and fresh opportunities. Some of the consequences of this are

[52] For example Hills uses the terms "enjoyment" and "pleasure" in their description. In "Value of Understanding" Grimm uses the terms "enjoyment" and "satisfaction" (109), and Alison Gopnik refers to it as a mental "orgasm".

that one's opinions and judgements remain unchallenged, one's world view can become limited causing one to succumb to dogmatism, and one's contributions to work, family and society can become out-dated or irrelevant. If someone is assured that they can effectively use their understanding to relate ideas, relate evidence to conclusions, and examine the possibility and plausibility of content, arguments and solutions, then that person will be better disposed to venturing beyond what they already know and as a result, very likely encounter more learning.[53]

Intrinsic Value of Cognitive Control

(a) Truth and Mirroring

I think it is also the case that cognitive control has intrinsic value; by this I mean it is valuable for its own sake. There are a number of views on this and one of them considers the intrinsic value of truth and how this relates to cognitive control. True beliefs are evidently instrumentally valuable; we do not need to make a case for this. But true beliefs are valuable in and of themselves too, because they give us a correct account of reality; they mirror or reflect reality. But how does truth or mirroring make a case for the intrinsic value of cognitive control? Some have argued that someone who exercises cognitive control has a mind that more deeply mirrors the world than someone who simply "accepts" a true proposition; the latter's mind would still be mirroring reality, but the mirroring would be more superficial. Grimm suggests that deep mirroring is achieved when one is able to see how the various connections of some given state in reality *actually* piece together, as opposed to simply accepting facts about the given state (111). For example, being taught Boyle's Law will certainly equip me with an accurate mirroring of reality; I will have accurate information about how gases work and function in the world.

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[53] Again we see a link to vulnerability and being "open", which I discuss in more detail in Chapter 6.

However, because I have only "assented" to this law, and not exercised cognitive control, the mirroring of reality is only superficial.

Perhaps it might help to try to articulate this idea of depth and superficiality more, so as to show exactly why this depth of mirroring is more valuable. I think what philosophers like Grimm are getting at is the fact that the deep mirroring provides a match between the true proposition and one's own "working out" of the way reality works. One way of articulating this might be to say that superficial mirroring, or the direct reflection of the way things are provides us with some knowledge but deep mirroring (which entails understanding how various parts of this reality come to be, connect with each other, and so on) is a sort of "knowledge-plus", where the "plus" refers to having cognitive control; that is, the ability to make sense of the knowledge in a deeper way and to potentially use it or parts or pieces of it to make sense of similar situations or information. The argument by the likes of Grimm and Pritchard is that this adds an additional "weight" or "authority" to the knowledge that we get from just superficial mirroring. Therefore, being able to "mirror deeply" is epistemically better than not being able to. If we believe that more epistemic value is better than less epistemic value then cognitive control is able to offer something uniquely and intrinsically valuable here.

However, as Grimm points out, there is a potential problem with this position. It is not, as he says, evident that an insignificant item of understanding always mirrors the world in a better way than a deeper item of propositional knowledge. He tries to defend against this by saying that some items of propositional knowledge appear to be deeper because of their potential to explain and that this then makes it "harder to judge its value solely as an instance of propositional knowledge" (111). I am not sure this defence is the best one because it gets into a rather muddled area of trying to work out just how much explanatory mileage an item of propositional knowledge must have before its value becomes difficult to judge solely as an instance of

propositional knowledge (and not as, say, an instance of understanding). Additionally complicating is that if it is not *exactly* an item of propositional knowledge, then what would it be – an item of understanding, or an item that is part propositional knowledge and part understanding?

Perhaps a stronger response to the counterargument Grimm postulates comes from Hills, who manages to argue for the value of cognitive control with reference to truth and mirroring while avoiding the potentially problematic method of distinguishing between deep and superficial mirroring; hers is the view that I endorse. She does so by drawing a correlation between the dependence between two beliefs and the dependence between two facts in the world; cognitive control allows for the mirroring of the dependence between two beliefs and two facts, propositional knowledge does not. She writes:

> …a set of beliefs might also mirror the world in virtue of their *form*; by which I mean the similarities between the relationships between those beliefs and the relationships between the facts in the world: for instance a dependence between two beliefs might mirror a dependence between two facts…a mirroring—between your beliefs and the world, that cannot be explained fully in terms of the content of those beliefs alone, but also must refer to the relationship between them: one of your beliefs depends on the other, just as there is a dependence between the facts in the world. (Hills 679)

Hills does not say much more than this but I think what she means by "form" can be understood by thinking of the relationship between a set of beliefs and the relationship between a set of corresponding facts in the world as having not just parallel subject matter but also parallel structures or configurations.

The *type* of relationship between one set correlates with the *type* of relationship of the other corresponding set.

Hills' argument shows that cognitive control makes both types of mirroring, the mirroring of facts and the mirroring of beliefs, accessible. She writes, "In addition, by exercising your understanding, you can mirror the structure of the world within the structure of your own thoughts as well as their content" (679). I think an added benefit to being able to mirror the structure of the world within the structure of one's own thoughts and their content is that there is a higher chance that discrepancies between one's thoughts and their contents, and the world, is more likely to become evident to the self. It is also possible that discrepancies between one's various thoughts, their structure and content could also become more apparent since one's mind is engaged in the activity of this sort of matching up; inconsistencies in our thoughts and beliefs are more likely to become apparent when we find that they do not "piece well together". Therefore Hills' account might actually offer us the additional advantage of potentially improving our reflective ability and the consistency we maintain across various beliefs. This suggests that the sort of mirroring that Hills accounts for is valuable in itself, if we assume that being rational, consistent and accurate in our beliefs is valuable, because it is more likely to "surface" inaccuracies, contradictions and inconsistencies.

Hills' account also circumvents rebuttals that claim that trivial items of understanding do not mirror the world better than deeper items of propositional knowledge. This is because there is no comparison between fixed categories of deep and superficial in the same way there is in Grimm's account. Hills's account also avoids confusion about whether items of propositional knowledge that have more "explanatory payoff" are indeed straightforward items of propositional knowledge because this concern does not arise with Hills account. Additionally, Hills' account maintains the unique value of cognitive control. With propositional knowledge alone there is no

guarantee that one will be able to draw connections between various propositions. Cognitive control on the other hand facilitates drawing exactly these sorts of connections.

(b) Achievement

(1) Defining Achievement

I also believe that the intrinsic value of cognitive control can be linked to achievement. Unlike truth however, the intrinsic value of "achievement" may not be immediately evident to some. As such, a case will need to be made first for why achievement is worth having for its own sake. Before I get to that, it would be useful to explain briefly what I mean by achievement, and what counts as an achievement, so that I can justify how cognitive control counts as one.

As a basic stepping-stone, I think it is reasonable to claim that achievements are successes that come about as a result of ability.[54] It would also seem then that achievements consist of a process that results in a product. So achievements have a process-product relationship.[55] The way in which the process results in the product would be of important significance because abilities are represented in the process. So, in considering what is involved in achieving, we should consider what is involved in the process as well as the product.

If achievement is about ability, then cognitive control, by virtue of the fact that it is characterized by a list of six abilities, is a good candidate to count as an achievement. But perhaps this is saying too little on the matter, so let us elaborate a bit more. Theories of achievement (in fact there are not very many)

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[54] Pritchard offers the same basic definition throughout *NVK.*

[55] Bradford also holds this view in *Achievement*.

tend to claim that achievements are contingent on how difficult the related tasks are.

Philosophers like Gwen Bradford and Duncan Pritchard, who have written about achievement, make distinctions between achievements that are "everyday" or "easy" and those that involve some difficulty or effort. Pritchard's distinction in his section of *The Nature and Value of Knowledge* (NVK) is between what he calls the "Weak Achievement Thesis" and the "Strong Achievement Thesis". He writes,

> (Weak Achievement Thesis) Achievements are successes that are because of ability. (Strong Achievement Thesis) Achievements are successes that are because of ability where the success in question either involves the overcoming of a significant obstacle or the exercise of a significant level of ability (70)

Bradford also distinguishes between "mundane achievements" and "capital-A achievements":

> We might put it this way: there is a sense of the word "achievement" in which every little thing we do, every aim we accomplish is an "achievement." But there is another sense of the word "achievement," which seems to be reserved for exceptional accomplishments… These specially significant achievements—achievements with a capital A, as it were—seem to be so much more valuable than mundane accomplishments… (4)

For the purposes of this thesis the achievements that I am interested in have to involve something that requires some level of difficulty, or obstacles that

one has to overcome to succeed in the task, as such, I want to focus just on non-mundane or non-ordinary achievements. I prefer using non-mundane or non-ordinary instead of "capital A" achievements because Bradford restricts the use of this term to extraordinary achievements, like climbing Everest. On the converse, I do not think that achievements have to necessarily be extraordinary or tremendously awe-inspiring. A requirement like that does not match up with our intuitions either. We would not balk at the idea of saying someone has achieved something of significance if they do well in an exam. And many of us would very easily refer to someone inventing a cure for a disease as having accomplished an achievement too. In fact, we often hear people refer to achievements such as the latter as *great* achievements. So, I think that an achievement does not have to be reserved for "capital-A achievements" in the Bradford sense (which is exceptional or profoundly admirable or particularly noteworthy in some respect). Achievements of the not-ordinary kind can admit of a range, so long as the effort required to attain them extends beyond "ordinary" effort, where ordinary effort refers to the effort that someone, in normal circumstances, expends on tasks that are ordinary to them.[56]

So, what do we mean when we say something needs to be difficult to be an achievement? I think effort is an important factor to consider because firstly, on an intuitive level, it is what comes to mind when we think about difficulty and also when we judge whether or not something is worthy of being called

[56] In her book Bradford has a very detailed account of how to calculate effort so that one can conclude what amount of effort is sufficient for something to count as an achievement. However, as this thesis is not about achievement per se, and because assessing cognitive control for effort in my thesis does not necessarily require a full account of how to calculate effort, additionally because there is simply no room here for such a detailed account, going into such detail is neither necessary nor possible for this thesis.

an achievement. Secondly, this connection is one that has been generally accepted in the existing literature. Bradford writes, "We often identify activities as difficult on the basis of features typical of things that require effort—for instance, activities with many complicated steps usually require effort" (28). And Pritchard writes in *NVK* "…one gains understanding by undertaking an obstacle-overcoming effort to piece together the relevant pieces of information" (82-83).

I do not think effort needs to be explained; it is something we all experience to varying degrees and it is not philosophically contentious, so I will reasonably assume that when I refer to effort, we all know what I mean.[57] There is no doubt that it takes effort to do most things, even in normal circumstances – getting out of bed, walking to the loo, brushing our teeth and so on. This sort of effort, in normal circumstances, would be "ordinary effort". But as I have said, ordinary effort is not what I am focusing on here.

It is also the case that most of us would have no qualms about referring to a person who has lost their arms in some tragic accident pouring themselves a glass of water as having achieved something significant, but we probably would not say the same of someone fully able-bodied, doing the same thing. Presumably this is because we realise how much effort it would take this person to do that task without arms, because the lack of arms is a significant obstacle to a task that usually relies on the use of one's arms. We would probably also say that the effort it takes for a woman in Afghanistan to give

[57] There can be various "types" of effort of course, of which physical and mental effort come to mind instantly. Again, I think this claim is fairly self-evident and does not require justification. In the case of cognitive control, the effort would be mostly mental, so perhaps if one wanted to be very specific, one could refer to this kind of achievement as a mental or cognitive achievement.

her personal opinion on something would be more than the effort it takes for one in the UK to do the same. This is an indication of how circumstances have an impact on what we deem to be not-ordinary effort, even if the task seems (somewhat) ordinary.[58] This also indicates that there is an element of relativity here: that effort is established on a relative basis. Bradford describes this succinctly when she writes,

> Difficulty is always relativized. Even if the difficulty is relativized to the class of human beings, it is still relative. For whatever allegedly difficult simpliciter activities, we can imagine a race of alien beings for whom these activities are quite easy. So even if we say that there are indeed difficult simpliciter activities, they will only be difficult relative to our abilities as human beings. So there is no real way in which anything is difficult in an absolute sense. (27-28)

Bradford's point is that the difficulty of all activities can be judged on the basis of the related circumstances. The very same thing that is easy for one person might be difficult for another. I think this is true. Difficulty and effort are therefore relative and contingent on one's circumstances.

So far, then, we have two requirements for something to count as an achievement:

1) It must be to some extent difficult. The sub-conditions for this are:
a) something is more difficult if it requires more effort

[58] What is meant by "ordinary" is, to some extent, clear – if I say tasks *like* brushing your teeth, making a cup of tea and so on I think it would be reasonable to expect that most people can gauge what other tasks fit into this kind of category.

b) there are varying degrees of effort which are based on one's circumstances
c) there are varying degrees of achievement based on the varying degrees of effort that one expends

These statements do not immediately stick out as being contentious, so we will assume it is fair to proceed (though I will consider some potential problems that may be identified later on).[59]

2) There must be a process-product relationship
Bradford writes:

> So it seems achievements have this particular structure: there is a process and a product, we might say. The process culminates in a product… The successfulness of an achievement, in a typical case, is the production of the product, such as the finished painting, or the completion of the dance performance (11)

In terms of the process-product relationship in cognitive control, the product or the culmination of the process is having cognitive control itself and the process is acquiring the six abilities that together facilitate one being able to exercise cognitive control successfully. So, if one successfully acquires all the six abilities of cognitive control then one successfully ends up with the product, cognitive control. The exercise of cognitive control is then repeated over time, and each time it is exercised, there is a product of the exercise of that instance of cognitive control – so if one is trying to solve problem x, one exercises cognitive control as the process to acquiring the product, which is

[59] In so far as it is indeed accurate to use the terms "more" and "less" when it comes to effort and to prefix achievement with "great" if it is considered *more* of an achievement.

the solution to problem x. Given that cognitive control admits of degrees, we might say that there is a "foundational" level of cognitive control that is successfully achieved as the product of acquiring the six abilities to some basic level. These six abilities can then be honed over time, for example at opportunities when the challenge is a bit more considerable, so the exercise of cognitive control is always being honed, and at each time of exercising cognitive control correctly, one is also achieving the product of increased, or better cognitive control.

Next, I think we need to establish how difficult cognitive control is. The answer lies in assessing how much effort goes into acquiring the six abilities.
We have already established that in order to count as having cognitive control one must exhibit all six abilities on the list and also that cognitive control can come in varying degrees. So a possibility I would like to put forward is that any effort taken in the process of acquiring the six abilities, (to achieve any degree of cognitive control), would count as sufficiently difficult for cognitive control to count as an achievement.

Even if one were to argue that in normal circumstances, following some explanation of why p given by someone else, explaining why p in your own words, drawing the conclusion that p from the information that q and given the information that p, give the right explanation q, all required no more than ordinary, mundane effort to acquire (for example they may say that many of us do this sort of thing frequently and p could be something as simple as a door slamming), one would be hard pressed to defend the view that drawing the conclusion p' from the information q' (where the two are similar but not identical) and given that p', give the right explanation q', requires ordinary effort to acquire. This is because, as we have already established, these abilities are application-based, problem-solving abilities that require us to independently piece together the right kinds of information in a new or tricky situation. These usually require good observation, practice, reflection, mental

sharpness and alertness, the ability to compare and contrast, sort and categorise and so on. These further sub-abilities also have to come together coherently and cohesively to match the situation at hand. Situations can of course vary in how complicated or difficult they are, but having cognitive control means acquiring *all* six of these abilities. So, for argument's sake, if even one of these abilities is difficult to acquire, that is, requires more than ordinary effort, then cognitive control would have to count as an achievement.

In fact, it is not far-fetched to argue that some of the "p-abilities" (as opposed to p' ones) can also be difficult. For example, explaining why p in your own words can be a difficult skill to acquire. This requires other abilities, such as having a wide enough range of vocabulary and being able to paraphrase accurately, being sensitive to subtleties, nuances, tone and implications where relevant, when choosing the right words. It may also require grasping cause and effect relationships – as would most of the six abilities of cognitive control.

In the two paragraphs above I discussed how acquiring the six abilities could be a difficult process that requires more than ordinary effort. As we said earlier, it is possible to possess these six abilities to varying degrees, so in some instances, one might be faced with more of a challenge when it comes to exercising cognitive control. In these cases, when one overcomes the challenge and better applies cognitive control to the situation or information, it might be said that one has attained a greater achievement. For example, there might be times when all the abilities might be especially difficult to exercise. Some instances where this might be the case could be: if p is a particularly difficult concept or situation; if p' is a particularly tricky concept or situation; if the agent suffers from a learning disability or a language impediment; or more than one of these or other relevant complications. In these cases there are obstacles in the way of the successful exercise of cognitive control, so that exercise becomes more difficult. If the agent overcomes these then it would most likely be the case that they have taken

more effort than someone who has exercised cognitive control but without these obstacles. In which case, exercising cognitive control would have been a greater achievement than in cases where there were no obstacles or fewer obstacles (and it would also be the case that one would have more cognitive control if one has exercised the abilities on the list to a greater extent).

(2) Is achievement intrinsically valuable? Is cognitive control intrinsically valuable by virtue of being an achievement?

We have established that cognitive control can be considered an achievement. Now we move on to whether cognitive control has intrinsic value by virtue of being an achievement. This requires us to first justify why achievement is intrinsically valuable.

One suggestion in the existing literature is that achievement is valuable if the product of the achievement is valuable. According to Bradford this is called the Simple Product View (84). It suggests that the entire value of an achievement is based on the intrinsic value of its product. According to this view, difficulty or any other factor would have no place in deciding the value, although these would decide if something was an achievement in the first place. This view then clearly takes as a basis the separation between the process and product in achievement. Applied to cognitive control, this would mean that having cognitive control is what gives value to the achievement. And as we have seen, cognitive control is potentially intrinsically valuable for its truth properties, so having cognitive control is an intrinsically valuable product at least for that one reason. This simple product view could then potentially work for us as a justification just on the basis that it has the intrinsic value of being true. As legitimate as this may be, I feel this is taking the easier way out; it is not getting to the heart of the intrinsic value of cognitive control in the most robust possible way because there is also something to be said for the value of acquiring the six abilities – that is the hard work and effort that

goes into the process of achieving the product. However, once we take the effort into account, we cannot subscribe to the simple product view, because this view discounts difficulty. Take the example of Mt Everest – most of us would agree that taking a helicopter up to the top would simply be less of an achievement than a solo ascent. This is because most of us would attach value to the exercise of climbing the mountain. So, at least intuitively, most of us would agree that the value must have also been coming from the process. Bradford writes that it is the difficulty; the effort, the obstacles, the perseverance: that is, it is the nature of the process that gives that value to achievement (91-92), and I think there is truth to this. As we saw, the more difficult, or more effort something requires, the higher the potential for greater and greater achievement. But why is this difficulty, this expense of effort, intrinsically valuable? Especially as we tend to think of difficulty as something to be avoided. I consider two reasons in the next section.

Two possibilities to explain why there is intrinsic value to the difficulty of gaining cognitive control: (1) exercising the will and (2) intellectual perseverance

As I discussed earlier, there is difficulty in acquiring cognitive control. I think there are at least two possibilities to explain why the difficulty in gaining cognitive control is intrinsically valuable. Tackling the difficulties encountered when acquiring and exercising cognitive control might be valuable because, in working your way through those difficulties you encounter, there is (1) an exercise of the will (this is something I draw from Bradford); and (2) the exercise of intellectual perseverance, which is valuable because it is a virtue and virtues are intrinsically valuable. Exercising both of these capacities is intrinsically valuable and as such doing difficult things, including attaining the achievement of having cognitive control, is intrinsically valuable.

Exercising the will is presented as intrinsically valuable according to the perfectionist view that Bradford advocates. It is not ordinarily contentious that most persons have a will and exert it.[60] In fact most persons exert their will in most activities. Additionally, it seems worth having and developing, so the exercise of will seems a reasonable addition to the list of capacities that perfectionists should accept. Bradford writes,

> So it is my contention that the will should be included in an account of the relevant capacities for perfectionism. It clearly passes the epistemic guide of being a characteristic human capacity, and it is intuitively good to develop (119)

Given that the will is exercised in most activities, it would be evident that it is exercised in difficult activities such as cognitive control. Bradford also references Nietzsche's will to power as another justification for why the exercise of will is intrinsically valuable, however limitations of this thesis do not allow me to fully explore this second justification of hers; in a nutshell, she argues that will to power, which is essentially the exercise of will, or the drive to overcome resistance, is the fundamentally characteristic human feature and "what's distinctive about this is that the will to power, then, to put it in my terminology, is the drive to *be engaged in difficult activity*" (120). Because the exercise of will is a, if not the, fundamental human feature, it goes without saying that on a perfectionist account, the excellent exercise of the will is

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[60] Bradford uses the term human beings, but I prefer to use persons, because along with Frankfurt, who says in "Freedom of the Will and the Concept of a Person", I think it is possible to have "wanton" human beings that are led by their first-order desires more than their will (11). I discuss this in a later chapter on wholeheartedness, but for now, I just want to clarify the use of the term here.

intrinsically good. It is worth pursuing for the fact that it is what makes us persons. I offer a somewhat expanded account of the will in the section on wholeheartedness, making a stronger link there between cognitive control and the exercise of the will, but I think the claim that exercise of will is what makes us "persons" and is therefore valuable to exercise our wills is not a very contentious one.[61]

In summary, difficulty is intrinsically valuable because it is the excellent exercise of will and the excellent exercise of the will is intrinsically valuable because it is a, if not the, fundamental human feature. Acquiring cognitive control via acquiring the six sub-abilities, as well as then exercising cognitive control when one has it is difficult, and requires the exercise of the will, so it must be intrinsically valuable. Exercising cognitive control, in contrast to simply possessing it, is valuable instrumentally because as I said earlier, it means one can learn, apply what one has learned, and solve problems independently. Exercising it is intrinsically valuable because, as I discussed earlier, the level of achievement associated with cognitive control increases as the exercise of it successfully yields the relevant products in more and more challenging situations – so the exertion of the will in successfully exercising cognitive control makes the exercising of cognitive control valuable (for the reasons above), and the more challenging the task is then the more the difficulty is involved – so the more the will needs to exercised, the greater the value.[62]

The second consideration is intellectual perseverance. I am going to take it as a given that intellectual perseverance is a virtue and ask that you come along

[61] I explain this more in the chapter on wholeheartedness.

[62] Concerns about the value of things which are difficult but "evil" or "immoral" are addressed later in this chapter.

with me in doing so.[63] Intellectual perseverance refers to perseverance but with specific respect to an intellectual activity, such as cognitive control. I'll give a brief account of this sort of perseverance (as brevity is all there is space for here) and admit that it is not exhaustive in terms of descriptions that might be offered to defend such a position.

Intellectual perseverance, if it is to be considered a virtue, should be considered in light of what we might suggest as the mean between its deficiency and its excess. Its deficiency would be the propensity to give up too early in the game. The excess would be the propensity to keep going even when it starts to become clear that progress is unlikely; giving up too late or not at all, and usually at the detriment of other aspects of the agent's life. "Too early" and "too late" are rather subjective qualifiers, so how does one tell when is too early and when is too late? I think most of us can reasonably assess this, and we often use our observations and experiences of the world to decide based on context. In doing so, I think most of us, whether consciously or not, tend to base our assessment on time, likelihood of success and effort.

For example, Nina has always wanted to learn to play chess; she has been saving up for seven years to take a course. She signs up for an 18-hour course using all the money she has saved and then within the first ten minutes of the first lesson, she decides that it is just not worth the effort to continue learning chess. I think most people would assess this to be giving up too early. This is because we expect that if someone was especially keen on acquiring a skill and had put effort into creating a situation for themselves to acquire that skill,

[63] Bradford does something similar. She suggests an "innovation" – something she asks us to go along with, without offering arguments to support it: "This, then, is the innovation I propose for perfectionism: to acknowledge the will as a characteristic human capacity" (120).

such as saving money over many years, they would be willing to put more time and effort into acquiring the skill, rather than giving up at the slightest indication of difficulty. Ten minutes is also a highly unlikely amount of time, given that it is an 18-hour course, within which one can reasonably assess whether learning to play chess is worth the effort. Likewise, persisting even after a decade of trying to convince a colleague who is a die-hard Kantian that utilitarianism is the best moral philosophy by sending her eloquently worded essays once every other day would, I think, be fairly construed as giving up too late (I should stress that this is a hypothetical scenario!) Firstly, we know this person to be adamant about, and extremely loyal to their views, so it is very unlikely they will change said views. Secondly, a decade is a long time to spend on a project that is unlikely to progress. And thirdly, even a rough assessment of the expense of effort into this pointless cause seems to indicate that one should have given up some time ago.

Intellectual perseverance then is the median between its deficiency and excess. It should therefore involve spending an appropriate amount of time on one's projects, assessing the likelihood of progress and success by considering the context and situation wisely and expending the adequate amount of effort by deciding when obstacles are worth overcoming and when they are not, and what effort is worth expending in the given context. Deciding how much time is appropriate would again depend on experience and observation but also on reflection. One might say that it would depend, as Aristotle suggested, on the excellent exercise of practical wisdom.

I want to make an additional point about effort here because the ability to persist in spite of obstacles is a crucial component of intellectual perseverance and in particular, of cognitive control. The obstacles to intellectual perseverance could be any number; some examples include: the attempt to acquire or hone cognitive control when it comes to a particularly difficult, or complicated concept, as in the case of chess; hindrances and delays to one's

intellectual projects, for example, illness or competing responsibilities; one's abilities with respect to the challenges of the task; the temptation of procrastination; and so on. Intellectual perseverance is also relative to some extent. Certain obstacles may be harder for some people than others, depending, for example, on their abilities, context and time and effort they can afford.

It is not difficult to see how intellectual perseverance relates to the exercise of cognitive control. Intellectual perseverance would be necessary to acquire the six abilities necessary in order to have cognitive control. As mentioned, an explanation might be especially difficult to follow and one may need to go over it multiple times. One might find it difficult to communicate what one has grasped, and may need multiple attempts to successfully do this, and it would surely be the case that in trying to answer new questions or solve problems in new situations that intellectual perseverance would be required to work out the appropriate answer or solution.

In light of this, I want to suggest that achievement with reference to cognitive control is intrinsically valuable because achievement is an exercise of will, which is necessary, in differing degrees, when it comes to acquiring and honing cognitive control and acquiring and honing cognitive control requires intellectual perseverance – and both of these features, as I have discussed, are intrinsically valuable.

4.5 Potential problems for the value of understanding

There are of course rebuttals to address. I will consider two of the most persistent ones that come up in the literature for this topic. The first rebuttal is: to whom does the achievement belong in cases where someone comes to have cognitive control as a result of the "work" put in by someone else, i.e. - the person who gives them the explanation. This comes up as a

counterargument to Pritchard's account of the value of understanding in "Knowledge, Understanding and Epistemic Value". Pritchard also maintains the view that achievements are finally valuable for their own sake, and understanding is a type of achievement, so understanding will be finally valuable for its own sake too. His argument rests on the claim that knowledge can be passed on to one through trustworthy testimony but understanding requires one to engage in one's own cognitive work. It is an agent's own abilities rather than anyone else's that result in their understanding. In response to Pritchard, Grimm offers the following example as a way showing that there are some cases of understanding that are not a cognitive achievement:

> Suppose that I arrive home to find my house in cinders, and I ask the fire chief on the scene why it burned down. He then tells me (on the basis of his careful investigation) that the fire was due to faulty wiring, so that I come to share his understanding of why the house burned down (111)

Grimm argues that in this example the bulk of the credit should be the chief's because the only reason Grimm comes to grasp the cause of the fire is due to the chief's fruitful investigation of the scene and not as a result of his own abilities.

The interpretation of understanding as cognitive control however could solve this problem and account for this example as one where Grimm can be said to have achieved something. If Grimm was able to follow some explanation of why the fire occurred, explain this in his own words, draw relevant conclusions from this information and be able to apply what he learned to a similar situation, then according to the cognitive control account, he would be exercising understanding. He may not be exercising it to as remarkable a degree as the chief, given that the chief was the one who painstakingly

combed the scene and came up with the conclusion, but he has still achieved something. Let us also not forget that in order to count as having cognitive control, one must possess all six abilities. So if Grimm can then apply what he has understood about this fire to some similar situation, and do that well, then we could even give him "extra" credit for undertaking a more difficult task successfully, and therefore having attained a greater achievement. Since the cognitive control account also makes room for the possibility that cognitive control, (and thereby understanding) comes in varying degrees, as we saw in the previous section, this example by Grimm may not pose as much of a problem because it is entirely possible to say that achievement and the value also varies in degrees.

To be fair, Grimm later admits, "a successful grasp is itself a kind of cognitive achievement" (112). He references the chief's understanding and his own as belonging to two different "areas" (112), but offers no explanation as to what he means by "areas" or how exactly they fall into two *different* "areas". I think the cognitive control account offers a stronger rationale on the basis that it allows for a more accurate way of identifying the chief's and Grimm's understanding as being of two differing *degrees* of understanding as opposed to two differing "areas". This also allows both the chief's and Grimm's degrees of understanding to more fairly correspond not simply to achievement, but to more specific and varying degrees of achievement.

Grimm shares a further concern: that where there is in-depth teaching or guidance involved, it is possible to think that "the main reason why anything was grasped at all" has more to do with the teacher than the learner (112). It is unclear what extent of grasping Grimm is referring to here. If something was grasped, then surely by Grimm's own admission, the grasping deserves some credit. Especially as there is no indication by Grimm that any particular level of grasping would need to be reached before any credit was due. What seems to be of more importance in establishing a greater sense of achievement and

therefore value is not so much a question of the extent of guidance offered by the teacher but the subsequent extent of cognitive control the learner is able to acquire or exercise on the basis of what they have learned.

The second rebuttal takes this form: what if someone uses his or her cognitive control to plot and carry out the murder of a dozen innocent people? If this murder was a difficult one to carry out and required a lot of effort, which it probably would have, given that a dozen people were involved, and it was committed successfully, would it count as an achievement? We would normally think of achievements as being positive or having positive value, so most of us would not consider a successful mass murder an achievement, even if a terrorist might consider it one. However, we also said earlier that for something to count as an achievement we essentially require there to have been more than ordinary effort - and since someone could insistently argue that that would be the case in the mass murder, we could also do with a response that does not ask us to rely solely on our intuitions or commonly shared opinion.

I think the solution to this lies in considering achievements as constituent of both the process and the product.[64] This requires us to consider the process involved in the potential achievement and the product of the potential achievement. Why is this important? Because as we said before, we can think of cases where for example, a person has no intention of achieving something, puts in none of the required work, but accidentally achieves something. In this case you have the positive value of the product but not of the achievement. Or imagine a person who puts hours of effort and hard work into setting up a soup kitchen for the homeless, and then without realising and by a cruel twist of fate, serves them soup that ends up giving the homeless people who come in for their lunch upset stomachs – here you have the positive value of the

[64] Bradford offers a very thorough account of this in *Achievement*.

process but negative value in terms of the product. This explains why to most of us, it would feel strange calling these achievements on the whole.

A person who plots a mass murder, one that is extremely difficult to carry out, and requires a great deal of effort, needing the murderer to overcome a number challenging obstacles along the way, has undoubtedly passed (with flying colours!) the test for difficulty and effort in what is involved in the process of achieving something. However the product is of tragically negative value. It is probably also the case that we can argue that elements of the process are of negative value too: for example, a misguided view of the world or an irrational belief that the murder will solve some problem and so on. In fact, if we think about evil "achievements" with reference to cognitive control in particular, I think we might see another reason why many of these cases may not be counted as achievements.

Most likely, evil deeds are committed because there has been no exercise, or a flawed exercise, of cognitive control. Cognitive control, if exercised with competence and exercised well, will most likely reveal, particularly in the processes aimed at drawing accurate and likely conclusions and providing accurate explanations, that evil deeds are very often the result of drawing inaccurate conclusions or providing inaccurate explanations. If accurate and deep understanding is achieved, then an agent will realise that most evil acts ultimately fail to achieve what the agent sets out to achieve – if not in the short term then in the long run or as part of the wider picture. This suggests, for example, that a mass murderer is potentially putting in a lot of effort to execute a task that will likely not achieve the ultimate aims he thinks they might achieve –because his exercise of cognitive control has been poor or non-existent, he may have failed to see the ultimate ineffectiveness of his

efforts.[65] So cognitive control, if exercised well, is more likely to result in outcomes that have neutral or positive value than ones that have negative value.

4.6 A quick word about the knowledge-comparison

The question as to whether knowledge can achieve these same outcomes has already been mostly answered in the last section by the distinction between knowing and what it means to exercise "cognitive control". The value of knowledge is not something I'm actively seeking to problematise. Knowledge and understanding can both, depending on the situation and requirements, be equally valuable. If we accept that understanding is a different state from knowing, then it would make sense that both will serve at least some different purposes and lead to some different outcomes. Knowledge may be quicker and easier to attain and as such serve us better when we need quick answers or solutions. If for example I was going to participate in a quiz show and need to, over a short period of time, learn as much information as possible, then it would be a better idea to "pore over" an encyclopedia or ask experts to give me the facts than trying to work them out for myself. In this case, knowledge better serves my purposes and for that reason is, at least in these circumstances, potentially more valuable.

In light of this, a balanced approach – that is, one that holds that both understanding and knowledge can be valuable depending on the circumstances – is more defensible. We have come to see that understanding, or cognitive control presents one with the ability to usefully and successfully

[65] I will have to concede that it is possible to imagine rare situations where a mass murderer has absolutely no reasons for committing murder, they are just exceedingly destructive, and as such the question of long-term ineffectiveness in achieving some wider goal or outcome is not relevant in those cases.

apply information, especially in new and unfamiliar contexts, and to genuinely and more fully appreciate the value of our objects of understanding and their unique and important roles. Consequently, cognitive control can also reward us with a meaningful sense of achievement which can be both valuable in itself and also act as a vital tool for motivating learners to continue learning and honing their cognitive control.

I have shown thus far that in order to help someone come to love learning, we must first choose the right sort of learning. This ultimately boils down to helping students acquire and exercise cognitive control. Cognitive control contributes to facilitating love for learning by providing the right sort of basis for facilitating greater pleasure in learning because ultimately, having and exercising cognitive control is pleasurable. Genuine lovers of learning will most often engage in cognitive control (as opposed to just superficial learning), find this sort of learning pleasurable, which will in turn be rewarded with higher degrees of cognitive control and ultimately, more pleasure. In the next chapter I argue that along with developing cognitive control, we must also make learning pleasurable.

Chapter 5: Pleasure

Introduction

In 2003, the Department for Education and Skills (DfES) in England published a strategy for educating children and learners that foregrounded enjoyment as a crucial component of educational policy for schools. In its executive summary, the government states: "Our goal is for every primary school to combine excellence in teaching with enjoyment in learning". In its foreword, the same strategy document states, "Children learn better when they are excited and engaged . . . When there is joy in what they are doing, they learn to love learning". Over the course of the following years, the significance of enjoyment in educational strategy has remained robust with the renamed Department for Children, Schools and Families (DCSF) stating in 2008, in Twenty-first century schools" a world class education for every child that a key objective for achieving their vision was to ensure children "enjoy their learning" (3.4). If we needed any more evidence than common sense that pleasure is a crucial component in encouraging and facilitating love for learning, this quote provides it from the standpoint of educational policy experts.[66]

The philosophical literature, as well as educational theories, on pleasure constitute a vast range and cannot be exhaustively surveyed here. It also seems inefficient to entirely "re-invent the wheel" when so much research has been done into establishing what learners find pleasurable in learning – both in philosophy and in educational theory. As such, I suggest a theory of

[66] For the purposes of this thesis, I take enjoyment to mean the same thing as pleasure and choose to use the term "pleasure" as it is more widely used in philosophy.

pleasure that is inspired largely by the work of Aristotle, focusing on the value he places on contemplation and understanding as well as his arguments centred on unimpeded activity. I also take into account a contemporary psychology theory called "flow theory", which gained acclaim through the work of social psychologist Mikhail Csikszentmihalyi. This theory has been inspired by Aristotle's work on unimpeded activity and the role of unimpeded activity in achieving eudaimonia.

Let me offer a summary of how I intend to link these two theories. In a nutshell, Aristotle held that the highest of pleasures is to be found in the highest of intellectual or cognitive activity, namely contemplation, which I liken to cognitive control. Finding great pleasure in any activity requires that the activity be unimpeded – this means that there are no factors that hinder or compete with the activity that one is engaged in, thus allowing one to be immersed in the activity. This feature of Aristotelian pleasure is what has influenced contemporary flow theory, so this is where I draw from the literature on flow theory (which has been more directly linked to contemporary

educational practices and pedagogies than Aristotle's work).[67] Let us now turn to the conditions I believe might contribute to greater pleasure in learning.[68]

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[67] Additionally, Aristotle argues that pleasure should not be the aim of activities, but instead something that is achieved "by the way" and that acts as the "cherry on top" if one really puts care and effort into the activity and does it well – Aristotle includes this predominantly to differentiate his theory from hedonistic ones and to avoid the misconception that enjoying pleasure is necessarily morally dubious. I think this attitude (that pleasure should not be the ultimate focus of our activities) could be additionally helpful as concerning ourselves too much on whether or not, or how much pleasure we are enjoying while carrying out the activity could potentially distract us from the pleasure we might get by being "in the moment".

[68] To clarify, when I say that learning must be pleasurable I do not mean that the learner must always find all experiences of learning pleasurable. There will certainly be times when it feels like an uphill task, when they have to encounter failure or situations that expose their vulnerabilities; learners, even when they love to learn, can get bored or distracted or encounter teachers or classmates who put them off learning something. However, if the learner is able to say that learning is, all things considered, pleasurable for them, then they are more likely candidates for being lovers of learning. Perhaps offering a contrast between what I think someone who loves learning and someone hates learning may look like could be helpful. I think that in order for someone to actually hate learning, it is the case that they have not quite figured out how to learn "properly" or to learn "well" – they see learning as automatized, rote-based, they see learning having little or no relevant links to their lives and do not see it as something that gives them independence and empowers them. Essentially, those who do not know how learning works, tend also to be those who do not love it. Someone who has worked out how to learn "properly" – that is, acquiring cognitive control – will, conversely, gain pleasure from

I believe that the presence of certain conditions in learning help to facilitate the experience of pleasure in learning. These conditions increase the opportunities for, and the amounts of pleasure the learner can potentially experience. The conditions for maximising pleasure in learning are that:

1) There are opportunities to develop and/or exercise cognitive control (to an appropriate level depending on the learner's abilities).

2) There is "flow". I believe that finding and creating opportunities for flow in learning are likely to bring about pleasure for the learner; the more flow one experiences, the more pleasure one feels and the more pleasure one feels, the more flow one experiences.

3) Learners feel safe and supported in being appropriately vulnerable. I explore this in greater detail in the chapter on vulnerability.[69]

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learning and in most cases, come to love learning too. Empirical evidence seems to suggest that what is "loved" in learning is essentially those skills that equip the learner with cognitive control and what is hated is rote, automatized learning. This is also a good juncture at which to acknowledge that some learners may receive more pleasure from rote learning than they might from acquiring and/or exercising cognitive control. Quotes from empirical evidence that I presented in the earlier part of this section hold that those who enjoy this method of learning are in the minority compared to those who find deep approaches to learning more interesting and enjoyable. This justifies us thinking about how we might want learning, as we commonly see it especially in school settings, a little differently – we do this by encouraging cognitive control. I think this will then lead to a virtuous circle.

[69] Other conditions such as encouraging a sense of wonder and curiosity, adequate and appropriate praise and reward, could also potentially be useful

I begin by drawing the links between cognitive control, contemplation and pleasure. To do this, I will make reference to Aristotle's views on intellectual, or cognitive activity (which includes as the highest aim, contemplation) and pleasure. As mentioned earlier, lovers of learning find pleasure in some or all of the various "stages" of learning. They may find pleasure in discovering new things to learn and in the process of learning itself, that is, the process of coming to understand things. They often also find pleasure in having successfully understood something, that is, in the successful "completion" of that particular process of learning. James Warren writes that Aristotle implies that:

…the process of first having a capacity to know, then acquiring some knowledge, and then actively contemplating that knowledge is a teleological process; each step is part of a process of perfecting the nature of the human knower (56).

We see that for Aristotle learning is a journey where the final destination is where one becomes the perfect "human knower". We will see as we explore more of Aristotle's ideas in this chapter that this "perfection" is achieved when one achieves the ability to "contemplate", by which Aristotle means the ability to actually use and "direct" the knowledge we have acquired to come into a full awareness of oneself, as opposed to simply procuring information.

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conditions for maximising pleasure in learning (in fact Aristotle discusses wonder and curiosity in his work), but I am unable to explore these and other possible conditions due to the space limitations of this thesis. The importance of offering appropriate praise and rewards in learning, and how they contribute to the learner's enjoyment, have already been researched extensively and their value is now largely considered unarguable, so I do not consider this in my thesis.

Pleasure can also be experienced in the applying of what one has learned to other contexts and in the awareness that one has cognitive control sufficient to apply what one has learned. While I believe that pleasure need not always be experienced in every instance of learning and throughout all the stages and it need not be experienced at a constant and/or consistent degree (one could experience more, less or no pleasure at various stages), it is more likely than not that lovers of learning are likely to experience greater pleasure, more frequently during their learning experiences and across the various stages or "steps" of learning than non-lovers of learning. In this chapter, I draw parallels between aspects of Aristotle's function argument, namely the various stages of intellectual activity, especially contemplation and cognitive control. My aim is to show that cognitive control is similar to contemplation. If, as Aristotle argues, contemplation is pleasurable, and cognitive control is similar to contemplation then cognitive control would be pleasurable too.

5.1 The link between contemplation, cognitive control and pleasure

Aristotelians differ on the exact nature of contemplation, but broadly agree that it refers to the uniquely human function of reasoning. In Book 10 of *The Nicomachean Ethics (EN)* he argues that contemplation is the function of man as well as the most divine quality of man. He writes:

> If reason is divine, then, in comparison with man, the life according to it is divine in comparison with human life . . . reason more than anything else *is* man (1177b25-1178a8).

The relationship between contemplation and cognitive control therefore becomes immediately apparent – if contemplation has to do with reasoning and cognitive control essentially consists of six abilities that we can quite easily see are abilities of reasoning, then cognitive control and contemplation have a lot in common.

To begin with, Aristotle holds that there are different stages of learning/knowing. And it is the final stage of "knowing" that equips one with the ability to use the knowledge one has acquired, as opposed to simply having that knowledge. Being this sort of knower is what is crucial to contemplation, which, as we have seen, is the highest stage of intellectual activity and one that humans should aspire to. My position is that cognitive control is a good parallel to this stage because it has a similar purpose, to equip the learner with the ability to reason – to independently "control", use/apply knowledge in such ways that they have gained, as Aristotle might suggest, ultimate understanding. For Aristotle, reaching this stage involves various other stages of coming to know things – some stages are founded on sensory experience and others on intellectual activity. I think this makes sense in terms of our own experiences of learning as well – we begin learning simpler concepts and then progress to ones that are more complex and require us to think more critically and deeply. We also saw something similar with Rousseau, where he discusses the various developmental stages of a learner, beginning with those linking learning directly to the experience of our senses and then progressing to involve reasoning.

In *De Anima* 2.5 Aristotle makes distinctions between different kinds of "knowers". He writes:

1) "For there are knowers in that we should speak of a man as a knower because man is one of those who can be knowers and have knowledge;" (417a22-24)

What Aristotle means here is that all and any human being can be called a "knower," or the kind of being that knows and can acquire knowledge.

2) "then there are knowers in that we speak straightaway of the man who has knowledge of grammar as a knower." (417a24-25)

Here, Aristotle is referring to a "knower" in terms of someone who has acquired knowledge of a certain type, for example grammar. This "knower" according to Warren:

…has the capacity in the sense that, provided that nothing external prevents him, he can exercise his capacity to contemplate some knowledge that he possesses (55).

So the second "knower" is able to reason about some of the knowledge he possesses (since contemplation refers to the ability to reason).

3) "There is thirdly the one who is already contemplating, the knower who is in actuality, and in the controlling sense knowing this particular A." (417a28-29)

This third sense of "knower" refers to someone who is able to contemplate some particular piece of knowledge in the fullest, most "complete" knowing, that is, in the sense of being able to "control" this knowledge. As Warren writes:

> The person in (3) is a knower because he is in fulfilment and knows in the proper sense this particular thing…He stands as the end-point or goal of intellectual achievement to which the other two should be compared and related. (55)

The term "knows" as is used in the case of the second and third "knower" does not describe one who knows in the sense of having information or facts, or items of knowledge. It refers to, as Warren explains,

> …a specific form of understanding that is the best kind of knowledge for humans, is involved in the kind of activity that ought to be recognised as the goal of a human life and is, in that sense, something that all humans desire just as all humans desire to live well. In other words, there is a special kind of knowing that is to be identified as the fulfilment of our human nature: this is the best thing we can do and is the activity of the very best part of us. (52)

Of significance in this quote is the phrase "specific form of understanding", which is differentiated from knowledge that presumably does not involve this sort of understanding. This "specific form" that the third type of "knower" possesses is understanding in the most complete sense, which makes them closest to the ideal in terms of fulfilling intellectual activity and the unique activities of human nature – as Warren says he "stands at the end point or goal of intellectual achievement", meaning he has complete mastery. The second type of "knower" is "on the way" to this ideal and possesses "understanding" but not the perfect, complete understanding that the third "knower" holds.

I think these two types of knower are similar to the learners who possess cognitive control. The second "knower" is different from the first "knower" because they have the ability to reason, or contemplate some knowledge while the first "knower" only has the yet-to-be realised potential to do so. The third "knower" is different from the second "knower" because the knower goes from having some understanding and ability to reason to having understanding of that specific item of knowledge in the fullest sense. In other words, the steps are: one goes from someone who has the potential to reason to someone who acquires and then actively uses that knowledge by reasoning (that is, exercises cognitive control) to a basic degree, to someone who finally possesses *full* cognitive control. Warren adds that actively using a piece of knowledge in contemplation is "indeed the fulfilment of the knower as such –

it brings the knower to his fulfilled state…" (56). This makes it clear that cognitive control has a crucial part to play in Aristotle's theory, and since cognitive control admits of degrees, we can see how it matches up with the "knower" two and "knower" three, who also contemplate to varying degrees. The possession of the highest levels of cognitive control and the exercise of this cognitive control to the highest abilities would then be tantamount to having the complete and perfect reasoning abilities that Aristotle calls contemplation.[70]

Now let us move on to discussing how contemplation is linked to pleasure in Aristotle. I hope to show that if contemplation is pleasurable then cognitive control is also pleasurable and that learning that involves mostly cognitive control is therefore pleasurable. The pleasure may vary depending on the extent of cognitive control one has and is able to exercise, but it is nonetheless pleasurable. If we agree that cognitive control is pleasurable, this encourages us to ensure that learning compromises of as much cognitive control as possible and if learning is pleasurable then that contributes to us becoming lovers of learning.

Aristotle held that all humans have a natural desire for knowledge and this desire is signified by pleasure. He writes in *Metaphysics* I, "All humans desire to know. An indication of this is the joy they take in perceiving" (980a21-2). This quote seems to suggest that all humans desire, and would choose to engage in "knowing" for its own sake. Although Aristotle refers specifically to

[70] Unlike Aristotle my own position does not centre on the notion of an *ultimate* human "function" as such – I do not adopt this view in my thesis. However, due to how pervasively it appears in his work, I cannot always avoid referencing it in the Aristotelian quotes I select. So, when it does appear, I attempt to extract only the relevant ideas and explain how they apply to my position.

perception in this quote, it is clear, as the opening passages of *Metaphysics* continue that perception is the foundation of a range of cognitive activities, which include memory, experience, skill and understanding, and which, we will come to see, fall into a sort of hierarchy of abilities.

Aristotle believed that eudaimonia and as such pleasure can only be achieved when human beings act in accordance with their natural functions. Paramount of these functions, as we have seen, is the intellectual one of reasoning. CCW Taylor writes on Aristotle's motivations for considering pleasure:

> …his primary concern is to give pleasure its proper place in his account of the best form of human life, and it is because that concern requires a proper understanding of what pleasure is that the account of its nature engages his attention. (240)

Pleasure is particularly important to Aristotle's wider moral aims because he holds that individuals will be naturally drawn to those actions that give us pleasure and avoid those that bring us pain. As such, he essentially hopes that individuals can be socialized into finding pleasure and pain in appropriate actions (*EN* 1152b1-8). Aristotle also holds the view that pleasure and pain signify the extent to which a living being is successfully, or unsuccessfully, engaging in its proper natural activity. Pleasure is to be found in each living being pursuing its own proper natural activity. In *EN* he writes "a horse's pleasure is different from that of a dog or a human; so Heraclitus was right to say that donkeys prefer rubbish to gold" (1176a5-8) . Humans natural activity, according to Aristotle is the engagement in cognitive and rational activities, so it follows that pleasure accompanies cognitive and rational activities. Once one reaches the final goal in one's ability to fulfil the ultimate human function, contemplation, then eudaimonia is achieved.

In *EN*, Aristotle makes the connection between pleasure and activity. Reasoning is an activity, as is cognitive control. He does so by first considering seeing and perception and highlights the importance of noting how "seeing" is a "complete" or "perfect" activity. Seeing and perception are lower on the hierarchy of cognitive abilities, but the principles of "completeness" and "perfection" are applied to all stages of cognitive ability, from those lower in the hierarchy to those at the top. The "completeness" and "perfectness" of an activity are something we need to note with importance because they play a crucial role in producing pleasure. So what do these two terms mean? As Warren suggests,

> This notion of 'completeness' or 'fulfilment' works in two ways throughout the argument. It has a chronological sense and a teleological sense . . . At any moment in an act of seeing, the seeing is complete . . . Seeing is also perfect in the sense that seeing does not have a goal or end-point (*telos*) as, for example, shipbuilding does . . . And in this respect pleasure seems to be like seeing. (10.4 II74a16-17) (61)

For Aristotle, all perception involves activity and in each case when the activity is most complete or perfect, it is also the most pleasant. Aristotle gives a variety of examples to elucidate this point – those of the flautist, sculptor, carpenter, tanner and even our various body parts (*EN* 97b26–27). The extent to which we can ascertain the "good" and "the well" of a craftsperson or artist, or our eyes and hands for that matter, is based on how well, or how excellently they perform their roles/activities, be it playing a flute for the flautist or "seeing" for our eyes. To see how the same principles hold for all activities, beginning with perception but also covering the intellect, consider this quote, again from *EN*:

> In each sense, the activity is best when it belongs to something disposed in the best way and in relation to what is the most powerful of those things that fall in its remit. The same activity would be the most complete/perfect and the most pleasant. For all perception is pleasant, as are both thinking and contemplating, but what is most pleasant is what is most complete/perfect and what is most complete/perfect is what belongs to something in a good state and with relation to the best of the things in its remit. Pleasure completes/perfects the activity. (1174b18-23)

Here Aristotle is referring to cognitive activities other than perception (though as we saw earlier, the same principles apply to perception) and explains that these intellectual activities will be most complete/perfect when the knower is fulfilling the best of this process, fulfilling it in the best way and with reference to the best "objects" for that activity. By best "objects" it would seem that Aristotle means the most excellent objects of engagement for our cognitive activities; those that are best suited for the specific type of cognitive activity.[71] Warren explains that according to Aristotle:

[71] The term 'beauty' is often used in *EN* to refer these 'best' objects but in this quote, Aristotle uses the terms 'kratiston' (strongest) and 'spoudaiotaton' (quickest) instead, to account for intellectual activities that are related not just to perception but to other more intellectually engaged activities such as contemplation (Warren 63). Interestingly, beauty, as it is used by Aristotle, also need not be taken in the most literal sense but as Warren suggests could refer also to order and magnitude, as well as potentially the arrangement and order of one's life (Warren 73).

> …pleasures of thought (dianoia) differ from all of these and different intellectual pleasures differ from one another (10.5 1175b36–1176a3). So intellectual activities – and therefore their pleasures – are as a kind superior to perceptual activities and their pleasures . . .(64)

The phrase, "different intellectual pleasures differing from one another" indicates that there are a variety of intellectual pleasures. This serves to further justify the claim that there is pleasure to be found in basic cognitive control as well as in the highest levels of cognitive control. Warren also writes:

> Often the sense of 'learning' involved seems to be of a rather low-level kind not much more elevated than a mere 'recognition' that such-and-such is the case. But this shows that Aristotle accepts that all forms of intellectual achievement are pleasant in a way, even if they fall short of the exquisite and divine pleasures of contemplation . . .(67)

Aristotle does not diminish the value of the earlier stages of cognitive activity (that is, those that come before perfect contemplation) and holds firm that each of these bring pleasures worthy of our attention and desire. Perhaps he does so because each stage potentially brings the learner closer to achieving the perfect stage of contemplation, which is the highest and therefore most pleasurable stage of learning. This is very similar to my belief that both surface and deep approaches to learning are important, can be enjoyable and are valuable, but the deeper approach, being that which prioritises cognitive control, is more likely to yield greater pleasure.

Referring back to cognitive control, we can see how having cognitive control to some extent could yield pleasure of the sort related to being able to make sense of something, being able to apply what one has learned independently

to solve a problem and so on. The more cognitive control one has, the more pleasure one gets from exercising it.

Aristotle also says that pleasure arises when activity is unimpeded. Robert Scott Stewart writes about Aristotle's account of pleasure:

> On this account of pleasure, then, it is maintained that what we *actually enjoy* is not a *process to* a natural state but the *activity of the natural state itself.* Thus, activities such as quenching one's thirst or recovering from sickness-things taken as paradigmatic pleasures on the alternative account—are, in Aristotle's theory, taken as being only incidentally or derivatively pleasurable. 'Real' or 'unmixed' pleasures are to be identified with the unimpeded activity of the natural state. Since thirst or sickness can *impede* such activity, the alleviation of them is (incidentally) pleasurable since it allows for the possibility of true 'unmixed' pleasures. (101)

Natural state might then refer to human beings being able to perform their natural functions and those functions they enjoy in conditions that ensure that human beings' natural states – that is, the health of body, mind and soul – are present. In Book 7 of *EN*, Aristotle raises the issue of natural states and processes as a rebuttal to conceptions of pleasure that argue that it is a perceptible processes that leads one to a natural state; a natural state that needs to be achieved due to some lack that needs to be restored. This, he felt, reduced pleasures to having an instrumental value as opposed to being a chief good. We know that Aristotle wants pleasure to have a more meaningful role as he wishes for it to play a significant role in guiding people to engage in virtue and live a eudaimonic life. So on this account of pleasure what we enjoy is not a process to a natural state but the activity of the natural state itself. For

humans, as Aristotle carefully distinguishes, "natural state" involves engaging in intellectual activity, culminating in contemplation.

To be in one's natural state it is also necessary that one does not face any impediments. In *EN*, Aristotle writes, "no activity is complete when impeded" (1153b16-8). Again, here we are required to consider what these impediments refer to. Aristotle could be referring to the absence of sufficient external resources such as good fortune, and potentially the provision of other suitable conditions that do not render a person poverty-stricken, without a safe roof over their heads, and so on. Aristotle writes:

> . . .so that the happy man requires in addition the goods of the body, external goods and the gifts of fortune, in order that his activity may not be impeded through lack of them. (1153b17–19)[72]

Unimpeded also refers to the impediments caused by "foreign" or "alien" pleasures. Stewart explains it like this:

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[72] Situational impediments such as poverty, various forms of discrimination and so on have the potential to restrict or challenge one's ability to be in one's "natural state" and to reach a stage where one's activities are "complete" or "perfect" in the Aristotelian sense. I think it is important to acknowledge this, particularly in the context of school-based learning which does not always successfully take into consideration such impediments and how they might affect the ability to engage fully and vigorously in learning, at least in how learning is "set up" in most educational institutions. In noting this, I also want to clarify that my thesis considers learning more generally, where these situational impediments are not especially extreme or especially concerning. As such I do not challenge what might be considered by some as Aristotle taking a rather privileged, and exclusive starting point for his position.

> Imagine someone occupied in the activity of geometry. Suppose, however, that someone is playing a violin in the next room. Further, suppose that we enjoy violin playing; much more so than we enjoy doing geometry. In such a case as this, Aristotle tells us, it is extremely unlikely that we could keep concentrating on geometry rather than the violin playing. Thus this foreign pleasure, i.e., the pleasure, in this case, of listening to the violin, impedes the activity of geometry. In this, Aristotle says, "alien pleasures do pretty much what proper pains do, since activities are destroyed by their proper pains" (II75b16) (106)

One is less likely to succumb to impediments if one takes pleasure in what one is doing. People are therefore more likely to do what they find pleasurable, and pleasure in turn makes them more focused and engaged in their activity. One is also less likely to succumb to impediments if one chooses the "proper" activity. Warren explains what Aristotle means by this:

> . . . (Aristotle) then specifies that the best activity will be the intellectual activity of a person's *nous.* This is the most divine thing in us, the best aspect of us, and also that which is superlatively human; indeed, Aristotle is even tempted to say that each person should be identified with this ruling element (1177a13–17, 1177b26–1178a8). The best activity of this divine part is identified as 'contemplative' activity (theōrētikē, 1177a17–18)." (65)

Choosing the proper activity is therefore most likely to prevent impediments from disrupting the activity, thereby allowing one to most successfully, or excellently, fulfil that activity. It is in such fulfilment that one finds pleasure.

This is relevant to my position on the importance of focusing on the right kind of learning – deep learning or learning that prioritises the development of, and opportunity to exercise cognitive control. Choosing the proper "activity" (cognitive control) means that students are more likely to achieve a state where they can engage in the activity without obstructions. I say more about this in the section on "flow".

So what exactly is the relationship between activity of this unimpeded kind, and pleasure? Aristotle says in *EN* that pleasure is "involved in the activity" (1175a1) and "accompanies activity" (1175a5) in that it "completes the activity" (1174b32, 1175a15, 1175a28) "as an end which supervenes as the bloom of youth does on those in the flower of their age" (1174b32-33).

In *EN* Aristotle states that pleasure *completes* an activity, as a supervenient end, which means that it is not an end we aim at but one which comes as a consequence of the aimed-at end if we perform the activity well. Aristotle writes:

> But the pleasure perfects the activity, not as the fixed disposition does, by being already present in the agent, but as a supervening perfection, like the bloom of health in the young and vigorous (1174b32).

An activity is complete if it fulfils its function perfectly and it is directed at the best possible end it could be (1174b14-16). With learning, the best possible end is possessing and exercising cognitive control to the highest possible degree. Aristotle also says that pleasure accompanies activities and helps to bring them into completion. Importantly, pleasure is to be understood as something that complements and perfects the activity that it accompanies. If we return to the quote about pleasure perfecting the bloom of youth we see that what Aristotle means is not that the bloom of youth is imperfect and that

pleasure perfects it or fills some sort of lack, but rather that pleasure complements it. The pleasure derived is something we get "by-the way" and not something we should seek out in itself.[73] Aristotle writes in *EN*:

> It might be held that all men seek to obtain pleasure, because all men desire life. Life is a form of activity, and each man exercises his activity upon those objects and with those faculties which he likes the most: for example, the musician exercises his sense of hearing upon musical tunes, the student his intellect upon problems of philosophy, and so on. And the pleasure of these activities perfects the activities, and therefore perfects life, which all men seek (1175a).

Here we see that Aristotle includes "those faculties which he likes the most" in his description of pleasure and human activities. This suggests that virtuous actions are in themselves pleasurable and as such, life lived in this way is intrinsically pleasurable. But it also suggests that virtuous and pleasurable actions are not just morally virtuous activities per se, but also activities that are the excellent exercise of our capacities as well as capacities that an individual specifically finds pleasure in.[74]

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[73] Pleasure is not necessarily found in every activity, of course; it is a by-product of activities that meet the criteria stated in these two claims – it is unimpeded and supervenient.

[74] To circumvent the problem of a good life including humans performing immoral activities excellently, it is important to note that for Aristotle, rationality (or excellent functioning) is possible only if the human being in question is morally excellent or virtuous in character. He writes, "Virtue then is twofold, of thought and of character" (*EN* 1103a 11-15). Both these aspects

For Aristotle, the notion of excellence here and elsewhere is tied in with the awareness and fulfilment of specifically human functions, which for Aristotle refers to intellectual activity. Again, I think it is entirely possible to draw from this view the notion that fulfilling one's capacities for cognitive control in the most excellent way, that is, to the best of one's abilities and where the object and objective of the cognitive control is morally sound (i.e.: we are not seeking to use cognitive control to do harm) is something that will bring us great pleasure without having to buy into the Aristotelian idea that the pleasure comes from fulfilling what is a "unique" or "ultimate" human function. It can bring us pleasure in realising our capacities, whether these capacities are our ultimate function or not.

5.2 Criticisms of Aristotle's views

Aristotle's theory of pleasure is, of course, not without contention. One problem arises from confusion about the exact definition of pleasure – more specifically, what sort of activity it is. If Aristotle's account of pleasure is not robust, then my using it as inspiration for my own account would of course be problematic. So I need to allay this concern about confusing definitions. RS Stewart writes:

> Aristotle provides two extended discussions on the subject of pleasure within the Nicomachean Ethics. The first, which comprises the last four chapters of Book 7, produces a definition of pleasure in which pleasure is identified with activity (energeia). But in the second discussion of pleasure—provided in the first five chapters of Book 10-this position is characterized

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need to work in tandem in order for a person to be deemed virtuous (EN 1144b14–17).

> as "strange" or "absurd" (1175b 35). Instead of an identification between the two, pleasure is now said to "supervene" upon activity "as the bloom of youth does on those in the flower of their youth". (1174b 33) (97)

So the question is, is pleasure an energeia-type activity or is it something that is a process? Energeia type activities are meant to be "complete" in themselves (as opposed to kinesis-type activities, which are the other type of activity we find in Aristotle's work). Hiroshi Miura explains that:

> …while the energeia simpliciter in which the end is present is complete in each moment, kinesis, being a kind of energeia, is incomplete. In short, the principle of the distinction is the contrast between completeness of energeia and incompleteness of kinesis (72).

This distinction essentially arises from Aristotle's concerns that pleasure was seen to be something that addresses a lack. Aristotle wants to make sure that pleasures cannot simply be about restoring bodies to their natural states because he believes this is not a comprehensive enough account of pleasure. He says:

> Therefore pleasure is not a process of replenishment, though while replenishment takes place, a feeling of pleasure may accompany it, just as a feeling of pain may accompany a surgical operation. (*EN* 1173b 9-15)

So pleasure, according to Aristotle, is not to be seen as a process to a natural state. Instead it is to be seen as the unimpeded activity of the natural state itself – so not kinesis but energeia. However, he later says that pleasure

"supervenes" upon activity – which seems rather confusing given that we are told earlier that pleasure is the unimpeded activity itself.

A strong and often cited response to this problem is that there is actually no contradiction, simply that Aristotle was asking and attempting to answer two different questions about pleasure in Books 7 and X of *EN*. In Book 7, the claim is that he is analyzing what it is that we find pleasurable and in Book 10 he considers what pleasure itself is. RS Stewart, GEL Owen and CCW Taylor all hold this view. For example, CCW Taylor writes:

> But Aristotle's question is itself ambiguous between 'What do we enjoy?' and 'What is enjoyment?' and my suggestion is that the discussion of book X shows some indication, absent from book VII, that Aristotle had moved towards separating those questions. (264)

The justification for this claim lies in a close reading of books 7 and 10 that seem to indicate that Aristotle is indeed grappling with two different questions. Here is an oft-cited passage from Aristotle that indicates that he wishes to respond to two different questions:

> If then pleasure is the replenishment with that which is according to nature, that which feels pleasure will be that in which the replenishment takes place, I.e., the body; but this is not thought to be the case... (*EN* 1173b 9-11)

The idea of "replenishment" suggests the lack of something in the body. If this were true, then the replenishing would render the body as that which is pleased. Stewart writes:

> But, as Aristotle says, "this is not thought to be the case" even though "one would *be* pleased when replenishment was taking place, just as one would *be* pained if one was being operated on" (1173b 12). It would seem then that Aristotle is here distinguishing between two questions-roughly, "What is enjoyable?" and "What is the nature of enjoyment?" (102)

Aristotle believes that "this is not thought to be case" because he holds that not all pleasures fit the anti-hedonist model of "replenishment". This response come on the back of his desire to challenge the preconception that pleasure is necessarily hedonistic. He wants to relay the idea that pleasure is worth having but not for the reasons that hedonists believe. He also believes that the anti-hedonists have gotten their response to hedonists all wrong by taking the "replenishment" route. Certain pleasures, such as those that involve the exercise of faculties like perception or thought for example, do not fit this pattern of replenishment, he argues –so this cannot be a suitable response. One of his aims is then to correct this mistake and offer the right idea about why pleasure is a self-contained good - an energeia and not a process aimed at replenishing.

I think that what we have to concede here is that Aristotle fails to offer clear "sign-posting" about which question - what we find pleasurable or what is the nature of pleasure itself – he is answering. The conclusion, I think, is not that he is guilty of inconsistency so much as perhaps the failure to be clear about which question he is answering when. While it would of course have been helpful had Aristotle done this work, it would seem reasonable and in fact sensible to separate the two definitions-for our reading now. They are answers to two different questions, and, in fact, one may not necessarily have any effect on the other.

This clarification is important because it allays concerns that Aristotle offers confusing and contradictory accounts of pleasure that then make his theory an unsuitable one to base my own views upon. This clarification also supports the idea that pleasure is to be found in the unimpeded intellectual activity of reasoning, which then gives us further grounds to suggest that flow theory, which draws from this Aristotelian notion of unimpeded activity is a very appropriate theory to apply to the sort of learning which is focused on cognitive control (reasoning).

The clarification that it is the *nature* of pleasure that it *accompanies* the activity of contemplation rather than "adding to it" is also important because contemplation at its fullest is energeia – it is complete in itself, so pleasure is not something that can "add to it" – if something can be added to contemplation then it would not be "complete". The account that pleasure supervenes rather than "adds to" also supports, as I mentioned earlier, the position that pleasure is not to be taken as the goal of intellectual activity, but rather something that is an opportune "by-product" of engaging in contemplation.

Another problem arises from the fact that according to Aristotle *all* men desire to know, so presumably everyone pursues the goal of ideal contemplation and everyone finds contemplation pleasurable. This is plainly not true. So how can we explain this? By pointing out that the pleasure to be found in contemplation is conditional. Where the conditions are not met, real pleasure will not follow. In "The Place of Pleasure in Aristotle's Ethics", Amelie Rorty offers a good response along those lines. She writes:

> Pleasures are a subclass of energeiai: those that involve the unimpeded exercise of a natural hexis, kata phusin hexeos. The correct description of an action type not only determines whether it is an energeia; it also identifies the natural hexeis

> which are exercised. Only when the appropriate hexeis are exercised rightly, on the right objects, with the organs in the right condition, is the activity properly pleasurable. It is under such conditions that the action description passes the grammatical-intentionality test as the energeia it is, because the description reveals the natural hexeis which are exercised. Someone who has not really got the hang of contemplation, who isn't suited to it, but does it desiring the fame it may bring, doesn't really find contemplation pleasurable, except perhaps incidentally. The description of his contemplating will reveal that what he does is either not self-contained, or that it is the exercise of natural hexeis which are incidental, rather than intrinsic, to contemplation (491).

Hexis usually translates to mean "state" and according to Owen and others, in Aristotle's work means more specifically, "any settled condition or propensity of the agent that is exhibited in characteristic performances" (Owen 139). *Kata phusin hexeos refers to* "unimpeded activity of the natural state". Rorty is explaining here that the right categorization of energeia and kinesis activities contributes to recognizing the natural states, or the propensities, which are being exercised. This is important because Aristotle, as I explained earlier, says that activities tend to be more pleasurable when they are activities that fit or suit an individual or their interests well (hence Owen's use of the terms "propensity" and "characteristic") – this is when the individual is less likely to face certain types of impediments; they are able to focus on them and not be easily distracted. It is also when they are more likely, all other conditions being met, to truly find pleasure in them. The other conditions are essentially those that suggest that there are no other impediments - that the states are exercised in the right way, the body is healthy and its parts are able to fulfill their functions well and the states or propensities are exerted on the right sort

of object. The intentionality test that Rorty refers to here is also a very useful way of helping to categorise energeia and kinesis activities – it involves:

> . . .focusing on the difference between what is contained within the description of the action-type (what constitutes the action), and what is a consequence of its being performed . . . We 'psychologize' the intentionality of actions when we start looking for motives that lie beyond those already imbedded in the standard description of the actions. (Place of Pleasure 488)

Rorty's point here is that in instances where it is especially difficult to identify the category of the activity (whether it is energeia or kinesis), some consideration into the consequences of the action in line with the potential category of the action may be useful in helping us assess whether indeed the action belongs to that category or the other. Rorty also suggests that this method is to be used sparingly and with as minimal psychologising as possible because these would have "an un-Aristotelian ring" (Place of Pleasure 488). In the quote above where she talks about pleasures being a sub-class of energeia, she offers the example of contemplation, explaining how the lack of the right conditions, and the description of the contemplation together with the consequences, in certain cases of contemplation, leads us to realise that the right propensities are not at play; this then suggests that the action is not self-contained and therefore unlikely to be energeia as Aristotle intends for energeia to be. In such cases, pleasure is either not, or only accidentally, being experienced. This would explain why it is not especially fair to suggest that Aristotle necessarily expects everyone to find contemplation pleasurable.

What this further suggests is that not everyone will find learning pleasurable, whether it consists predominantly of cognitive control or not. I think this also rings true when we think about how different people are – to expect that every person would find a particular thing pleasurable just seems to sit at odds with

what we know from interacting with others. While I think it is true that in normal cases people have the capacity for cognitive control, not everyone with this capacity will then find cognitive control (or any type of learning for that matter), pleasurable. However, I do think that more often than not, this comes to down to one's learning experiences. So the more we are able to make these learning experiences align with the sorts of features we know are more likely than not to enable pleasure, the more likely we will be to "turn around" some of the negative opinions students have formed about learning.

One such way to enable optimal pleasure in learning is to create opportunities for "flow". Let us see how elements of flow theory are linked to cognitive control, and how they complement Aristotle's views on "unimpeded activity" and ultimately "pleasure".

5.3 Flow Theory

"Flow" is a theory put forward by social psychologist Mihaly Csikszentmihalyi. At the heart of the theory is the desire to direct people to the belief that happiness is not to be found in external factors and conditions, but is something that comes from within oneself, and from one's own abilities. In *Flow: The Psychology of Optimal Experience (FPOE)*, Csikszentmihalyi quotes Marcus Aurelius: "If you are pained by external things it is not they that disturb you, but your own judgment of them. And it is in your power to wipe out that power now" (20).

In this case, wiping out the power involves directing our energies and attention on a goal that has been consciously chosen, where all our energies "flow" towards that goal at that time and we are not caught up in other distractions. This sort of focused activity ultimately creates "harmony" within the consciousness. Csikszentmihalyi cites research that has shown that as a result of the brain only being able to process a certain amount of information

at any one time, we are making constant trade-offs about what we focus on. However, while in "flow" all the brain's available resources are directed towards the one chosen activity or goal. As a result of the brain being so focused on this activity or goal, distractions go unnoticed. According to Csikszentmihalyi this sort of optimal "flow" experience can come about in any situation where there is an on-going activity. The activity need not be an intellectual one, though that is the sort of activity I will discuss in detail here. Flow is described by Bonaiuto et al rather succinctly in the article "Optimal Experience and Personal Growth: Flow and the Consolidation of Place Identity", like this:

> . . . it depicts the psychological mental state of a person who is immersed in an activity with energized concentration, optimal enjoyment, full involvement, and intrinsic interests, and who is usually focused, motivated, positive, energized, and aligned with the task at hand (Csikszentmihalyi, 1975/2000, 1990). The term "flow" describes optimal experiences that are among the most enjoyable in human life (Csikszentmihalyi, 1982), and such experience may emerge in any situation or place in which there is an ongoing activity (Csikszentmihalyi, 1990, 1997), as well as when there are clear goals, immediate feedback, and good balance between the skills of a person and the challenge of the activity (Csikszentmihalyi and Csikszentmihalyi, 1988; Csikszentmihalyi and LeFevre, 1989; Waterman et al., 2003).

From this quote alone we can see immediate parallels to Aristotle's positions on unimpeded activity, engaging in activity that one personally finds interesting, and the fulfilment of our highest intellectual capacities. I think it is quite clear how Aristotle has influenced flow theory. In a nutshell:

- "Intrinsic interests" as mentioned in this quote align with Aristotle's views that the more personally interested we are in an activity, the more it aligns with our propensities and "natural state", the more likely we are to take pleasure in it.
- "Full involvement", "aligned with the task at hand" and "ongoing activity" can be associated with Aristotle's ideas about unimpeded activity. Recall the example of the violin being played in the room next door when one is doing geometry.
- The point about "the challenge of the activity" relates to Aristotle's views on fulfilling our intellectual capacities, where each "stage" is potentially pleasurable, but it is when we have achieved the final stage of intellectual activity and overcome that "highest" challenge that we experience the most pleasure.
- "Flow's" relationship with pleasure is made clear here in the references to "optimal enjoyment" and "the most enjoyable human life". It is therefore clearly a theory meant (to some significant degree) to explore engagement in activity that offers optimal pleasure and a good life, much like Aristotle's theory.[75]

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[75] It is important to point out that in *FPOE* Csikszentmihalyi himself distinguishes between pleasure and enjoyment. He writes:

> Pleasure is an important component in the quality of life, but by itself does not bring happiness . . . [Pleasurable experiences] do not produce psychological growth . . . When people ponder further about what makes their lives rewarding, they tend to move beyond pleasant memories and begin to remember other events, other experiences that overlap with pleasurable ones but fall into a category that deserves a separate name: enjoyment…Enjoyment is characterized by this forward movement: by a sense of novelty, of accomplishment . . . After an enjoyable event we know that we have changed, that our self

In the paper, "Optimal Experience and Optimal Identity: A Multinational Study of the Associations Between Flow and Social Identity" (OEOI) co-authored by Mao Yenhui, they write:

> Activities that are important for identity development are those that provide the impetus toward self-actualization, which involves a developmental process tending toward the actualized version of one's self, specifically, a "full use and exploration of talents, capacities, and potentials" (Maslow, 1970, p. 50)

We can see here too the Aristotelian influence of natural states, particularly with reference to Maslow's quote, which suggests that self-actualisation is aided by someone exercising their natural propensities and the capacities which are characteristic of their . The mention in this quote of a "developmental process" is also reminiscent of Aristotle's suggestion that there are stages or a process that one must pursue to achieve eudaimonia. And if we need further evidence that a great deal of influence has been derived from Aristotelian philosophy, for flow theory as well as other psychological theories, consider this quote from "OEOI":

> has grown: in some respect, we have become more complex as a result of it." (46)

I think he makes this distinction so as to offer clarity on the point that "flow" requires activity or action and is not a passive or hedonistic state of receiving, which is what he seems to take 'pleasure' to mean. If we accept that pleasure is not a passive state but is essentially what Csikszentmihalyi refers to as enjoyment, then perhaps it is not necessary (for the sake of clarity here) to make a distinction between the two. So I when I use the term pleasure in reference to Csikszentmihalyi's work, let us imagine that I mean what he does when he uses the term "enjoyment".

> According to Aristotle (1925) eudaimonia requires activity, so that it is not sufficient for a person to possess an unpotentiated ability or disposition. Aristotle's philosophy on eudaimonia has provided philosophically grounding influence upon psychological researchers across the study of different constructs regarding an individual's growth and fulfilment, for instance, Personal Expressiveness and Intrinsic Motivation (Waterman, 1993b; Ashforth, 1997); Self-determination (Deci and Ryan, 1985; Ryan and Deci, 2000, 2001); as well as Parenting (Huta, 2011)

Having established that there are strong and credible links between Aristotle's theories and flow theory, I now move on to exploring what characterises "flow" and how those features offer guidance in terms of the conditions we might seek in order to get the most pleasure in learning. In doing so, I will explain that it is in exercising cognitive control rather than surface methods of learning that we are more likely to find ourselves engaged in "flow", thereby making pleasure in learning more likely if we are exercising cognitive control. The main reason for this is that we will find that central to most of the characteristics of "flow" is that the challenge of the activity be matched to the individual.

In "OEOI" they write that flow is:

> characterized by a merging of action and awareness, an expanded sense of time, a dropping out of self-consciousness, a feeling of being in control of his/her action and of the environment, a total concentration on the task at hand, and intrinsically rewarding action without external reward to maintain the behaviour.

Let us consider each of these characteristics beginning with merging of action and awareness. The merging of action and awareness occurs when one becomes so involved in one's activity that one stops being aware of oneself as "separate" from the actions they are performing. In *FPOE*, Csikszentmihalyi suggests that it is usually in states of strenuous physical exertion or highly disciplined mental activity that one can reach this state (54). While it is entirely possible to be disciplined when engaged in surface methods of learning, for example, memorising the times table as a child took great discipline, one is more likely to become *deeply absorbed* in a mental activity if it involves understanding, and particularly acquiring or exercising the set of skills associated with cognitive control. This is because cognitive control creates much more of a challenge for the learner, requiring that they not only retain the information but develop the ability to apply and manipulate it. It is also the case that acquiring these cognitive control skills, for instance closely following an explanation such that one can then explain it in one's own words, or drawing likely conclusions from available information, requires that one is systematic and disciplined in one's engagement with the source of learning.

An expanded sense of time refers to the sense that time seems to pass at a different rate when one is fully engaged in an activity. Throughout *Flow: The Classic Work On How To Achieve Happiness*, Csikszentmihalyi uses the colloquial phrases "do not know where the time went" and "time seems to stand still" to describe this experience. Psychological scientists Philip Gable and Bryan Poole suggest that time seems to move faster because activities that get us excited narrow our memory and attention processes, helping us to shut out irrelevant thoughts and feelings (880). This seems to align with common experiences of engagement in activities we find pleasurable, or that we find challenging, but I think it is also possible that one can be absorbed in an activity, and pleasurably so, without experiencing time as passing more quickly. In writing my PhD thesis, I am often so drawn into my research that I

do not check the clock or remember when it is lunch time, but I do not always feel that time is passing more quickly. Perhaps the reason is simply that I am not always in a "flow" state, but I think given that what one wants to capture with the "flow" state is the sense that one is so absorbed in an activity that one is not aware of anything else, including time, it is also reasonable to suggest that what might be happening, as when I am sometimes writing, is that I am not as aware of time passing by as I might be when I am engaged in an activity that is tedious, boring, unchallenging or too challenging. I think this broader description is better because it fits with a broader range of experiences of time passing during "flow" states without limiting it to speed; at the same time, this broader reading is not doing a disservice to Csikszentmihalyi's original meaning.

The dropping out of self-consciousness is the temporary loss of reflexive self-awareness. Csikszentmihalyi writes: "When in a flow experience, what slips below the threshold of awareness is the concept of self, the information we use to represent to ourselves who we are" (*FPOE* 64). By this I do not think Csikszentmihalyi means that we literally forget who we are or go into an automaton state where our reflexive ability vanishes entirely. I think it is important to be clear about this in a way that Csikszentmihalyi himself sometimes is not, because an awareness of our individual propensities, or natural states as Aristotle might call them, is crucial to us enjoying unimpeded activity and "flow".[76] Without going into a lengthy discussion on

[76] For example, in a short online article also called "Flow: The Psychology of Optimal Experience" for Harper Row Csikszentmihalyi writes, "And being able to forget temporarily who we are seems to be very enjoyable" when I believe, given that he then says, "When not preoccupied with our selves, we actually have a chance to expand the concept of who we are", what he really means is not that we temporarily forget ourselves but that we are simply not

consciousness, I think, given what we have seen from Aristotle and flow theory thus far, pleasure in an activity requires some awareness that our propensities and abilities are being well-matched as the activity goes on. This "awareness", though it may be very slight, is what keeps us engaged and returns us to engagement should an activity be interrupted by something outwith our control. We should not be highly conscious of this "match" and it ideally should not be the focus of our minds at the time of the activity. The idea is that when we are fully absorbed in an activity, when there are no distractions or pulls in other directions, then we tend to be less preoccupied with ourselves and with our thoughts, responses and feelings. The more this happens, the more likely we are to be able to experience "flow" and the pleasure that it offers. The loss of self-awareness in these situations also has the potential to fend off self-consciousness, or the fear that we might sometimes have of being judged by others. We can see how this effect can support a student who feels particularly insecure or vulnerable in the classroom setting and does not participate in classroom activities for fear of being judged. It might also restrict unhealthy "performativeness" that comes with a heightened awareness of who we are and how we want to "come across" to others. Aristotle does not seem to discuss the loss of self-consciousness during unimpeded activity but I believe that any heightened self-awareness that leads to unnecessary and unhelpful interference or disturbance, whether it is in the form of self-consciousness, performativeness and so on, would not be desirable for Aristotle either.

The feeling of being in control of one's actions and the environment is rather an ambiguous one because the quotes we saw earlier, from "OEOI", seem to offer a slightly different sense of control from one in *FPOE*. In the OEOI quote,

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preoccupied with ourselves as much as we usually might be outside the state of "flow".

the sense one gets is that one of the characteristics of "flow" is feeling that one is in control of one's actions and environment. In the *FPOE* passage, this sense of control is discussed more as a paradox. Csikszentmihalyi writes:

> The flow experience is typically described as involving a sense of control--or more precisely, as lacking the sense of worry about losing control that is typical in many situations of normal life. What people enjoy is not the sense of being in control, but the sense of exercising control in difficult situations. (61)

This quote seems to be more in line with the other characteristics of "flow", particularly that during the experience of "flow" there is a loss of self-awareness. Yet at the same time, studies of "flow" in classroom settings discuss in great detail how students' perceptions of being in control affect their ability to enter into "flow states". For example, in a chapter in the book *Handbook of Positive Psychology in Schools (HPPS)*, which is co-authored with David Shernoff, they say: "Students experienced greater enjoyment, motivation, self-esteem, and overall engagement when they perceived themselves to be active, in control, and competent" (134). Perhaps what is meant by control in this discussion can be explained by way of suggesting a degree of balance: that while agency and the feeling that one is in control of one's actions is important for "flow" to occur; equally, an overt desire to control the activity and the environment, such that any subsequent frustration, anxiety or negative impact that follows from either the failure to do so or from the amount of effort expended in trying, is to be avoided. This would make sense given that an important factor in achieving "flow" is ensuring that the level of challenge is well matched to an individual's abilities. In "OEOI", the authors, including Csikszentmihalyi write:

> When performing an activity that provides challenges and requisite skills, and when both challenges and skills are high and

> in balance, an individual is not only enjoying the moment, but is also stretching his/her capabilities with the likelihood of learning new skills and increasing self-esteem and personal complexity.

If a task offers a challenge pitched at the right level, there is a higher likelihood that this reinforces someone's feelings that they are in control of, or able to control what they are doing. Cognitive control clearly offers this sense of control simply by virtue of the fact that it centres around the idea of exercising control over knowledge so that one can think, learn and problem-solve independently. Given that we have already shown that cognitive control can admit of degrees, a state of "flow" for learners can be achieved by pegging activities that hone cognitive control to the level of skill of the learner, thereby creating a suitable level of challenge. At the same time, ideally, the learner's abilities are extended and they feel more capable of exercising cognitive control to a greater degree or with regards to more complicated information. With surface learning, there tends to more reliance on various external sources, and this can affect the learner's sense of agency. There might also be less opportunity for the learner's abilities to be stretched in the way they are when understanding is being tested.

With reference to Aristotle's ideas, the sense of agency here in flow theory aligns with his views that one is most likely to find pleasure in activities that match with one's natural state. On the basis of this, the agent *chooses* to do the action and, if we recall Amelie Rorty's intentionality test, chooses to do so with the right considerations. All of this points quite clearly to that fact that for an activity to be truly unimpeded, an agent must be able to exercise agency.

Total concentration on the task at hand means that the "task requires such concentration that only a very select range of information can be allowed into awareness" (*FPOE* 58). This seems to be the foundational characteristic for some of the other characteristics – it is only when a task requires full

concentration that action and awareness can merge, our experience or awareness of time passing is altered, we become less reflexively self-aware. Again an appropriate level of challenge can ensure maximum concentration and facilitate the maintenance of that level of concentration, so it is not lost because of boredom, repetitiveness or in the other extreme, because the task seems so difficult that engaging in it feels pointless. In "OEOI" the authors write:

> When personal skills exceed the situation's challenge, boredom is the consequence (based on the Quadrant Model of the flow state); if challenges overpass an individual's skills, anxiety evolves. If both challenges and skills are relatively low, apathy will be experienced. (Csikszentmihalyi and LeFevre, 1989)

The final characteristic mentioned is that the activity is experienced as intrinsically rewarding. In an earlier text, Csikszentmihalyi writes:

> The key element of an optimal experience is that it is an end in itself. It is an autotelic experience. The term "autotelic" derives from two Greek words, "auto" meaning self, and "telos" meaning goal. It refers to a self-contained activity, one that is done not with the expectation of some future benefit, but simply because the doing itself is the reward. (*FPOE* 67)

The reference to "flow" activities as "self-contained" activities that are worthwhile for their own is directly influenced by Aristotle's ideas about contemplation being self-sufficient. Aristotle also argues for why pleasure should not become reason for contemplation, but something that one derives "by the way". This is similar to cognitive control too, because as I have already argued in Chapter 4, cognitive control is also intrinsically valuable – it is worth having for its own sake and worth engaging in for its own sake.

Thus far I have shown how each of the characteristics of "flow" relate to Aristotle's theory of unimpeded activity and how this in turn relates to pleasure and cognitive control. I have shown that activities that involve cognitive control are more likely to yield states of "flow" because they offer challenges that are more likely to draw one in, to demand the concentration and focus necessary to absorb one deeply into the activity. The descriptions of "flow" here offer us some guiding points, additional to those offered by Aristotle, on what we should be taking into consideration if we want students to partake in the pleasures that learning has to offer. There has been much research into specific activities and tools that teachers can use in the classroom to encourage "flow", and it is no surprise that most of them are activities that encourage the use and development of cognitive control or abilities very similar to it. The two studies mentioned in this quote by Shernoff and Csikszentmihalyi found that:

> Concentration, attentiveness, and student engagement were significantly higher when instruction was perceived as challenging and relevant (Shernoff et al., 2003). This finding suggests that students are more likely to become engaged when academic work intellectually involves them in a process of meaningful inquiry extending beyond the classroom. (Newmann, Wehlage, & Lamborn,1992) (*HPPS* 134)

The phrase "meaningful inquiry" is contrasted with passive, surface learning, which focuses predominantly on tests, exams, and covering a set syllabus, as opposed to focusing on the development of skills that will help the learner truly understand the material so that they can then apply it meaningfully outside the classroom context. This seems very much like the range of abilities associated with having cognitive control.

With reference to contextual factors, Shernoff and Csikszentmihalyi report that:

> Student engagement appeared to be significantly influenced by the activity in which students were involved. Students were more engaged in group and individual work than while listening to a lecture or watching TV or a video. While taking a test or quiz, students reported very high levels of concentration, but low enjoyment. Overall, students were more engaged during instructional methods that present opportunities for action and to demonstrate their skills, but such activities were rare while the disengaging activities were more common. (*HPPS* 136)

Here, we see the reference to activities that offer opportunities for action, and opportunities to show understanding of what one has learned through application, which is again characteristic of cognitive control.

In this chapter, I set out to show that if contemplation is pleasurable then having cognitive control is pleasurable. In so far as we have already presented an argument for why learning should predominantly entail cognitive control, we show that learning is pleasurable. And finding learning pleasurable is something that contributes to us becoming lovers of learning. Additionally, the more pleasurable experiences of learning one has, the more likely one is to know how to find the pleasures of learning – what conditions contribute to pleasure, how to create and sustain these conditions, and what must be avoided if these pleasures are to continue. If we want to make learning "lovable", then there is good advice here from Aristotle and flow theorists on how we might achieve this.

In the following two chapters I consider two traits of those who love learning: they are vulnerable in learning, and they are wholehearted about learning. And in relation to these characteristics they find learning pleasurable in spite

of facing challenges in learning. It is my belief that the more that students are helped to acquire these traits, together with the right sort of learning, i.e.: cognitive control and with successful attempts at making learning pleasurable, the more likely students are to genuinely “love” learning.

Chapter 6: Vulnerability

I began by exploring some of the empirical research on deep learning and traced the roots of many of those ideas back to the philosophies of Plato, Rousseau and Dewey. I argued that to enable love for learning, one must engage in the right sort of learning, that is, learning that emphasises cognitive control. I then showed that making learning pleasurable will also help students develop and sustain their love for learning. I argued that creating opportunities for "flow in line with Aristotle's views on unimpeded activity and Csikszentmihalyi's work on flow theory will increase the opportunities to experience pleasure in learning, and that learning experiences that focus on cognitive control are more likely to offer opportunities to experience "flow".[77] In the next two chapters I explore two other characteristics of lovers of learning – vulnerability in learning and wholeheartedness in learning.[78] Those

[77] It could be possible to "love" acquiring knowledge in terms of accumulating facts, figures and information too, but I think this is less likely. As I described earlier, data shows that students do not even enjoy lessons that focus on the straight-up acquisition of information. In any case, this sort of learning is not what I am interested in exploring here.

[78] What I seek to present here is not a justification for *why* we should value learning but rather, what valuing learning looks like; what it entails. As we are taking learning here to be deep learning, and as deep learning is fundamentally defined by the ability to understand or to exercise cognitive control, the justifications for *why* we should value learning have already been provided in Chapters 3 and 4 of the thesis. Alongside the explication of these characteristics, I also consider how possessing each of them is valuable for learning.

who possess these traits tend to "stick" with learning in spite of challenges and setbacks, develop confidence and independence and find learning pleasurable. I hold that these traits, if they are carefully and diligently encouraged and developed, with a robust focus on deep learning and in particular, developing cognitive control, are sufficient for facilitating the love for learning.[79]

In this chapter, my aim is to contribute a new angle to the existing discussion of vulnerability in philosophy. I argue that lovers of learning are not afraid to exhibit appropriate amounts of the relevant types of vulnerability in the process of learning, and that they acknowledge that this vulnerability has a positive effect on their learning. Instead of shutting themselves off from learning because of fear, they engage with openness to the world around them. I also suggest that when vulnerability is encouraged and responded to in appropriate ways, this can inspire and enable love for learning.[80]

6.1 Describing Vulnerability

Vulnerability is a broad and complex concept. I also think that it is one that is significantly entwined with our temporal nature as human beings. In spite of this, the concept has not had as much systematic analysis as one might expect. The analysis it *has* had is almost entirely focused on a notion of vulnerability that is in line with the wider aims of assessing what moral obligations we have to the vulnerable and how we might best realise them,

[79] However, I am open to the possibility that there may be more features than the ones I explore here.

[80] I elaborate on what I mean by "relevant" and "appropriate" later in this chapter.

what are our duties of justice to the vulnerable and who assumes the main responsibilities for the vulnerable. As such, notions of vulnerability in most of the existing literature concentrate on aspects of vulnerability that revolve around the power dynamics of our interactions with others, and in particular interactions where the dynamics of power favour one person or group over the other. Additionally, the specific analysis of vulnerability with reference to learning has had even less thorough attention, so this is the main contribution I hope to make to the existing literature on vulnerability.[81]

To date, vulnerability is often associated with weakness, fear and injury. And to be fair, this is not a ridiculous misconception because ordinarily and broadly, vulnerability is defined as the disposition to be wounded. It seems reasonable to believe that the potential to be wounded is something to be avoided and that injury might seem like an indication of some sort of inability to fend for oneself. In that regard vulnerability is seen as failure, a flaw or weakness. However, this disposition to be wounded is a human condition, meaning that all of us are vulnerable, whether we like it or not. Mackenzie, Rogers and Dodds write:

> Human life is conditioned by vulnerability. By virtue of our embodiment, human beings have bodily and material needs; are exposed to physical illness, injury, disability, and death; and

[81] Another aspect of vulnerability that has not had much attention, and which I am also interested in exploring with reference to learning, centres around the idea that one can protect oneself to different degrees from feeling vulnerable or being wounded; here the immediate focus is not on abuse of power by one individual over another, or on our duties of care and protection towards the vulnerable, but rather on the decisions one makes about the extent to which one protects oneself from wounding and how those decisions might affect one's growth and possibilities. I explore this idea in greater detail later on.

> depend on the care of others for extended periods during our lives. As social and affective beings we are emotionally and psychologically vulnerable to others in myriad ways: to loss and grief; to neglect, abuse, and lack of care; to rejection, ostracism, and humiliation. (1)

We are physically vulnerable simply by virtue of being temporal creatures; we can be injured, diseased, killed and we die. As Mackenzie et.al. explain, we are, by virtue of being social and affective, capable of feeling emotional and psychological hurt and pain as well, vulnerability is not reserved for describing just our physical potential for injury, but also our emotional and psychological disposition for it. However, since vulnerability is a disposition, this suggests ability or potential, and so to be vulnerable, is to possess the ability or the potential to be hurt. Therefore, this disposition to be wounded does not have to be actualised, but it is a constant possibility. As such, most of us have been socialised into believing that it is best to avoid this possibility and to protect ourselves, often at all costs, from wounding. When we are wounded, the tendency is to see it as only as a failure or disappointment of some kind, something that needs to rectified and not repeated. While I hold that there is good reason to, and in fact, we should protect ourselves from wounding in some instances, in others, such as in learning, some of our vulnerabilities, if appropriately welcomed and actualised, can be of great benefit to us. I come back to how exactly this is so later in this chapter but for now, I want to explore some more of the relevant existing philosophical research into the concept of vulnerability so that I can make a case for why actualising this disposition wisely could be of benefit to us when we are engaged in learning.

There has been some debate in the philosophical literature about the scope of the concept of vulnerability. Should vulnerability be applied to specific persons or groups who are more than ordinarily vulnerable or should it be applied universally to all human beings? Butler and Fineman are amongst

those who have written on this. For the purposes of this thesis, I take vulnerability to be universal; in the specific language of this debate, I take vulnerability to be an ontological condition of our humanity. As Fineman points out, vulnerability is a "universal, inevitable, enduring aspect of the human condition" (15). Drawing from Mackenzie et al.'s "taxonomy of vulnerability' we might then call the universal vulnerability that is intrinsic to all humans "inherent vulnerability". They write:

> These vulnerabilities arise from our corporeality, our neediness, our dependence on others, and our affective and social natures… Some of these vulnerabilities are constant…Others vary depending on a range of factors, such as age, gender, health status, and disability…Inherent vulnerability also varies depending on a person's resilience and capacity to cope. (7)

Our "neediness, dependence on others, and our affective and social natures" suggest that as human beings we are vulnerable to the actions of others. As Butler writes in *Frames of War*, "The body is constitutively social and interdependent," (31). Mackenzie et al suggest that vulnerability and dependency are interweaved, which means we all also depend on the care and support of others at various points during our lives depending on the extent of our vulnerability (4).[82] I think it is also the case that while everyone is

[82] This is an important point for this thesis and we will return to review it in greater depth later in this chapter. This is because in learning, there are times when one is dependent on a teacher, mentor or figure (or text) of authority to teach and guide one. I will argue that to be comfortable, to an appropriate degree, with some of one's relevant vulnerabilities during the process of learning has the potential to enhance the process, enrich the outcomes and facilitate and sustain 'love' for learning. However, the intertwining of vulnerability and dependence can also lead to an abuse of power that is

inherently vulnerable, we may be inherently vulnerable to differing degrees. Some people are simply less affected than other people are.

Butler also adds, that our human vulnerability to the actions of others, something she calls "precariousness" is not the same across the board for everyone; some people and groups are more precarious than others, for example, those whose are exposed to poverty, social and political violence (3). According to the Mackenzie et. al. "taxonomy of vulnerability" we might then call this sort of vulnerability "situational vulnerability". This area is where most of philosophical research has been done so far. They write:

> This may be caused or exacerbated by the personal, social, political, economic, or environmental situations of individuals or social groups. Situational vulnerability may be short term, intermittent, or enduring. (7)

Mackenzie et.al. do point out that inherent and situational vulnerability are not categorically distinct, because inherent sources of vulnerability can be tied to features of the environment into which people are born and brought up and situational causes of vulnerability will be impacted by a person's resilience, which itself is arguably an outcome of genetic and environmental factors (8). Like Mackenzie et.al., I agree that there are significant links between both, but that the differences can be useful for differentiating, for example, the sources of vulnerability in specific cases. That said, my interest in this thesis is primarily the notion of inherent vulnerability. I began this chapter suggesting that in learning, one needs to be vulnerable to an appropriate degree. All of us are vulnerable to others in the universal sense, so we are all susceptible to

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dangerous and detrimental not just to learning but to the vulnerable person involved. This is something I also explore in the section on Rousseau who had concerns about the role and power of authority figures in learning.

emotional and psychological wounding and the negative social and emotional consequences of being vulnerable; for example, being humiliated, rejected and ostracized.[83]

6.2 Being "Open" to the World

What does engaging vulnerably with the world look like? Because we are inherently vulnerable by virtue of being human beings, it would not be accurate to say that we should "allow" ourselves to be vulnerable at appropriate times as "allowing" suggests a choice in the matter. Instead what I am trying to convey is that instead of looking to protect ourselves from wounding at all times, it might be useful to think carefully about when it might be beneficial to "acquiesce" to an appropriate amount of wounding. For example, to protect ourselves from emotional and psychological wounding, we might "close" ourselves off to emotional encounters. One might have heard the phrases to "put up a wall" or "put up one's defenses" as a means of

[83] Those whose personal circumstances have also made them situationally vulnerable in some way or the other might be more prone to the detrimental effects of being rejected, humiliated and so on. This suggests that not everyone should be encouraged to be vulnerably open to the world to the same extent. I say more about this later on. Additionally, both inherent and situational vulnerability refer to physical, emotional and psychological vulnerability. With learning, my focus will be on emotional and psychological vulnerability as this is more relevant to the cognitive-based approach I am taking. Physical vulnerability such as death and risk of physical injury would be, for example, of particular relevance to learning a sport, which is still learning, but as my focus in this thesis is on cognitive-based learning, I do not delve into physical vulnerability.

protecting oneself from negative feelings of rejection, humiliation and so on.[84] I use "engaging" to indicate an attitude that is converse to this; engaging with the world describes an "openness" towards situations and experiences; a willingness to "set forth" even if situations that might make us vulnerable are looming ahead. To be "open" is a helpful metaphor because it symbolises accessibility – in this case, that our emotions are accessible and subject to forms of engagement that could potentially wound us. Being "open" also implies that protective barriers or defences are lowered or removed and we are at least somewhat at the mercy of whatever it is that we are subject to. The messages we receive as human beings, to protect ourselves by "keeping out" things that could potentially harm us, to build big, strong walls to keep ourselves safe and to stay in control undoubtedly leads us to associate vulnerability with weakness, violence and fear. The potential to be wounded has therefore become something to be necessarily feared, feel ashamed of, and viewed as a failure that needs to be overcome. I think there are two types of examples of "opening up": One is consciously and willingly opening up to hurt that one knows one will most likely encounter. For example, under special circumstances, one might think it is reasonable to "open up" to the hurt caused by say a good friend who is ill or has been through an especially difficult spell who is then being hurtful. In less exotic cases, and often in most cases, there's less reason to do this; to open up in this sort of willing way knowing that hurt is very likely to occur. The second way of opening up is to open up to the *possibility* of being hurt in the hope that you will not be hurt - expecting not to be harmed but trusting those around you to treat you with respect and dignity. It is this second type of "openness" that I think relates more to learning. In most cases, the student opens themselves to the possible

[84] There is a host of research into how it is indeed possible to "lower one's defenses" in psychology. Schema Therapy for example discusses "detached protector mode" and "avoidant protector mode".

risk of encountering people such as teachers or other classmates who humiliate them but that does not usually happen. However, when it does, sometimes the benefits may be better than the detriments and it might be worth having been "open". As such I think there are more, or less valuable ways of dealing with our vulnerabilities, and these depend on various circumstances, some of which may have to do with the whether or not we are more, or less inherently vulnerable to begin with, what sort of situational vulnerabilities we are exposed to, whether the hurt has any benefits at all and what tools we have to turn the hurtful experience into a positive/beneficial one. My view is that while it is appropriate to fear being wounded and to raise our defences when we feel we cannot cope with the potential wounding, or when we feel that we may be exploited, appropriate, vulnerable engagement with the world can be positive and need not necessarily lead to weakness. For instance, being aware and appropriately responsive to that which can hurt others is often viewed as virtuous and when we respond appropriately to others' vulnerability it is usually beneficial to building and maintaining the wellbeing of relationships and communities. But how about being aware and responding to our own vulnerabilities? When we are aware of what can cause us hurt, and when we can respond to these appropriately, this too can contribute to building and strengthening ourselves, our communities and the relationships we value, and it too, it seems fair to say, is virtuous.

Here's an example that references physical vulnerability but which I think might be helpful in elucidating my point. Take for instance the fact that we are mortal, which makes us vulnerable to physical wounding and ultimately death. The medical aid worker making the choice to treat victims of Ebola is very much vulnerably open to the patients she is treating, as is the passer-by who decides to jump into the canal to try and save a drowning man. The vulnerability to death and injury in these cases is a crucial factor in the decisions taken (or not taken) in these examples. With the medical aid worker, the vulnerability to disease, suffering and death is acknowledged and

accepted because certain beliefs and values about responsibility, duty, community, empathy and so on are overriding. One's responses to vulnerability in these sorts of examples could be an indication of personal virtue, an example to others of virtuous behaviour and undoubtedly contributes to supporting and fostering community. One may also argue that accepting one's own vulnerability and engaging vulnerably with the world could aid in heightening the awareness of other's suffering and vulnerability. Research has found that we are more likely to feel sympathy, pity and kindness towards others because we have experienced or acknowledged what suffering feels like for ourselves, even if the circumstances are not identical. That we have been exposed to wounds – physical and emotional – compels us to at least an awareness of the vulnerability of others. This is one way in which I think engaging with our vulnerabilities can be beneficial. It is not the only way though. However, in order to present some of the other ways in which vulnerability is beneficial, we need to approach the notion of vulnerability from a slightly different angle. As I pointed out earlier, this is an angle that has not been developed in the existing philosophical literature, which tends to focus on vulnerability from the perspective of power, morality and justice. This notion has however been explored by psychologists and social workers, most prominently by Brené Brown whose Ted Talks and book *The Power of Vulnerability* achieved great popular success. The notion of vulnerability that Brown presents is that vulnerability is something people tend to over-protect by taking on cynical beliefs, numbing themselves against happiness, avoiding "facing" grief and shutting off their willingness to love. Inspired by interviews taken as part of her academic research into shame, Brown's fundamental point seems to be that people essentially erect barriers that prevent them from experiencing hurt and disappointment and this stunts their potential for growth and happiness.[85] This idea of erecting barriers in order to protect

[85] Even though Brown is an academic and some of her other work, namely her research on shame, has been published in academic journals, this book is

oneself from potential wounding to the detriment of one's personal development is in particular the idea that I would like to explore with reference to learning alongside the approach on vulnerability that philosophers such as Mackenzie, Rogers and Dodds have taken.

If we were to accept that being willing to engage vulnerably with the world is also what allows one to build close and intimate relationships and to grow as a person, then we might be more willing to accept that vulnerability is not always and necessarily unfavourable. By sometimes resisting the urge to don "armoury" to protect ourselves, we can make deeper and more genuine connections with others, build trust when those we are willing to "be vulnerable with" accept and support us, develop empathy because, as I mentioned before, we develop a better understanding of people's choices, behaviours and emotional responses and perhaps even take responsibility for our actions and choices because we avoid adopting tactics that protect us from coming to terms with truths that might be injurious to us. As a result, we could change behaviours that are damaging to our personal growth and happiness.

I am not suggesting that one should seek to engage vulnerably with the world simply for the sake of being open to harm, as if making oneself open to harm was a good in and of itself. It is also the case that engaging vulnerably with the world need not always be a good thing. Lowering one's defences is not always the best way to deal with situations that evoke our disposition to vulnerability. Sometimes, it might be better for our wellbeing if we erect our defences and

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aimed at a general audience and as such it does not contain any of the conventions of academic research. As such, I refer to Brown's ideas here not so much to use her work as academic justification but to indicate that there has already been some precedent (and success) in taking this alternative approach to exploring vulnerability.

protect ourselves. It is difficult to say, systematically, when it is best to build up or lower our defences. This would depend on the extent of our inherent vulnerability, our state of mind at the time, the circumstance we are in, what we hope to gain or achieve and what the risks are of exposing our vulnerable selves. Recalling what I said earlier about situational vulnerability, people can be vulnerable in different ways, to different things and to different degrees. For instance, if someone is already extremely vulnerable, it may not be a good idea to suggest that they expose themselves to more, at least until such time that they feel well prepared. This is where knowledge, understanding and self-awareness can have an important role to play.[86] The more knowledge and understanding one has of one's circumstances, the options available, risks and outcomes, the more likely one is able to make the right decisions about how to respond to one's vulnerability. One can be careful and tentative in practising one's responses to vulnerability as well. It does not have to be all or nothing. We may be able to lower some of our defences in situations where we feel safer or where we understand that what is to gain is worth some discomfort for us, and then we can assess how the experience affected us and learn further from this by the fact that these experiences can give us a useful indication of when it would be helpful to lower our defences and when not, how much of our defences to lower and what sort of support systems we may need once we have taken the steps to respond to our vulnerabilities in this way. Offering a formula of any kind would be difficult given how many subjective and personal factors would be at play but here is a guide of sorts as to how "open" one should be. For example: It would be advisable to avoid situations where being vulnerable might lead to a loss of self-esteem and confidence. Being vulnerably open to the world will sometimes lead to disappointments and a loss of confidence, the point here is that should not be

[86] This sort of reflexive activity is not expected of young children, so this is perhaps a good point at which to be reminded that my account of love for learning is not applicable to them.

so severe that one becomes depressed, has a breakdown or is unable to carry on with one's usual tasks. It would also be pertinent to avoid entering into situations if one thinks that one's vulnerabilities might result in one being put-off learning from then on. One should also avoid being open in situations where they feel there is a risk of being manipulated or exploited. Of course no one can be certain of making the right call in every situation, and there might be one or more instances where being open results in these consequences. The solution there is to take time to recover, reflect on those situations and draw useful observations and insights for future situations.[87]

6.3 Vulnerability in the Learning Context

So far, my aim has been to offer a few exploratory reasons for why it is worth investigating how vulnerability, something normally associated with weakness, can be viewed not just as valuable, but also as associative with strength and virtue. It can be very enriching and perhaps even empowering to practice making decisions about the proper responses to vulnerability, that is, being open to or dealing with one's vulnerabilities in a non-defensive way, with particular reference to learning. Temporality, awareness of our own and others' vulnerabilities and virtue also feature when we think about vulnerability and learning, not least because our lives are finite and we cannot know everything there is to know before "our time is up". Learning involves openness and vulnerability too involves openness. Choosing how much and what we learn requires us being "open" to knowledge, new perspectives and

[87] I think it is also possible that certain vulnerabilities are not static. They may disappear or change, increase or decrease over time. Additionally, we see a link here between the value of thinking of our experiences within context and across the span of our past, present and future, in the way that Dewey recommends. This broad perspective gives us better awareness of what we can "manage" in terms of being "open".

possibilities and lowering our defences so that we are able to more fully engage with our learning and make connections between what we learn and our own lives. To some extent this requires us to be "open", aware and reflective – not just about our own vulnerable situations but those of others; this awareness helps us understand or make sense of different beliefs and values and where they may be stemming from and how to better manage them or cope with them. In learning, one "opens" oneself to the world, exposes oneself to the possibility that one was mistaken in one's views about some subject matter or beliefs, that one was wrong about certain facts or information, that one perhaps does not know as much as one believes one does, that one needs to learn from someone wiser, more skilled, more learned or knowledgeable, that one is perhaps not as well-disposed to a particular skill that one thought they had special talents for; essentially, being vulnerable to learning requires that one be "open" and willing to accept that their beliefs, attitudes, perspectives and even self-knowledge might be challenged. In this sense, learning makes one immediately "known" and vulnerable. Once one is "open" and "known" in this way, one is also more at risk of being manipulated. For example, when a student "opens" herself up to her teacher, there is a chance the teacher might abuse her power. I say more on this in the following section on "wounding".

Vulnerability also comes into play when we take risks with what we venture to learn – do we stick with facts and perspectives we are comfortable with or are we willing to genuinely and respectfully seek out and consider very different views that might make us uneasy. One is likely to feel disappointed if one were to discover, by being vulnerable in their learning and acquiring new knowledge, that one's life's work was misguided and wasted. These kinds of realisations can even be traumatic for some. So we can see that considerations of when to be vulnerable and when not to, require care and deliberation.

What we choose to do with what we learn or how we choose to apply what we learn can also put us in a vulnerable position. For example, do we attempt to share what we have learned with others who may shun us for having those perspectives? Here, Plato's cave allegory comes to mind. Do we try to apply what we have learned to make changes to our lives or those of our communities even if this requires taxing, consuming work? These decisions can be difficult to make and in the sections that follow, I explore some of the considerations we need to keep in mind.

6.4 Wounding in the Learning Context

I have introduced some of the concerns that arise from vulnerability in learning, it might be useful first to establish what the risk of wounding is when it comes to learning, because wounding is such a fundamental concept when it comes to understanding vulnerability.

There are broadly two ways of being wounded that I would like to consider here. The first one, is being wounded by others. This, I think is a contingent feature of learning from others. Giving authority and power to a teacher or a mentor puts one at risk of being wounded because a teacher or mentor might abuse that power and you might be wounded as a result, although this is not always the case, or even often the case, it remains a possibility. The second way is through the possibility of experiencing something I call "epistemic vulnerability".

Epistemic vulnerability refers to situations in which wounds come about as a result of one being "carried away" from or "resisting" the truth. In these cases, one may hold on to false beliefs and even endorse these beliefs and pass them on to others. So, in an effort to learn, someone might "open" themselves up and begin to acquire false beliefs, or even substitute true beliefs for false ones, causing themselves damage and wounding in this

epistemic sense because they are further away from the truth. I explore the philosophical nature of false beliefs in a bit, referring to the work of philosophers such as Katherine Puddifoot and WK Clifford, but first let me suggest how this "carrying away" or "resisting" could happen. One might make oneself vulnerable to someone, or some material that endorses false beliefs (for example we see this sort of thing in a more extreme sense in how cults operate or with those who buy into spurious conspiracy theories) or perhaps because one is in self-delusion of some kind as a way of protecting oneself from the consequences of having discovered a truth that will cause one significant wounds.

Take the example of a scientist who has been conducting research on whether the earth is flat or round. She has up until this new discovery, held the belief that the earth is flat but discovers eventually that it is round and not flat. She now experiences the negatively disconcerting feelings associated with holding this false belief for so long, and perhaps even hedging other beliefs and speculations on this false belief. Additionally, endorsing this new belief would very likely, at the least, involve ridicule and ostracism by members of the scientific, religious as well as wider community. Some of the options now available to her are: she could grit her teeth, be willing to face the consequences and share these findings even if it means being heavily wounded, because she holds that the truth is valuable over and above any injuries she may suffer for sharing it; she could decide to keep quiet about it to protect herself, and let us imagine that she is already especially vulnerable and emotionally fragile because of past experiences so this is an option she is seriously considering. She could even begin to actively now search for reasons why her new discovery may not be altogether accurate in a bid to convince herself or even delude herself that this new discovery is in fact not legitimate,

so that she can hold onto the "old" false belief, because this would make the situation easier to manage going forward.[88]

Examples related to epistemic vulnerability, or straying away from or resisting the truth (like the one above) are interesting for two reasons: (1) if we are vulnerable in learning, and the result is that true beliefs are replaced by false ones, is it actually the case that it is valuable to be vulnerable in learning? (2) up until now, I have said that deciding when to be vulnerable in learning is dependent on one's situation and life experiences, but when the truth is at stake as it is in the example of the scientist above, do we become responsible for "opening up", being vulnerable, even when we know that the injury to us may be significant? Note that once the scientist fully endorses this discovery and her beliefs, she becomes even more vulnerable to a society that could ridicule and ostracize her, or worse. In a situation like this, can it simply be a question of weighing up costs and benefits based on her own circumstances, or do we need to consider more factors, such as the ultimate societal gain from a discovery of this significance, which perhaps outweighs any harm she may experience?

In response to (1), we naturally assume that holding false beliefs is not a valuable thing, especially when it comes to learning, which has the function of leading us to truth. Therefore, we would assume that being vulnerable, if it could lead us to believing falsehoods, is not something to aspire to. However it is true that there may be instances of learning, because we have to be "open" to some extent, that we come across information that is false. Since I

[88] In terms of vulnerability in learning, with the scientist, she has made herself vulnerable by doing such research to begin with, because there was the risk that her beliefs would be challenged and shown to be wrong. There is also the additional risk of vulnerability in deciding whether or not to go forward with sharing her discovery.

explained earlier that learning is not simply a matter of passively absorbing information as presented by others, then if it is passive absorption or unanalysed and unquestioning believing that is occurring, then I would suggest that actual learning is not taking place in these instances. As understanding in the form of cognitive control is a necessary component of learning, I would hold that genuine learning should not result in true beliefs being replaced by false ones because exercising the abilities that constitute cognitive control should usually raise red flags about false information. However, given that there are varying degrees of cognitive control, there may be some cases in which one does not spot the red flags because one is not yet in possession of strong enough cognitive control. I would recommend that the learner make attempts to verify what they have learned, particularly if the source is questionable. In fact, this is usually good practice for everyone, regardless of how good his or her cognitive control is. This is a better option than "closing" ourselves up from learning for fear that we may occasionally end up in an epistemically vulnerable position. Think about it this way: It would be almost impossible to develop a loving relationship with anyone or anything if at the first sign of any negativity or discomfort, one "jumps ship"; the same could apply to how we relate to learning.

The question of whether false beliefs are unacceptable has had some attention from philosophers such as Katherine Puddifoot and Duncan Pritchard and even earlier on in the 1800s from the lesser known philosopher WK Clifford. It is not possible to explore this debate in great detail here, so I will summarise and respond to two of the arguments.

We saw that one of the options available to the scientist in the example is to convince herself to resist the true beliefs by trying to find excuses that could support the de-legitimising of her discovery so as to mitigate the injurious consequences of the truth she has discovered. Is this acceptable? Clifford gives the following example to suggest that it is not:

> A shipowner was about to send to sea an emigrant-ship. He knew that she was old, and not overwell built at the first; that she had seen many seas and climes, and often had needed repairs. Doubts had been suggested to him that possibly she was not seaworthy. These doubts preyed upon his mind, and made him unhappy; he thought that perhaps he ought to have her thoroughly overhauled and refitted, even though this should put him to great expense. Before the ship sailed, however, he succeeded in overcoming these melancholy reflections. He said to himself that she had gone safely through so many voyages and weathered so many storms that it was idle to suppose she would not come safely home from this trip also. He would put his trust in Providence, which could hardly fail to protect all these unhappy families that were leaving their fatherland to seek for better times elsewhere. He would dismiss from his mind all ungenerous suspicions about the honesty of builders and contractors. In such ways he acquired a sincere and comfortable conviction that his vessel was thoroughly safe and seaworthy; he watched her departure with a light heart, and benevolent wishes for the success of the exiles in their strange new home that was to be; and he got his insurance-money when she went down in mid-ocean and told no tales. (544)

Clifford holds that the shipowner is guilty of these deaths because:

> He had acquired his belief not by honestly earning it in patient investigation, but by stifling his doubts. And although in the end he may have felt so sure about it that he could not think otherwise, yet in as much as he had knowingly and willingly worked himself into that frame of mind, he must be held

> responsible for it…The question of right or wrong has to do with the origin of his belief, not the matter of it; not what it was, but how he got it; not whether it turned out to be true or false, but whether he had a right to believe on such evidence as was before him. (545)

According to Clifford, the rationale for this is that our beliefs affect our actions. It would not be controversial to say that what we believe about the world influences our behaviour. For example, if I believe that my roof needs fixing, I call a roofer, if I believe that speaking ill of others is wrong, I do not gossip with malice. If I believe that climate change is fake, I do not heed any advice about protecting the environment. Having false beliefs can lead us into actions that are impractical, unhelpful and even dangerous to others and ourselves. So if we are purposely resisting true beliefs and replacing them with false ones that are more in line with the consequences we prefer or would hope to be the case then according to Clifford, this is objectionable.

Quite apart from concerns we might have about the self-delusional excuse making employed by the shipowner and the scientist to avoid facing the wounds of endorsing their true beliefs, if our scientist retains the false belief that the earth is flat despite discovering it is not (by stifling her findings and her thoughts, for example, or working herself, like the shipowner into a frame of mind where retaining the false belief was possible), her actions would likely be to continue with her research, publications, engagements with others and her projects as if the earth was flat and she had not discovered otherwise. She may keep quiet, instead of giving support if another scientist made the same discovery and unlike her, spoke up. The outcome of this is that it would actively be impeding progress in science and the benefits that would come from this discovery. She would also be encouraging the continued false belief of others by keeping quiet or continuing to actively endorse a belief she now has little reason to maintain, and (indirectly) promoting the progress of useless

and perhaps even detrimental projects and activities that rely on the belief that the earth is flat. Therefore, by maintaining a belief that she now has no reason to, the scientist acts in accordance with this belief, thereby very probably setting off a chain of negative consequences not just for herself, but for others and society in general.

There is of course the counter-argument that not all beliefs will or must result in actions, so in cases where they do not, holding or maintaining false beliefs may not be so much of a problem, and in fact, may help one avoid these vulnerability-related wounds. Research by Bortolotti and Antrobus suggests that it may be advantageous for some persons suffering from some severe forms of depression to maintain false beliefs, or 'distorted interpretations of experiences', that better fit with their existing schema than to eliminate these delusions, because the cost in knowledge of this distorted or false belief is outweighed by the benefit of reduced anxiety for that person (190-210). So, perhaps what is at stake in terms of the knowledge lost should factor into the decision as to whether or how much to make oneself vulnerable. And in any case, this research seems to indicate that there is epistemic innocence in holding false beliefs if one is severely depressed (which fortunately, is not the state that most of us are in).[89]

[89] I think in very special cases, where someone is very depressed or holds fragmenting/fragmented beliefs, false beliefs may be acceptable. I would suggest that the reason not to think of these types of wounds in this case is that they do not actually count as the same sort of epistemological wounding I am interested in here. In these special cases, we would want to let these people have these false beliefs, perhaps even reinforce them. If we wanted to insist that these too are instances of epistemic wounding, in the grander scheme of things for these people suffering from serious mental health issues, the epistemic wounding would be minor in comparison to other sorts of wounds they may suffer from knowing the truth.

Relatedly, another argument put forward by Clifford suggests that false beliefs compromise the work of our forefathers by infecting the existing collective body of knowledge. He writes:

> That duty (to mankind) is to guard ourselves from such beliefs as from pestilence, which may shortly master our own body and then spread to the rest of the town. What would be thought of one who, for the sake of a sweet fruit, should deliberately run the risk of bringing a plague upon his family and his neighbours? (547)

And additionally, holding and endorsing false beliefs without questioning, critically thinking and doing some of this important epistemic work ourselves, we are not doing our part to 'build up knowledge' in the spirit in which it has been shared with us by those who came before us. He writes:

> We shall find reason to answer that it is not only possible and right, but our bounden duty; that the main purpose of the tradition itself is to supply us with the means of asking questions, of testing and inquiring into things; that if we misuse it, and take it as a collection of cut-and-dried statements to be accepted without further inquiry, we are not only injuring ourselves here, but, by refusing to do our part towards the building up of the fabric which shall be inherited by our children, we are tending to cut off ourselves and our race from the human line. (547)

These arguments go to the heart of the scientist example because in maintaining her false belief Clifford would argue that she is both polluting collective reserves of knowledge as well as failing in her duties as a human

being to contribute, through critical thinking and questioning, to the progression of the human race as a whole. While these arguments may suit the scientist example because of the significant, worldview-altering nature of the knowledge she possesses and the damage that her preservation of the false belief will bring about, one could say that most of us who do not hold such important knowledge could get away with avoiding a true belief, avoiding the questioning of suspect beliefs, or providing ourselves with convenient excuses and reasoning to maintain a false belief because the true belief is just too injurious. So perhaps Clifford is being too demanding or dramatic. Or is he?

In response, it would seem to me that in the times we now live in, where we turn to the internet and to Wikipedia and other similar platforms for information, that we rely in an unprecedented way on the authority and integrity of anonymous people to provide us with information. We rely on these people to convey truths that have been critically assessed and supported with sound evidence and it is not always the case that our trust is repaid with information that is not biased and that is the product of rigorous research. This means that we are becoming increasingly epistemically vulnerable because of how knowledge is shared and because we cannot always rely on the authority of those who are sharing this knowledge. Additionally, we live in an age where information about us, and our beliefs, is constantly being mined by companies collecting data online who then align news feeds, advertisements and so on based on information gathered about our preferences and ultimately, beliefs. In this way, news feeds and products that reinforce those beliefs can shore up false beliefs, and we are "carried away" further and further away from the truth. All of us who use the Internet are therefore at risk of the wounds of epistemic vulnerability more than ever before. And Clifford's argument that false beliefs contaminate the reserve of shared knowledge to the detriment of all of society then seem less overly-dramatic and more plausible. So on the basis of what we have seen so far,

what does this mean for encouraging vulnerability in learning? And what does it mean for the scientist?

As I said earlier, the risk of epistemic vulnerability should not be met with us putting up barriers to learning. With the practice and acquisition of cognitive control, the risk of acquiring false beliefs and being "taken away" from the truth is less likely. This is especially why we need to reform learning in schools and draw attention to the attainment and the constant practicing of cognitive control. In terms of the scientist, as I said earlier, the significance of her discovery suggests she does have a much stronger duty than others to stick with the truth and endorse those beliefs, perhaps even more so because a profession like hers is especially tied to the quest for discovering truth, so to be both true to herself and to carry out her responsibility to society it would seem she should take the risk of further wounding. However, this does not mean she has to plunge into it. She could take steps to minimise the wounds or make preparations to better cope with them; for example, she could approach trusted mentors or colleagues to share her findings and garner support before sharing it with the wider community. Where we know wounds are likely in this process of learning, the key to reaping the fruits of this risk may be to find ways to reduce damage and better prepare ourselves for managing the injuries, as opposed to replacing true beliefs with false ones.

Problematic actions that result from false beliefs are not the only complications one faces with holding or maintaining false beliefs. False beliefs about one thing can lead to or fuel false beliefs about other things, resulting in for example, unfair stereotyping and implicit bias. In her paper "Dissolving The Epistemic/Ethical Dilemma Over Implicit Bias", Katherine Puddifoot discusses inaccurate beliefs about social facts, specifically, the spontaneous stereotyping found in implicit bias. If we take it from an ethical perspective, the general agreement is that we should begin from a position of treating everyone equally and maintain that belief, until shown otherwise, that everyone is

equally likely to possess certain characteristics and qualities regardless of gender, race and so on. However, if our focus is on the more epistemic issues of knowledge and understanding, then it would be of greater benefit to us if our beliefs reflect actual social inequalities and biases and the fact that statistically, some social groups are more likely to possess certain traits rather than holding the egalitarian belief even if it is the more ethical one. While Puddifoot claims that holding these beliefs based on stereotypes offers us the greater likelihood of making true assumptions concerning random individuals, there are a multitude of drawbacks which include what she refers to as "distortion of memory". Research findings indicate that if a person (A) is conscious of the social traits of an individual (B) and those traits match a stereotype, then not only does the specific information retained about that individual (B) increase, but the person (A) also becomes more biased towards believing the stereotype. Additionally, the increase in quantity of information remembered does not outweigh the increase in bias, so it would be better to remember less and be less biased. Another epistemic disadvantage of stereotyping is that in holding these beliefs about stereotypes, one fails to take notice of the differences between individuals and the similarities between members of different groups. The cost of this is that decisions and judgements are made without accounting for potentially significant related information. One might also wrongly attribute certain explanations for a person's behaviour that fit the stereotype, disregarding or not even considering other explanations that may be more pertinent, or accurate. (S73- S75)

Puddifoot's claims suggest that while there may sometimes be a benefit to holding false beliefs such as stereotypes, (because if these stereotypes are indeed true, we *may* make better and/or faster assessments), there are enough of possible errors in forming related beliefs and assessments that it seems best to avoid holding on to or endorsing false beliefs. These examples may refer to stereotypes and implicit bias but we can imagine them relating to other learning contexts as well, because fundamentally, what Puddifoot's point

addresses is the fact that false beliefs can influence other beliefs and attitudes in a way that negatively compromises our judgements. If one of the most crucial points of learning is to find our way closer to truth and aid our decision making processes, then it seems counterproductive, in most cases, unless one is severely depressed, to endorse false beliefs even when one suspects or knows these beliefs to be false (S79-S83).

Another point to consider has to do with examples where the false beliefs end up having no role in one's cognitive life. Someone may ask, where is the wounding in cases like that? Take for example that one has a false belief about a very abstract mathematical principle. If one never has cause to use this principle then has one actually been wounded in any way? Relatedly, if one has acquired false beliefs, and never realises one has acquired such beliefs and those false beliefs end up seeming not to have any bearing whatsoever in any way on one's life, how has one been disadvantaged?

The answer to the first question, in cases where one realises they've acquired a false belief but it has no actual impact on their lives, the wounding, though very minor, might occur in the awareness that one failed to acquire a true belief – I would suggest this might simply be a very mild disruption to one's self-assurance or "ego" (wounds do not have to be significant to count as wounds all the same).

The answer to the second, related question, is that I think in those cases, there is still wounding taking place because although it may seem as if the false belief has had no bearing on one's life it is now part of a set of beliefs that I am disposed to using at some point in time and that set of beliefs is now 'contaminated' or 'faulty' as a result of this one false belief. Even if I never directly use that one false belief, this relevant belief may have an impact on other beliefs, which I would then use to make some decision or form some opinion at some point in my life. If that false belief ends up not affecting any

of my beliefs at any point then that is just a matter of luck. So having subsumed this false belief into my endorsed set of beliefs is indeed wounding, albeit not immediately evidently so.

The value of being "open" to the possibility of these types of "epistemic wounding" is that the alternative, which is "shutting oneself off" from learning or limiting oneself in learning could have more detrimental effects. As I discussed earlier, the way to mitigate against the "fallout" of these sorts of wounds is to acquire and exercise cognitive control whenever we are learning. The abilities that constitute cognitive control should usually raise red flags about false information. When in doubt, carefully and conscientiously exercising cognitive control while cross-referencing reliable sources or engaging in discussion and debate with reliable authorities on the subject could also help limit the acquisition of false beliefs.

For those of us who respond with some vulnerability to learning, the most common wounds we experience would be the milder negative disturbances or disconcerting moments we might feel when we realise we have been wrong or believed in something that was false, or similar periods of unsettling as we try to acquire and accept new beliefs. Some of us overcome these moments quite quickly and may even feel grateful or happy to have experienced them, but it remains that even if for just a moment and mildly, learning always offers the possibility of being wounded. This is regardless of whether we are learning in a social environment or a private, even solitary one. It may not be the case that we are always wounded, or wounded dreadfully and traumatically, but we do risk being wounded whenever we choose to truly learn. Being vulnerably open to the world is then no small challenge and would appear to require, even in mild cases, courage and resilience.

I now consider the other type of wounding, one that occurs when we give power to teachers and other figures of authority in learning. As we have seen,

much of the philosophical work on vulnerability focuses on our vulnerabilities with respect to others. This is certainly relevant to learning because it is often the case that we depend on someone, for example, a teacher, a mentor or someone else, a figure of authority who is deemed knowledgeable to teach us and guide us. In doing so we allow ourselves to be "known" by them. By this I mean, being open and honest with them about our weaknesses, fears and ignorance so that we can learn more effectively and deeply. This opens us up to the possibilities of wounding because teachers and mentors know our fears and weaknesses and there is the possibility that they may exploit, manipulate or worsen them. The relationship between dependence and vulnerability is explained by Dodds, who writes:

> Dependence is one form of vulnerability. Dependence is vulnerability that requires the support of a specific person (or people)—that is, care. To be dependent is to be in circumstances in which one must rely on the care of other individuals to access, provide or secure (one or more of) one's needs, and promote and support the development of one's or agency. (182-183)

Joel Anderson writes:

> Autonomy skills are learned with and from others. Social institutions and interpersonal relationships provide the contexts and supports for acquiring these competencies. And many of the most personally significant contexts in which we exercise these autonomy competencies are in social, interpersonal relations. (138)

In so far as learners depend on teachers and other figures of authority to not only provide them with knowledge and skills to exercise cognitive control, and

in so far as autonomy skills are learned from others, as Dodds and Anderson point out respectively, the development of learner's autonomy and agency is also part of the experience of learning. In Chapter 3 we saw that Dewey had a similar notion. Equipping learners with the abilities to exercise cognitive control is precisely the sort of teaching that supports their autonomy. It prepares them for making independent judgements and decisions and finding solutions to unique problems they may encounter. Caring teachers ensure that learners are truly equipped with these skills because they value their students' abilities to exercise their autonomy and agency. Enabling this autonomy and agency can take many shapes and forms, from providing opportunities for students to practice their skills, ask questions and clarify doubts to treating them with respect and dignity when they get things wrong or reveal other inadequacies. If treated in this way, students will come to find that being vulnerable in a safe space, where there is less judgement and more encouragement, and where there is appropriate nurturing of critical and questioning abilities that are in line with the abilities of cognitive control, can be fruitful, fulfilling and enjoyable. We can quite easily appreciate how someone could come to value learning if opening up to it made them feel positively challenged, nurtured, and resulted in them not just gaining knowledge but skills to be independent and confident in themselves. I consider autonomy and agency again in Chapter 7. However not all learning environments and journeys are like this. So when they are not, how would someone who deeply values learning respond? Here's an example from my own experience of a less than ideal learning experience.

As an undergraduate student, I recall attending the first lecture for a philosophy module on language where the lecturer rattled off a list of "famous" books and treatises and asked us if we had all read them. As new students of philosophy, most of us had not heard of many of them and some of us honestly admitted so. He then proceeded to embarrass and chastise us, saying we had some audacity to want to study philosophy without reading

these great works. A little unnerved by this, no one dared ask any further questions or admit any ignorance for the rest of that lecture. The following week, a third of the class had dropped that module and opted to take something else. However, for those of us who returned, the lecturer, now being aware of our ignorance of the philosophy of language, paced his lectures accordingly, explained concepts in greater detail and recommended a variety of guidebooks he had not initially planned to, to help us master what was needed more swiftly.

In this example, some of us decided to be honest about our ignorance, thus opening ourselves up to the possibility of wounding in the form of ridicule by the lecturer. It would not necessarily be the case that every time one opens oneself up to the possibility of ridicule that one will in fact be ridiculed, though often it is hard to tell beforehand how someone might respond. In this case, the lecturer regrettably used the opportunity to shame us. Some of us returned for the subsequent lectures and benefitted from a modified lecture plan that took into account our learning needs and addressed the ignorance we had admitted. For us returning students, being honest was the right response to our vulnerability, because it meant that we were now well on our way to learning about something we wanted to know more about, at a pace that better suited us.

For some who were not able or willing to return to his lectures afterwards, their reasons may have been that they personally felt more harm would be caused to their learning attitudes or self-esteem had they continued. Over the years that I have been a teacher and mentor, I have heard similar stories from students and mentees about teachers who mocked or made fun of them and how this resulted in them feeling ashamed and becoming fearful of the possibility of ridicule in most learning situations (not just the ones involving that particular teacher). For some students even the slightest comment on their ignorance about something, or a mild challenge or their beliefs by their

teachers or classmates could affect them badly enough that they entirely stopped engaging in that subject or in learning altogether.

As we discussed earlier, this may be the sort of case where situational vulnerabilities need to be considered as well. Perhaps some of them have been emotionally, or psychologically abused and being shamed was a trigger for uncomfortable, even painful feelings and memories. For others, it may have been similar previous learning experiences that they knew had ended badly. In these instances, it is crucial to rightly judge when, and how much of our vulnerabilities to expose in these learning situations. In deciding how vulnerable one should allow oneself to be, knowing when or how much to build up or lower our defences, if someone is already aware that they are especially sensitive to being open in some instances, or are at a point in their lives, due to personal circumstances at a higher risk of being discouraged, disillusioned or depressed, then perhaps responding necessarily with openness to those vulnerable situations may not always be the right response. However, it may also not be the right response to, from then onwards, never attempt to be open again. This requires us to know ourselves well enough, to exercise some wisdom, in choosing when, how and how much to expose or engage with our vulnerabilities; when we should prepare ourselves to feel some humiliation and soldier on, or when we should decide to protect ourselves by walking away or putting up our defences. There is of course also the option, when we feel we cannot assess these situations for ourselves, to seek professional or trustworthy advice and support and use that as a guide.

The options are not of course limited to either taking the course or dropping out. One could decide to make an official complaint against the lecturer that may result in him adopting a changed attitude or even in someone else taking over the teaching of the course. There is a risk here too, and approaching figures of authority and power to share such grievances can make one especially vulnerable to the abuse of power. I do not want to argue that *all*

learning is in such a special category that a lover of learning should be prepared to take on any and all wounding for the sake of learning (Later in this section I consider some situations in which some kinds of learning may require us to be willing to suffer more significant wounds). I believe that some resilience in the face of injury is probably a good thing for most of us because, for example, it can help remove us from harmful situations, help us achieve goals, help us gain confidence and to realise our autonomy and ability to activate change for ourselves and others. Again, how much is appropriate will depend on individual circumstances. I would like to recommend, though, that because it will often be the case that the more frequent wounds we encounter in learning are milder negative disruptions (as I discussed earlier), it is worth remembering that this discomfort will most likely pass. That being the case, it is then worth carefully considering and reflecting on giving up the learning opportunity and its potential for positive outcomes. One may even consider seeking out support from others to cope with these feelings before deciding to forego the opportunity for learning. This is because the benefits of learning could outweigh these often minor and short-lived disruptions and this attitude could result in a person, over time and further learning experiences, coming to find that they can take these disruptions in their stride and see them as a starting point for positive feelings and states, such as self-confidence, self-awareness, joy and wisdom that will often follow. Therein, potentially, lies the key to forming a "loving relationship" with learning.

It could also be the case that some students did not return because their egos were bruised and they did not like looking silly to the lecturer and their classmates. So, primarily for that reason, they were willing, at least in this instance, to give up on learning about the philosophy of language that semester. If it was simply a question of ego and pride, then again, perhaps taking the embarrassment less seriously may have meant they learned something they were interested in from someone who ended up, in spite of his brash personality, to be a pretty good teacher.

Experiences of learning have the potential to wound one even if one is learning independently; without a teacher, classmates or anyone at all present to facilitate public embarrassment or lessening of stature of any kind. Let us imagine someone living alone on a desert island. They have spent a significant amount of time exploring the island and learning about the plant and animal life. They have diligently recorded their research and based certain beliefs about the island, its location, environment and flora and fauna on this. They believe themselves to have expert knowledge on the island but continue to explore and research further. One day they learn that one of the beliefs they have held, say on the location of the island turns out to be wrong. This means that some of the other beliefs they held about the types of flora and fauna on the island are also erroneous because such flora and fauna could not exist on islands in this sort of location. There is no one else present to witness this error, to challenge or ridicule them. Yet, I think it would be fair to say that at least at that moment of discovering that their beliefs have been wrong all this while, the solitary islander would feel, if not deep disappointment that years of research and beliefs have now been shown to be wrong, some twinge of negative disturbance or unsettling about this new discovery that has disrupted their previous beliefs, making those previous beliefs now false. The wound here may not be traumatising or life altering, but it is enough that it causes a negative disturbance and unsettling, even if only in a mild sense. Not exposing oneself to alternative points-of-views ensures that one does not need to experience the stress and anxiety that may accompany the realisation that one's own point-of-view is erroneous or problematic in some way. In fact, for some, the experience of challenging or having their beliefs and attitudes challenged can be downright terrifying because these challenges could potentially result in one's life being disrupted to varying extents – from mild to severe. However, finding genuine value and meaningfulness in learning cannot arise from protecting oneself from learning or from approaching learning with a shield and armour, ready to dodge and deflect at the slightest sign of

discomfort. Abandoning or avoiding opportunities and "journeys" of learning like this are likely to leave one feeling unfulfilled, frustrated and ignorant, and true lovers of learning will see the importance of pushing past discomforts rather than experiencing the effects of deserting what they are pursuing in their learning.

In instances where what we are learning endorses what we believe and reinforces it, the risk we have taken with being vulnerable has immediate payoff in terms of facilitating feelings of joy, excitement and self-assurance. Then, the excitement of discovering some new knowledge, even when this discovery discounts previously held knowledge and beliefs, will in certain cases outweigh the negative, wounded feelings that one may have experienced in situations like those in the earlier examples. In these cases, the joy of finally "getting to the truth" will make it easier for one to face that wound: the emotional benefit of being vulnerable and feeling the negative disruptions or emotional outcomes will be outweighed by the emotional benefits of the feeling of achievement, resilience, courage and so on.

6.5 Conclusion, and a note about the role of teachers

Often, if we want to get the most out of learning, and certainly if we want to arrive at a place of loving learning, we must be prepared to approach learning with courage and a bit of a "thick skin". True lovers of learning are more adept at not allowing feelings of shame or embarrassment to get the better of them, they tend to engage in learning with less fear of disrupting their current beliefs, attitudes and preconceptions and without the limiting and damaging anxiety that admitting ignorance is necessarily a weakness, even if at times, we are made to feel that it is. It is also worth noting that being vulnerable can result in both negative as well as positive emotional experiences and disruptions, where the negative effects could outweigh the positive ones. It is

especially in these instances that learning gives us the payoffs of excitement, joy and a sense of accomplishment.

We live in a world where knowledge and expertise are respected and highly valued. Admitting that we do not know something is frequently seen as a weakness. Control over knowledge, facts, theories and the ability to use them practically and faultlessly are rewarded, and any concession of ignorance or uncertainty is often shamed. Many of us do not want to admit we are wrong because we live in a culture where being wrong, or admitting ignorance often results in losing respect and esteem from others. In an environment like this, there are those who prefer to avoid the chances of wounding altogether by sidestepping learning opportunities, holding on to false beliefs, defiantly denying or attempting to trounce views that challenge their own before giving those alternative views any careful thought or attention because they fear social wounds.

One may adamantly hold onto false beliefs because it maintains a comfortable and familiar status-quo, or it protects one from having to come to terms with the consequences of the beliefs and attitudes one has held unquestioningly. Communities and social groups often share beliefs and attitudes. "Tribalism" or peer-group reasoning is a common phenomenon and runs the gamut of topics from religion and politics to food and fashion. To be open to alternative perspectives is to increase the chance of discovering that the beliefs and attitudes held by the tribe(s) one belongs to are not always accurate or ideal. This is risky because challenging the status quo can mean exclusion from the tribe(s), and going along with the status quo, for fear of reprisal or exclusion, could risk a lifetime of living with one's own nagging doubts and feelings of inauthenticity.

To avoid these risks and to stay as a fairly oblivious but content member of the tribe would mean that one would have to protect oneself from exposure to

alternative views, new learning and self-questioning that may well lead one to the confronting difficult discoveries and decisions. This sort of "shutting off" or "shutting out" was the concern that promoted me to consider the role of vulnerability in learning in the first place. I wanted to show that a lover of learning is characterised by their willingness to be appropriately open to the world and to opportunities for learning, without unduly fearing the potential to be wounded. Making the choice to be open indicates that the learner sees that the value of learning often outweighs the disadvantages of the wounds they may encounter in the process, making them true lovers of learning.

Practical ways in which vulnerability and the openness of one's students can be protected and encouraged is an important and very useful topic for further consideration. However, the limits of this thesis do not permit me to explore ideas and advice in this area in enough detail here. I do want to mention some very brief thoughts here though. I think a very fundamental starting point is that teachers should be aware that students trust them and have handed over some power and authority to them, and as such they should strive to respect their student's trust and openness by avoiding abuses of power. Teachers can also moderate the classroom "vibe" and "environment" in such ways that encourage students to be open and non-judgemental towards other students, so that students feel "safe" in exploring thought and ideas openly. These are by no means easy to do and it is also important to acknowledge that it will take committed and exceptional teachers to facilitate these sorts of learning environments.

As I explained in Chapter 3, Rousseau, for example suggests that vulnerability should be embraced even to the extent of the teacher creating and presenting opportunities for the student to experience vulnerability. He encourages teachers to carefully consider how they may provoke students in this way and gradually introduce them to unfamiliar and potentially disconcerting experiences so that their fears dissipate, they gain confidence and grown in

their knowledge and understanding not just of new things but also of themselves and how they respond to their fears. Something like this, as I explained, might be useful only in so far as the teacher is mindful and careful to avoid any abuse of power and successfully achieving anything like this would require a very skillful teacher as provoking students to face their fears by orchestrating situations where they may be wounded could backfire.

Vulnerability in learning is a field that can do with a lot more research and exploration – both in terms of philosophy as well as pedagogical approaches. My account in this thesis serves as one possible approach to the role vulnerability plays in learning and how being open can add value to learning in ways that sustain our desire to continue learning, even at times when it is challenging.

We have seen so far that lovers of learning are deeply committed to learning. This commitment is sustained even when learning is not enjoyable: when it is trying and difficult, or has the potential to cause, and sometimes does cause, negative disruptions and disillusionment, or generates situations in which difficult decisions need to be made and wounds, both minor and fleeting or deeper and longer lasting, are part of the outcomes of learning. Undoubtedly this is usually endured for the rewards of learning, which include achievement, fulfilment, self-assurance, independence, joy, wisdom and many others, including the positive feelings and experiences that come from our learning resulting in not just valuable outcomes for us, but for others too, whether this is our children, our friends, our colleagues or wider society. It is clear though, that consistently enjoying these fruits of learning, having and maintaining a "love for learning" require deep engagement and sustained commitment. It is my belief that wholeheartedness is something that makes it possible for one to both deeply engage with learning and sustain that engagement. I consider wholeheartedness in more detail in the following chapter.

Chapter 7: Wholeheartedness

As ideal as the term "wholehearted" is in describing the sense of commitment to learning that I want to communicate, how it has been defined and discussed in some of the key literature on the subject has faced some significant criticism. Most of this criticism stems from the lack of clarity about the role of ambivalence, particularly in the work of Harry Frankfurt, who is a key figure in this area of research. A related problem with wholeheartedness as it has been defined in many of these theories is that it does not take into appropriate consideration that as human beings, circumstances in our lives change. As such it is an extremely difficult and perhaps even impossible requirement that in order to count as a committed and autonomous agent my decision to endorse an isolated desire and action at an isolated and particular period of time reflects either my commitment or lack thereof to what are often projects or plans that extend over a long period of time or even over the entire course of one's life. Of course difficulty is not always a good reason to review a theory, but in this case, resolutely sticking to one's commitments to certain learning experiences may at times limit other learning experiences, which may in fact turn out to be more valuable. Additionally, where our aim is to encourage students into becoming lovers of learning, we risk alienating many students from attempting to achieve wholeheartedness, or from feeling that they want to endorse this sort of commitment to learning because the chance of failing to do so is extremely high.

As such, my aim is to "soften" or "ease" the account of wholeheartedness that Frankfurt endorses. I offer a version that describes our ability to validate and commit to desires for the long run, even when the "going gets tough", but that makes some room for changing circumstances and takes into account the fuller picture of an agent's life and their on-going attitudes instead of focusing on isolated actions at isolated moments of time.

With reference to love for learning, this "softer" version of wholeheartedness supports the learner to make a genuine commitment to learning. This commitment is crucial because our learning journeys can be challenging and the ability to persevere with learning is not only important to ensure we do not give up too easily or drop out too quickly, but it also gives learning a special status in our lives, as something that we actively and reflectively endorse, as a decision that we have freely made, thereby communicating to ourselves that learning is something we value. This seems to be an important step because so many students seem to feel that learning is not something they want to do, or would choose to do. They feel forced or compelled to learn so they can get a job or earn an income or acquire respect in society. In looking at wholeheartedness, I want to know what makes learning truly one's own commitment and an autonomous one rather than a disinterested obligation or purely a means to an end.

I argue that wholeheartedness should not only apply to isolated actions at isolated points or moments in time but instead should be understood in relation to our "principles of action" (a term I explain later) which gives questions about our agency a significant element of diachronicity.

I draw mostly from the work of Frankfurt, but also refer from time-to-time to the research by Christine Korsgaard. I acknowledge where there are problems and confusions in their theories and attempt where relevant to respond to them. I also suggest how we might draw material from their discussions of wholeheartedness to offer the "softer" account of wholeheartedness that I propose being a good fit for learning. My hope is that this will be a useful concept in understanding why some people are able to commit themselves to learning projects and principles of learning for the entirety of the project or, in the case of principles, for life. And that this understanding will in turn provide some insight into how wholeheartedness can help learners endorse, and, doing so, sustain their love for learning.

7.1 Explaining Wholeheartedness: Frankfurt & Korsgaard

Both Frankfurt and Korsgaard have discussed wholeheartedness primarily in relation to agency and autonomy. According to them, actions are autonomous only when an agent is wholeheartedly committed to the motivation that grounds his or her actions. Agency is the capacity of a person to act in a world. According to Frankfurt, a person is someone who identifies herself with a desire that moves her to action and she reflexively endorses or identifies with this desire that motivates her. This reflexive endorsement is a matter of choosing which of her desires are truly hers, and wanting that desire to be her will. In order for the motivation to be truly hers the agent must endorse it or identify with it without uncertainty or ambivalence: that is, she must endorse it wholeheartedly.

In *Freedom of the Will and the Concept of a Person (FWCP)*, Frankfurt uses the terms first order desire and second order desire. First order desires take courses of action as their object (7-9). They are desires without reflection. So, in light of this definition, both human beings and animals are capable of having first order desires. Second order desires follow from first order desires and these are unique to human beings. Second order desires concern our desires themselves. Desiring what we desire means choosing which of our desires is really ours based on a hierarchy of what we value (8-10).

According to Frankfurt second-order desires that are endorsed are volitional. He writes, "Someone has a desire of the second order either when he simply wants to have a certain desire or when he wants a certain desire to be his will" (*FWCP* 10). When a person wants a particular desire to be their will, in other words, they endorse or identify with that desire then Frankfurt says they have something called volition (*FWCP* 8-10). It is volition that is essential to being a person, and having agency. This person is someone who reflectively identifies

with the attitudes that motivate her. This is a process often referred to as reflective endorsement, whereby a person gives precedence to one of their desires after a period of reflection.[90]

Frankfurt needed the concept of wholeheartedness to be included in his theory of endorsement because one of the main problems with the endorsement view is that it creates a problem of infinite regress. This is because one would need to endorse one's endorsement of the earlier act to make it one's own, but then what about the endorsement for this

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90 Persons are beings who care about their wills, that is, which of their desires win over other desires, and reflectively identify with those particular winning desires. As a further clarification of exactly what he means by "person", Frankfurt takes to describing something he calls a "wanton". The difference between a wanton and a person resides in the fact that a wanton has no concern for her will and simply acts upon desires she has without actively wanting or not wanting them. She simply pursues her strongest inclinations and does not care that she wants to do what she wants to do. She does not concern herself with the "desirability of her desires" (*FWCP* 11). A wanton possesses first and second order desires but not second order volition. A person on the other hand is a volitional entity. One question that arises here is whether Frankfurt means that a person is a being who is simply capable of second order desires or whether a person must always actually have second order desires? It seems Frankfurt would respond by saying that both persons and wantons are capable of second order desires. But a person must definitely always have second order desires in the form of volition, as opposed to just being capable of it, to be considered a person. Additionally, he would hold that we need second order desires to get to volition because we would need to want to have a certain desire before we can make that desire our will. In that sense, one would not be able to jump from first order desire to second order volition without first "passing through" the stage of second order desire.

endorsement, and so on and so forth? Wholeheartedness, it would seem, has been mostly introduced in order to curb the infinite regress. Whichever act I am endorsing is an autonomous act if I endorse the said act in such a way that prevents the possibility that a higher level of reflection could overturn that endorsement; that is, I wholeheartedly endorse the act. So the loop of regress is in this way, eliminated. However, wholeheartedness, while a very intuitively sound idea, is not without its own set of problems.

The problems with wholeheartedness as I briefly alluded to at the start are that:

a) it is not clear to what extent ambivalence and changing of one's mind is compatible with being wholehearted; how consistent does one have to be about being wholehearted about a particular desire over the course of one's life for one to count as being committed and being an autonomous agent?

b) relatedly, it is not clear that it is always the case that wholeheartedness is worth pursuing at the cost of meaningful growth and change. For example, a change of heart (an apparent weakness of one's will) might be the result of greater self-awareness, or the beginning of significant growth and valuable changes to one's life and circumstances

c) it is not clear if my status as an autonomous agent comes into question in situations where I have to choose between two conflicting desires, both of which I have wholeheartedly endorsed.

Let us consider these problems in a little more detail. With particular reference to caring (which Frankfurt discusses as a significant form of commitment), Frankfurt writes in *The Importance of What We Care About (IWWCA)*:

> . . .the notion of caring, implies a degree of persistence. A person who cared about something just for a single moment would be indistinguishable from someone who was being moved by impulse. (84)

It is clear here that Frankfurt holds that being wholehearted requires one to care about the object of care over a period of time – "persistence" being the word that indicates the significance of temporality in this discussion.

Similarly, Korsgaard writes in "Personal Identity and the Unity of Agency" that that as an agent, ". . .implementing something like a particular plan of life . . . you need to identify with your future in order to be *what you are even now*" (113-114). What Korsgaard is suggesting is that when we commit to a project or a cause, or to a particular way of life, and when we endorse our motivations in a wholehearted way, we do so not just for the moment but over time and in line with our futures; there must be a degree of persistence over time because if we endorsed or identified with an action for just a moment, we could essentially be at risk of acting on impulse. Korsgaard writes in *The Sources of Normativity (SON)*:

> If I change my mind and my will every time I have a new impulse, then I don't really have an active mind or a will at all – I am just a kind of location where these impulses are at play. And that means that to *make up my mind* even now – to give myself a reason – I must conceive my reason as an instance of some general type (232).

The fact that wholeheartedness seems to require commitment both to an individual action at a particular time but also to a wider set of "principles of action" suggests, as Marya Schechtman argues, that wholeheartedness requires one to unify one's will both synchronically and diachronically. This

requirement, she says, is problematic because firstly, it is unclear whether wholeheartedness requires one to be unambivalent about the project as a whole at the time of taking whatever action that facilitates it or whether one must remain wholehearted throughout the course of the whole project (180-182).

This sort of critique against wholeheartedness, that is to say ones that derive from questions about the role and value of ambivalence, are perhaps the most commonly recurring type of critique. Most of our real-life experiences would indicate that we can feel committed to something but also experience periods of ambivalence, in fact, there are commitments that we change our minds about sometimes too. Committing, and particularly so in any wholehearted way to something is often a process that spans over time. Many of our projects and lifestyle choices take time or occur over time, for example, our careers, writing a PhD, marriage, raising children and so on. It would be unhelpful for a theory on a topic such as wholeheartedness to not offer a clear response to some of the real-life difficulties that arise in being wholehearted across a span of time.

Frankfurt, unfortunately, is not especially clear on this matter. He writes *In The Reasons Of Love*:

> Being wholehearted means having a will that is undivided. The wholehearted person is fully settled as to what he wants, and what he cares about. With regard to any conflict of dispositions or inclinations within himself, he has no doubts or reservations as to where he stands. (95)

This is confusing. If a person is '*fully settled*' it seems unlikely that they would experience conflicts of disposition or inclination to begin with, and if they do

experience these then it would be unlikely that they would then have *no* doubts or reservations as to where they stand.

In *Necessity, Volition and Love (NVL)* Frankfurt writes:

> Wholeheartedness does not require that a person be altogether untroubled by inner opposition to his will. It just requires that, with respect to any such conflict, he himself be fully resolved. This means that he must be resolutely on the side of one of the forces struggling within him and not on the side of any other. (100)

Again this is confusing. Here it seems that feeling torn, uncertain and having moments of doubt *are* consistent with wholeheartedness, but once one has decided to endorse some desire or action wholeheartedly then either a lower desire or even a "higher" reflection just cannot displace it. If they "attempt" to "squeeze" in then one must shut them off and remain allied with the earlier/wholehearted endorsement. If this is true, which is likely given that wholeheartedness was introduced to cull infinite regress, then should our life's circumstances change, should there be new opportunities and desires that may in fact help us to grow and change for the better, or ones that could even increase our autonomy (something that Frankfurt clearly values), this would be out of bounds because we have already endorsed an earlier desire wholeheartedly. This seems to be counter-intuitive to the fact that we see opportunities in life for growth and development as valuable and therefore something to be welcomed and embraced.

On the other hand, Korsgaard's response to ambivalence is clearer. She writes, "Of course this is not to say that I cannot ever change my mind, but only to say that I must do it for a reason, and not at random" (*SON* 232). I think this seems a fair "caveat". It is a view of wholeheartedness that allows for doubt,

ambivalence and change of mind on the basis of judicious reflection, which seems more compatible with our experiences of the inescapable unpredictability of life. If wholeheartedness is meant to reflect our endorsement and identification with our motivations and actions, it would seem that the criteria for changing one's mind is that this change comes about as a result of a process of judicious reflection and understanding that is in line with one's self-understanding and one's understanding of what constitutes one's self.

A "softer" approach to wholeheartedness that permits the changing of one's mind and allows for periods of ambivalence, but within an appropriate context and at the end of a careful process of assessing one's reasons and circumstances with self-awareness and understanding, would offer us a way to be genuinely wholehearted but not at the risk of personal growth.

7.2 A "softer" approach to wholeheartedness

In light of this, I suggest that instead of considering an account of wholeheartedness where the endorsement of each individual action is what decides commitment, agency and autonomy, we take into consideration the agent's past and present actions, attitudes and circumstances as well as a broader picture of the trajectory of values and principles that have governed their actions and motivations.[91] This allows for wholeheartedness, a concept

[91] Marya Schechtman discusses very similar concerns and solutions. However, my argument offers a slightly different perspective in that it seeks to offer a "softer" approach to wholeheartedness, instead of eliminating it entirely, arguing that Frankfurt's existing theory does already seem to make some room, though not always very clearly, for a diachronous view. It is also interesting to note here that again we similarities with the sort of views that I

that, for all intents and purposes, captures our intuitive sense of what it means to "stick with something", to be committed and to care, to remain as a useful theory for understanding.

Korsgaard also echoes this view on how the self is constituted by this kind of self-unifying commitment, using an analogy between person and state. In *Self-Constitution: Agency, Identity, and Integrity*, she writes: ". . . the agent is something over and above her parts the way the constitution of a city is something over and above the citizens and officials who live there" (135). The idea she is exploring here is that like people who organise themselves into a state with a constitution and thereby become something that can be treated as one unified entity, a person who constitutes him or herself through wholehearted endorsement becomes a unified whole. This "unified whole" is more than just a collection of individual parts (or every individual thought and action); the unified whole is an entity that represents principles, beliefs, values and so on that embody the agent.

This "embodying" I think can be usefully explained through the idea of "principles of action" – a term Marya Schechtman uses. Self-constitution implies that what we endorse is linked not just to one moment or one action at some given time, but as Schechtman says, to our "principles of action", which represent how we decide to act based on our broader principles, our longer term projects and ways of life (175). Our actions at any isolated point in time are a representative or part of these wider principles of action. Schechtman writes that:

> A man may be seen simply to be digging a hole, but he may also be seen to be gardening, or getting exercise or spending

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explained Dewey held about experiences being relative to context and taking into account the span of time over one's past, present and future.

> more time outdoors, or trying to please his wife. When we evaluate our motivations in the way that leads to autonomy as the strong unity view describes, we are not just asking 'Do I want to do X?' but 'Do I want to be the kind of person who chooses to do X?' What we are evaluating is thus not simply an action or impulse, but rather a plan, project, relationship, or, in Korsgaard's term, a "practical identity" (an identity like mother, philosopher, union president, Democrat, recovered addict) that the action implies (Korsgaard 1996, 101). (178-179)

This seems to make sense because the self is not constituted solely by individual actions at particular times but by wider encompassing principles that guide our choices and actions over the course of our lives. The idea then is that "permission" to upturn certain decisions and abandon certain projects are granted and one may count as having acted wholeheartedly even in those cases, if the wider principles are still maintained.

To illustrate this point, let me give the example of a PhD student who experiences significant stretches of doubt and uncertainty about her area of research before then deciding on each occasion to set aside those doubts and continue with the research that she wholeheartedly chose to begin with.

Schechtman suggests (about her (similar) example of a lawyer) that:

> During her periods of ambivalence and doubt, however, she fails to be wholehearted and at these times there is no real fact of the matter about what she wants to do, which means that at those times there is no unified agent and no autonomous action. (184)

When it comes to the Frankfurtian account of wholeheartedness as it stands, it is unclear what the PhD student's status as an autonomous agent is at the moments in which she is doubtful. If indeed her status as an autonomous agent is no longer valid each time she has a doubt, then in many practical cases, the autonomous status of agents will be in constant flux.

Schechtman's suggestion is to remove wholeheartedness entirely from the picture and focus only on temporally extended plans and projects. Mine is to reconfigure wholeheartedness for a "softer" approach, so that we allow for someone to count as being wholehearted so long as ambivalence or change of heart about temporally extended plans and projects are well considered and have good reasons. The reason I do not want to eliminate wholeheartedness altogether is that I think Frankfurt already makes some room within his theory for this sort of diachronicity, so there is no need to completely get rid of a term that otherwise does a very good job, better than most other terms, of intuitively describing the sort of commitment we want when people make decisions. I also think that "wholeheartedness" is state of being that many of us aspire to – for that state to be so impractical to attain may make the pursuit of it seem pointless, which would be rather unfortunate, to say the least. What would help in this endeavor is to try to offer Frankfurt a way to overcome the problem of infinite regress so that he no longer needs to describe wholeheartedness in the way that he does.

The problem of infinite regress comes about as a result of having to endorse a particular, isolated action at a particular and isolated period of time. The regress loop has to be closed so that the endorsement does not require further endorsements thereby complicating the claims about autonomy that are the fundamentally crucial component of this discussion. The concern for Frankfurt is that if we allow an infinite regress we can never be certain that our decisions at any given time are "truly" ours because it is the endorsement that confirms this. Schechtman offers the solution to replace the claim that we

should aim at the isolated event as the point of endorsement with the claim that we should aim at the "temporally extended project or plan" as the point of endorsement (195). So in order to know if the PhD student is truly committed to her research, we need to know not just about the actions she endorses in her moments of doubt but also what her position is on the PhD as a whole – what made her want to do a PhD? What caused her doubts? How often has she experienced them? Are there triggers that cause them? Does she address these doubts immediately? How so? Have her plans for what she wants to do after her PhD changed? Why have they changed? And so on. It would be in the understanding of the answers to these wider questions about her long term plans, her past actions and their reasons that we would get a sense of whether her actions are truly her own, whether she has felt compelled or overwhelmed in certain moments but not others, and how these moments weigh up against each other. If we take this route, the issue of infinite regress is irrelevant because the strength of our endorsements are decided based on what is happening now *in relation to* attitudes and behaviours over a period of time.

Perhaps if not for the need to address the infinite regress problem, Frankfurt could potentially say that one must be fully resolved in the face of conflict, one must stick resolutely to the side of "one of the forces" and not on the side of any other, but that this "side" need not be the very same one that one started out with. He could stipulate that there must be a clear and decisive decision, not one that is the result of the lack of will or the outcome of simply "falling into an option" out of wanton indecision.[92] This clear and decisive decision

[92] There is some debate about the distinction between choice and decision and whether Frankfurt is right in insisting on "decision" over "choice" as the appropriate word. It is not especially relevant to this thesis to explore that debate so I stick with "decision" here, as that is the term Frankfurt uses.

cannot be an impulsive one of course; it would require careful thought, self-awareness and understanding of one's desires and motivations and aligning these with one's principles of action.

This reading could be compatible with Frankfurt's other arguments that are more visible in his writings on caring.[93] In "On Caring" in *NVL* he writes:

> Suppose we cared about nothing. In that case, we would be creatures with no active interest in establishing or sustaining any thematic continuity in our volitional lives . . . (caring is the) foundational activity through which we provide continuity and coherence to our volitional lives. (162)

I think that based on the use of the phrase "volitional lives", one might suggest that the unity and commitment that Frankfurt calls for through wholeheartedness is a unity and commitment in line with long-standing, and even lifelong values, principles and attitudes that are all in line with each other and that make up a coherent picture of what guides and motivates us throughout our lives. If not for his conception of wholeheartedness, Frankfurt could say that doubts or ambivalence may therefore be an indication that someone must perhaps return to reflecting on changes to their attitudes, values, broader principles and life circumstances, and either re-endorse the ones that they earlier endorsed or endorse new ones that better reflect what is

[93] I avoid focusing explicitly on Frankfurt's views on caring for this thesis because his discussions on it lead to conceptions of "concern" and then "love" as a specific and important mode of caring. Concern and love are both discussed largely in relation to objects that have autonomy and agency, in other words, people. As mentioned before, since learning has no agency as such, these concepts cannot be easily applied or borrowed for the purposes of discussing love for learning.

now meaningful to them. However, since he cannot say this, doubt and ambivalence are cast as entirely negative states to be avoided or simply pushed aside and overrode by loyalty to earlier endorsed desires and motivations. If this is so, then it would seem that the authenticity of our actions and decisions becomes just as problematic as in situations where these actions and decisions occur as a result of indecision or wantonness. Again, the main issue that seems to be preventing Frankfurt from adopting such a view is his conception of wholeheartedness.

Taking this "softer" approach to wholeheartedness would also relieve the problems associated with conflicting life plans. To illustrate, let us say the PhD student has now become a mother. She is wholehearted about both doing her PhD and being a mother but she feels conflicted when it comes to deciding whether to attend an important research-related event or to attend an important event in her child's life. There is therefore competition and conflict between two projects that she is equally committed to. Schechtman for example, thinks that it is this sort of dilemma that ends up

> . . . undermining her unity as an agent and making a truly autonomous action impossible. It is just this kind of ambivalence that strong unity theorists insist we must overcome in order to be agents. (187)

To support this she presents the following quote from Frankfurt:

> . . .what good is it for someone to be free to make significant choices if he does not know what he wants and if he is unable to overcome his ambivalence? What is the point of offering a beguiling variety of alternatives to people who can respond to them only with irresolute vacillation . . . unless a person is

> capable of a considerable degree of volitional unity, he cannot make coherent use of his freedom. (*NVL* 102)

What Frankfurt says here is compatible with the diachronous re-definition of wholeheartedness. That circumstances in our lives can change frequently and sometimes drastically seems a fact that most of us acknowledge. I suspect this is something Frankfurt would have to accept too. It is also the case that most people are able to overcome their ambivalence or vacillation at some point, not usually at the very instant they feel it, but over time – and it might be that this ambivalence is overcome when they choose a different course of action from one they chose earlier. So long as this choice is in line with their volitional unity in a diachronous sense, it seems reasonable to say that they are indeed making coherent use of their freedom. Without the need to account for endorsement with regards to isolated actions in isolated moments of time, we could now see the Frankfurtian quote above as a criticism of the type of people who find it difficult to ever make decisions that are volitionally unified, those who do not use their agency and autonomy, and who allow impulses to make their decisions for them on a regular and protracted basis.

If we return to the example of the PhD student, if in her reflection process and in deciding between the various desires she wants to endorse, she has deemed that the flourishing of her research and learning journey is one of them and being a mother is another, then yes, it is true that there will almost inevitably come a time when they conflict and she will be torn. If she decides to side with one over the other, it could be the case that she never truly desired or truly acted for (in the sense of an autonomous agent) one of them, that she endorsed one more than the other, or that she is endorses both equally but in these circumstances, she has simply had to prioritise one over the other.

To say that she simply did not truly desire or act on one of these decisions seems a rather severe conclusion, especially if she has dedicated time and energy to doing both. If in some instances where there are genuine conflicts and decisions need to be made, it seems reasonable that an autonomous agent can retain both their autonomy and agency by deciding to side with one over the other. In fact, Frankfurt accounts for conflicts similar to this. He gives the example of one desiring both to go to a concert and to a film that are programmed at the same time. Conflicts of this kind, he says ". . .require only that the desires at issue be ordered" (*IWWCA* 66). The reason this kind of conflict is easier to overcome is because, according to Frankfurt, the desires are both "on the same level". He offers a contrasting example of a conflict where someone wishes to congratulate someone else on a recent achievement but also finds that they have a jealous wish to insult this person. This jealous desire is not something that is endorsed or identified with. So, in the concert-film conflict, because both desires are "on the same level" if one of them cannot be fulfilled for some reason the natural course of action is to try to fulfill the other, but in the compliment-insult example they are not the same level because insulting the person is not a desire one endorses. (*IWWCA* 67).

It is because the two desires in question for the PhD Student are on the "same level" that it is possible to retain autonomy and agency by siding with one. It is also the case that with the new definition of wholeheartedness, prioritising can be done on the basis of seeing both these projects, or ways of life as being temporal and diachronous. So, for example, this time the student chooses to attend the research event because it is the only one of its kind this year and also her daughter is playing another football game next month, which she will be attending. If the student was always choosing to prioritise her PhD over her daughter, then it would be reasonable to question whether she is indeed wholeheartedly committed to both options.

One of the problems that could arise out of this re-defined view of wholeheartedness is that if an agent's isolated actions do not need to be endorsed, then what prevents them from never having to endorse any desires or actions, or from endorsing a temporal plan that involves them acting entirely on impulse or giving in to compulsions of some kind or the other? I think the answer is that nothing prevents them from this, but if they endorse such a lifestyle then this validly calls into question their status as an autonomous agent. To decide to never have to decide is essentially to give up your autonomy and such a person would simply not be considered autonomous and, by Frankfurt's account, would in fact be a wanton.

To translate this discussion of wholeheartedness into the context of learning we might say that a lover of learning is one who possesses volition with respect to learning. This means that lovers of learning want to learn and they endorse their desire to learn. They have very likely given thought to whether or not they find learning valuable and why, and decided that they do. One can make the case for the fact that we are very often learning something or the other and that sometimes learning is not something that takes place on the back of a conscious or active decision to learn. I do not disagree with this; I think it is entirely correct to say that learning happens even when we have not actively endorsed a desire to learn and then volitionally act on that desire. However, the sort of learning that I am interested in exploring in this thesis, as I clarified at the start, is intentional learning, and in particular learning that occurs in a formal setting, such as a classroom or an institution. In these situations, the idea of endorsement is important particularly because, as we have seen, learning experiences can be negatively disruptive; this might give some people sufficient reason not to pursue formal learning or value it (for example, they find it too disruptive and damaging). As there might be reasons not to value learning, it seems especially important that lovers of learning endorse their desire to learn.

If someone "loved" learning – as opposed to simply liking it, or not minding it, or doing it for the sake of getting a job, or making their parents happy and so on – then they would commit themselves to learning over time, to make choices and to act in accordance with this commitment, and would identify deeply with learning so that learning is part of their personal identity, something they believe constitutes who they are: they would see themselves genuinely as learners. Those who commit to learning in this way would not be apathetic, or, to use Frankfurt's term, wantons when it comes to learning. This would be in reference to the sorts of students for example who come to school every day but do not care if they learn or about what they learn. They simply sit in the classroom passively, not taking an interest or even an active disinterest in what is being taught.

Encouraging wholeheartedness in learning is important for reasons beyond just preventing early school-leaving. It makes learning, and learning in the right way, something that is linked to self-constitution, to one's principles and identity and allows one to exert more autonomy when it comes to choices in learning – this renders learning more than just a means to an end. Being wholehearted in learning also supports one to be vulnerable in learning to an appropriate degree because as we saw earlier, wounding in learning can more easily become a deterrent to learning if one is less committed to it.

Taking into account this "softer" approach to wholeheartedness in relation to temporally extended projects, there is room for a learner to endorse their desire to learn and truly act on that desire, but also experience doubts and ambivalence about this desire to learn. In fact they may even change their minds about learning, deciding now that they no longer desire to learn in any intentional way. Whether or not these decisions then render them as having been not wholehearted to begin with, not autonomous or even not an agent, will depend on attitudes, values and behaviours of the learner that pertain to

this ambivalence or change of mind.[94] I think this "softer" approach will encourage learners to see wholeheartedness in learning as something that is genuinely achievable and worth pursuing. In turn, their wholeheartedness will contribute to them sticking it out when things get difficult, honing their cognitive control committedly over time and nurturing their love for learning along with reaping the other benefits of learning.

[94] The discussion here could extend much further, but the limitations of the thesis do not permit further exploration of just this topic. Some other interesting points of discussion for future consideration might be, for example, what it means to endorse the desire to learn – does this also mean endorsing certain other desires related to learning, such as discovering the truth or accepting the truth?

Conclusion

In this thesis I aimed to respond to the questions: How do we help someone come to love learning? And, what facilitates a love for learning? The answer to those was to begin by first determining what is the "best" kind of learning to facilitate love for learning. To better understand this, I looked at what people on the empirical side of this discussion mean by surface and deep learning, concluding that deep learning, which is characterised by understanding, is crucial because evidence suggests that learners engaged in this kind of learning tend both to stay in school and ultimately find learning more valuable. I then argued that deep learning is not a concept that is entirely new to philosophy. As I presented, philosophers such as Plato, Rousseau and Dewey have historically taken a great interest in differentiating superficial learning from deep learning, prizing the latter over the former for a variety of reasons. I then showed that contemporary philosophers such as Hills and Pritchard amongst others have produced illuminating research on the notion of understanding, differentiating it from knowledge and the acquisition of information in more superficial ways. To varying degrees, both educational theorists and philosophers hold that understanding is an important facilitator, if not the defining characteristic, of deep learning. However, concentrated and robust discussions about what understanding actually entails are found more readily in the philosophical literature. This is seen particularly in Hills' account of understanding as something characterised by "cognitive control". I then drew from Hills' account to ground my own views on the role and value of understanding going forward. One of my contributions to this area of research has hopefully been to develop a more thorough account of deep learning by bringing together the philosophical research, especially in cognitive control, and the educational and psychological research on deep learning.

I then argued that pleasure, and in particular Aristotle's account of pleasure in relation to contemplation, gives us good reasons to believe that pleasure is an

important aspect in fostering love for learning. I then related this to Flow Theory, a psychological theory that is inspired by Aristotle's views on pleasure, to show that pleasure in learning can be achieved by creating states of flow in learning. I explained that pleasure in learning acts as an incentive to encourage students to find learning "lovable" and that the more students find learning "lovable" the better they are likely to become at finessing cognitive control, which in turn will add to their pleasure.

Following that I argued that lovers of learning are vulnerable and "open" to learning. My contributions to this area of research were to offer a way to re-think our perceptions of vulnerability to include aspects that are positive and worth seeking out – this is something that has not had much consideration in the current literature – to expand on the current research about intrinsic vulnerability with unique application to learning. I also introduced something I called "epistemic vulnerability" which considered the relationship between truth, learning and vulnerability. The conclusion in Chapter 6 was that lovers of learning are more inclined to see the value of learning in spite of the "wounds" that may sometimes result because of disruptions to their existing beliefs or to their "egos", and that the more adept one is at coping with these "wounds", the more likely one is to benefit from the many advantages of learning with an "openness" to the world, which includes further nurturing and growing one's love for learning.

Finally, I argued that a lover of learning is someone who is wholehearted about learning. Here I proposed a "softer" account of wholeheartedness, which permits one to be considered to be wholeheartedly committed to learning even if there are instances where one feels ambivalent or changes one's mind, so long as these instances are based on careful and conscientious reflection and are in line with one's "principles of action". This I suggested would take into account the nature of learning as a lifelong process informed

by the context of our past, present and future. It would also make commitment to learning something that is worth pursuing.

There is still more work to be done in the area of love for learning. As I mentioned the characteristics I consider here are those I think it is useful to begin with. We might also consider the value of curiosity, wonder and other such characteristics that could contribute valuably to a list of the traits we might want to nurture in order to foster love for learning. There would also be, of course, practical steps and suggestions for how to translate these theories into curriculum plans, syllabus, classroom activities and assessment. Some such ideas can already be found, for example, in more forward-thinking academic literature in educational theory, in progressive textbooks and teacher's guides, though would require some adapting to fit the characteristics and goals as stated here in this thesis.

I began research on this topic because it struck me that the belief many educators held that nurturing a love for learning would encourage learners to commit to learning, to genuinely enjoy it and see its value beyond it being a means to securing a job, was intuitively accurate. Yet, there seemed to be no account of this love for learning and no clear way in which an educator or a learner might first make sense of it in order to help nurture it. As a teacher myself, I immediately recognised the value that such an account might have for helping both educators and learners to not only understand what this sort of "love" entails but also to set distinct goals for fostering and nurturing this love. It is my hope that this thesis has made some headway into offering such an account and that with a better understanding of the love for learning that we are desperate to foster in students, we might also see that in order to genuinely do this, it is crucial and urgent that we re-think educational policies and systems that prioritise surface learning, that see vulnerability as a weakness to be avoided at all cost, and that peg the value of learning to the outcomes it produces only in terms of grades, jobs and income.

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