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Understanding Anxiety, and its Implications for Teaching and Learning: A Perspective on Freud and Others

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Understanding Anxiety, and its Implications for Teaching and Learning: A Perspective on Freud and Others

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A dissertation submitted to the Wits School of Education, Faculty of Humanities, University of Witwatersrand in fulfilment of the requirements for the degree of Master of Education

Johannesburg

June 2023

DECLARATION

I, **Adila Ally,** with student number: **713257**, declare that this dissertation is my own unaided work being submitted for the higher degree of Master's in Education by Dissertation at the University of the Witwatersrand, Johannesburg. It has not been previously submitted in any way at any institution. I have made the necessary acknowledgements and provided references for all the sources I have engaged with during the compilation of this dissertation.

A.Ally

Adila Ally

1 June 2023

DEDICATION

I dedicate this Master's by dissertation to my first-born son and my family who has been a pillar of strength throughout this journey which began in the midst of the pandemic and continued through many personal trials and tribulations including the passing of my daughter. Furthermore, I attribute all praises to the Lord for showering his blessings upon me, enabling me to further my studies. Finally, I sincerely hope that this research may in some way contribute to the body of research in its field.

ACKNOWLEDGEMENTS

This Master's dissertation was a passion I wished to pursue after successfully completing my honours degree. I had continued with my honours research topic as anxiety is a topic which is close to my heart as an individual who suffers from anxiety daily. In my final year of undergraduate studies (2016) I had decided to pursue the honours degree and registered for it in the forthcoming academic year (2017). However, after completing just one block of the degree my personal life took an abrupt turn forcing me to de-register from the degree. Being the determined person that I am, I worked towards getting back on track so when the time arises, I would be able to apply for the degree again in 2019 in a part-time capacity due to academic funding constraints.

I am, not within my personal timeline that I had set for myself, but still achieving the goals I had set for myself. As with everything else I have done in my life, this dissertation would not be possible without the support of many people.

I would like to acknowledge

Dr. Peter Aloka, for agreeing to act as my research supervisor. I thank him for his patient guidance, enthusiastic encouragement, and useful critiques of this research work.

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The assistance of the Wits CCDU center in providing emotional support of a personal and an academic nature remotely to students during this challenging time, has been exceptional given the burden of the pandemic the world faces. As a student who suffers with anxiety their workshops were highly beneficial.

Finally, I wish to thank my family for their continued support and encouragement throughout my study. It is their unconditional love and steady hand that motivated me to achieve my goals resulting in me being the first graduate, and postgraduate, in my family.

ABSTRACT

This dissertation is conceptual in nature rather than empirically-oriented and explores an understanding of learning and motivational theory in an attempt to study various formulations of the concept of anxiety, dating back to those presented by the foundational figure of psychoanalysis, Sigmund Freud. It is noted that Freud did not develop a single theory of anxiety but at least three and arguably as many as eight over the lifetime of his career. Such hesitancy and uncertainty is not interpreted by this dissertation as indecision, rather it is read as uncertainty being a core element in the meta-modelling of anxiety itself. Refracted through Lacan -- who performs a reinterpretation of Freud in a way that produces a unique formulation of the concept that seems to invert Freud's own definition -- and through J. B. Watson, this dissertation develops a novel concept of anxiety as being mimetic in nature, relying Girard's concept of mimetic desire for this purpose. Moscovici's social representation theory, Latour's interobjectivity, Bandura's triadic structure of observational learning, Foot's studies on Double-Effect problems, the Rashōmon Effect in the narrativisation of data and Seligman's learned helplessness are also used in developing the novel concept of mimetic anxiety. Thus after recognising four variants of anxiety -- a unified Freudian "object-loss" anxiety, Lacanian "overabundance" anxiety, Watsonian "commodity" anxiety and the novel concept of "mimetic anxiety" -- this dissertation proceeds to gauge interaction between these and the learning theories of Pavlov, Skinner, Piaget, Vygotsky and Gagné, and the motivational theories of expectancy value, achievement goal, and self-determination theory. In observing a case study of the flipped classroom model of teaching, Gagné and expectancy value seem to predict the emergence of Watsonian anxiety, the only variant of the four which allows for extinction of anxiety. However, the flipped classroom model, expectancy value motivation and Gagné's methodology together continue to address deeper challenges developed by mimetic anxiety and the synetic (not synthetic) demand placed on Girardian interdividual subjects by technology. Further use of the flipped classroom study is made to explore Freud's throwaway comment that economics might explain the concept of anxiety-as-signal, whereupon Hayek is found to introduce the concept of price-as-signal. This synchronicity forms the basis for considering Freud as necessarily heterogeneous and yielding of increased depth if paired with outside disciplines. In conclusion, the Flynn Effect is suggested as a significant driver of Freudian recession into insularity and from digitally mediated interaction, insinuating advocacy for the flipped classroom model.

Keywords

Understanding; Anxiety; Implications; Teaching; Learning; Perspective; Freud

Prefatory Note for Reader

I acknowledge that APA 7th edition under sections 4.18 and 5.5 recognises gender-neutral pronouns (so as to prevent bias) in cases of transgender, or gender uncertainty. I further note that this recognition does not exclude gender-specificity in the cases of established gender identity, such as Freud being identified as he or his. I note that section 5.5 applies here in its statement of addressing all by their preferred pronouns, and I understand that to mean whether those pronouns are gender-specific or gender-neutral. This dissertation however does not reflect that understanding as, at the insistence of my supervisor, gender-neutrality was instanced as standard across the board.

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CHAPTER 1: OVERVIEW AND INTRODUCTION

This dissertation attempts a study of anxiety from the disciplinary perspective of educational psychology. The research question follows as: "Adopting a purely conceptual approach and veering from any kind of experimentation, what theoretical resources from outside the disciplines of psychology and education can be utilised to meta-model a path to extinction of anxiety using solely educational theory, especially given that even during its foundational phases anxiety is not rigourously defined within psychology and that variant definitions of the concept are often at odds with each other?" Research into this area, and from this perspective, is argued for as worthy not only for producing practical results applicable within the classroom environment and of direct benefit to the activities of learning and teaching, but also for the role such research would play in the broader field of psychology itself. Since pioneering experiments in the last decades of the 19th century, a schism has developed within psychology itself. The psychoanalytic method pioneered by Freud was not only contested by the analytical psychology of Jung, Freud's former student, but also came to be assailed by the emerging school of experimental psychology. In distinction to the theoretical psychology of Freud that sought to understand the inner works of the mind, and that would develop theoretical models to achieve these ends, experimental psychology presented a fundamental shift from interiority towards the study of externalities. How would interior states manifest? For experimentalists, the answer was apparent that behaviour needed to be studied. Any externalisation of sensation, any behaviour, any manifestation of belief that results in voluntary or reflexive action would become the material subject of study. As this school of thought gained ground, psychology drew closer to

becoming two "kinds" of psychology. Writing in 1950 to describe this emergence of a new kind of psychology Boring (1957, p. 16) states,

> When I began writing, I supposed that the history of experimental psychology could very well begin with Fechner's *Elemente* of 1860 and Wundt's *Beiträge* of 1862. In this sense experimental psychology is only seventy years old. However, the genetic account requires the explanation of the new movement in terms of its ancestry. Hence my picture shows the lines of descent debouching from Descartes, Leibnitz, and Locke on the philosophical side, and developing within the new experimental physiology of the early nineteenth century on the physiological side. It was of the union of these two movements that experimental psychology was born.

Later, Boring (1957, p. 18), describes his project as,

> In a word, then, my book deals with the psychology of a half-century from 186 to 1910, with its preceding development and its consequences-a spindle-shaped history, as it were. Naturally the words "experimental psychology" must mean, in my title, what they meant to Wundt and what they meant to nearly all psychologists for fifty or sixty years--that is to say, the psychology of the generalized, human, normal, adult mind as revealed in the psychological laboratory. In making this choice I have had no doctrinaire's dissertation to defend. Animal psychology is of the laboratory; the mental tests are in a way experimental; abnormal psychology may be experimental. The first two of these subjects I have brought into my exposition in so far as their development was interpenetrated with the growth of 'experimental psychology; but I do not, of course, pretend to have written an adequate history of either movement.

But are these two systems mutually exclusive? This dissertation challenges the assumption that undergirds that question and present an argument that from the disciplinary perspective of educational psychology, the ostensible schism between theoretical psychology and experimental psychology might yet be bridged.

A Study of Aversives

A large component of this dissertation, perhaps the larger part, focuses on behaviourism. Whether classical or operant conditioning, behaviourism originally sought to investigate -- and once this was found to be the case, subsequently sought to experiment on -- the induction of behaviour by what was originally a neutral stimulus. The behaviour could be reflexive (involuntary) or voluntary and this was what primarily discerned operant (seeking the latter) from classical conditioning. As Freud (2003a, p. 269) bemoans of literature in his essay "The Uncanny," (strictly speaking, more broadly of the field of aesthetics in its entirety), the study of the positive, optimistic and beautiful is prized while the study of the unusual, ugly, strange, horrific -- generally speaking, the uncanny -- is disfavored. This however is not the case with behaviourist experiments from Pavlov through Skinner, through Miller & Seligman who all have not shied from the using of aversives -- negative stimuli -- in conditioning responses, whether reflexive or volitional.

In what might falsely have come to be identified as a landmark study by Watson and Rayner (1920) -- further discussion of this paper, and discussion in much greater depth that will add to the notional comment that a misidentification might have occurred, will be pursued in chapter 2 -- famously made use of nothing but aversives to induce the fear response in an experimental subject who was under two years at the time. While shocking, this dissertation is not intended to pursue a line of ethical inquiry into the field of experimental psychology. Nor does this dissertation seek to verge into an entirely different discipline and seek to examine studies in psychology from the perspective of moral philosophy.

A second role of aversives, and one that has grown to become increasingly popular, is the position taken by researchers whose work is in a similar vein to Lerman & Vorndran (2002) who

acknowledge the role of aversives, but who also argue for an objective calibration of their experimental efficacy. In a studied discussion Lerman and Vorndarn (2002) consider whether the data obtained through punishment is not in some way compromised by its very nature. However, this dissertation moves to consider Lerman and Vorndarn's argument, and all other similar research in the literature, in much the same way as it considers questions of ethics -- that while important, it is ultimately not the focus that must be maintained.

A third kind role for aversives in the literature is staked out by researchers like Platt (1973) and Gardner (1962) who both focus on what might be termed creative utility. Outside questions of ethics -- the basic right or wrong, should or should not -- and outside questions of value -- are results obtained valid or invalid, accurate or inaccurate -- Platt and Gardner apply aversives to what might be considered "off-label" use. For Gardner (1962) aversives could be, and are, deployed in the training of rudimentary artificial intelligence systems, where punishment can accelerate learning. Platt (1973) on the other hand considers what could be considered "negative benefit," where an individual benefits in the short-term only to harm themselves by that same action in the long-term or, by that same action, harms society rather than themselves. Platt's (1973) research focuses on how aversives might actually stimulate such behaviours that result in negative benefit (behaviours Platt himself terms "social traps").

But this third role of aversives in the literature, again, is not how the subject will be apprehended in this paper. However, this third role of creative utility does key into an essential and problematic feature of aversives. This is that aversives, and more broadly, any kind of stimuli are treated with great care in experimental settings. A bell is rung, motors are started, a floor is electrified and these are treated as a "starter pistol" of sorts, the kind which activates a

conditioned response. In the "real" world however, outside the precisely-arranged conditions of experimental labs, what is intended as a signal and what becomes reinforced as such, might not be as clear as in the experimenter's intent.

While Skinner is noted for his leading behaviours, even Pavlov, who pioneered the study of stimuli and conditioning as early as the 1890s, was well aware of this kind of difficulty as they (Pavlov, 1955, 233) wrote,

> But the "psychical" excitation has an additional feature… Let us suppose that the attendant enters for the first time the chamber in which the dog is kept and brings in the food. The food begins to act the moment it is shown to the dog. And if the same attendant brings in the food several days in succession the upshot will be that the moment he opens the door and puts his head in, the action begins. Thus, a new stimulating agent has appeared. If this is continued long enough, then the sound of the attendant's steps alone is sufficient to evoke a secretion of saliva. Consequently, stimuli that did not exist before have now developed. The difference appears to be considerable and essential: while in the physiological stimulation the stimuli are constant, here they are variable.

Even for Pavlov there is a variability in the nature of stimuli. The question of interest then becomes, what is signal (stimulus) and what is noise (non-pertinent information in the data-background)? And what relevant information can be coded into a stimulus that would allow that stimulus, when received by a subject, to be readily and reliably interpreted by that subject as stimulus?

The nature of transmission of stimuli, and questions around what can be encoded within stimuli in predictable ways, becomes important when dealing with anxiety outside of a clinical or laboratory setting and in a classroom setting. The reason for this is self-evident. In an information-driven world such as ours, perception, reception and interpretation of the correct stimuli make the difference between mastery of not only new skills, but also the "operating

system" of the world. In regard to the pursuit of this objective, aversives, rather than positive reinforcers, hold a privileged position, in that, they are predictive of more deeply ingrained behavioural patterns based on the inclusion of negative information.

This chapter has been an introduction and overview to the concepts and questions to be developed during this dissertation. The concept of aversives were discussed in relation to the schism between theoretical psychology and behaviourism.

CHAPTER 2: A WORKING MODEL OF ANXIETY

The following chapter discusses anxiety by considering its broader ontogenesis in the literature. Like much of the history of psychology, previous working models of anxiety can be directly associated with certain key personalities. This chapter considers three formulations -- three working models, as it were -- of anxiety, each model defined respectively by Sigmund Freud, Jacques Lacan and John Broadus Watson. For Freud, whose model of anxiety is chronologically first to appear, anxiety describes a tension within individual humans, between humans themselves and the individual and the extended social sphere which could be considered as the human superorganism. In *Civilization and its Discontents*, Freud (2002, p. 74) states this approach reasonably clearly, stating,

> By way of objection it might be asked whether it is not a positive addition to my pleasure, an unequivocal increment of my happiness, if I can hear, as often as I wish, the voice of the child who lives hundreds of miles away, or if a friend can inform me, shortly after reaching land, that he has survived his long and arduous voyage. Is it of no importance that medicine has succeeded in significantly reducing infant mortality and the risk of infection to women in childbirth, and in adding a good many years to the average life-span of civilized man? We can cite many such benefits that we owe to the much-despised era of scientific and technical advances. At this point, however, the voice of pessimistic criticism makes itself heard, reminding us that most of these satisfactions follow the pattern of the cheap pleasure recommended in a certain joke, a pleasure that one can enjoy by sticking a bare leg out from under the covers on a cold winter's night, then pulling it back in. If there were no railway to overcome distances, my child would never have left his home town, and I should not need the telephone in order to hear his voice. If there were no sea travel, my friend would not have embarked on his voyage, and I should not need the telegraph service in order to allay my anxiety about him. What is the good of the reduction of infant mortality if it forces us to practise extreme restraint in the procreation of children, with the result that on the whole we rear no more children than we did before hygiene became all-important, but have imposed restraints on sexual life within marriage and probably worked against the benefits of natural selection?

> And finally, what good is a long life to us if it is hard, joyless and so full of suffering that we can only welcome death as a deliverer?

Lacan, who has always distinguished himself by claiming a return to Freud, defines anxiety from within a very different intellectual tradition, the postmodern one. Lacan's is not merely a neoconservative descrying of traditionalism, but rather a dissection of metanarratives of psychology that have emerged post the foundational era of Freud and Jung by an analysis of "language games." This is a theoretical path similar to that taken by Jean François Lyotard (1984) in his book *The Postmodern Condition: A Report on Knowledge.* It is in this book that Lyotard (1984) defines the postmodern condition as an incredulity at the metanarratives that support the sciences, politics, justice -- any discourse that creates or legitimates our current social organisation -- that arises from, but is also predicted by, scientific progress. While Freud, in other words, struggles with the extant fact of scientific and technological progress, Lacan struggles to define anxiety for a world that questions the mechanisms of legitimation for that very scientific and technological progress. By contrast, Watson moves the search for a definition of anxiety from the more familiar theoretical frame of psychology -- one to which both Freud and Lacan conform -- to using the sub-field of experimental psychology as a basis of definition. As discussed earlier, experimental psychology arises from a basic distrust of the exploration of mental interiority, and instead proffers a method for gauging psychological insights through outward demonstrations like behavior. Ironically, the popularity of appeal that can be attributed to experimental psychology in the early decades of the 20th century, might explain Lacan's plea to return to the fundamentals of Freud.

Freudian Anxiety

All the foregoing reversions, inversions and calibrations set Freud up for *Civilization and its Discontents*, a work published in the last decade of his life, but one ruminated on for all the decades since the psychoanalytic project began in earnest. *Civilization and its Discontents* is a volume in which Freud directly confronts the pressures of modernity. High speed transport in the form of rail and steam-driven ocean-going vessels have come to be more than reliable, they have come to be the standard for transporting large numbers of humans great distances. Distances that would have been, just a handful of decades prior, unimaginable. High speed communication in the form of the telegraph and the telephone have completely nullified human displacement, allowing for instantaneous human connection across all the distances human can now safely travel. And misplaced prewar optimism would mis-estimate the Great War -- with its brutalist industrialisation of inter-state conflict -- as a final "settling of the bill" for centuries of internecine European aggression. To most Europeans, and arguably to most of the rest of the world as well, that even if it was not occurring in the moment, a new kind of peace and a lasting prosperity. It is in the spirit of such times that scientists turn to the ex nihilo fundamentals of their fields. In physics Bohr, Heisenberg, Schrödinger and others study objects so much smaller than atoms they can only be perceived as events rather than particles. As Bateson (1987) and Tooze (2018) would later both comment, the political economy moves from a oppression/ conflict/liberation geopolitical footing to one of armistice/abeyance/deterrence. And Freud himself is finally able to turn to the more basic question of the origin and the end of human aggression. The end in the double sense of both what the final outcome of human aggression might be, and in the sense of an end, or putting an end to, the sense of how human aggression might be confronted and ultimately extinguished. Early on in *Civilization and its Discontents*

Freud (2002, p. 35) begins this exploration by acknowledging his return to his most recent formulation of anxiety, where he writes,

> Suffering threatens us from three sides: from our own body, which, being doomed to decay and dissolution, cannot dispense with pain and anxiety as warning signals; from the external world, which can unleash overwhelming, implacable, destructive forces against us; and finally from our relations with others. The suffering that arises from this last source perhaps causes us more pain than any other; we are inclined to regard it as a somewhat superfluous extra, though it is probably no less ineluctable than suffering that originates elsewhere.

Here Freud offers a gentle allusion to an entire working life of back and forth, a career of undecided cogitation in which they pivot around two ideas; is anxiety simply transformed libido, or is anxiety neurogenic and a response to trauma. It is only much later in his career -- a final reconciliation is offered *Volume XX* of the *Standard Edition,* which collects writings from 1925 through 1926 -- that Freud settles on a sustainable definition marries together parts of all previous thought on the matter. Anxiety, Freud (1981) suggests, is the response to loss of an object of desire. Here in the 1929-published *Civilization and its Discontents*, Freud can be seen to thresh this thought. The suffering causing anxiety in the body, is the neurogenic aspect that was earlier thought to be causal of trauma. Anxiety as a signal, is the new formulation of anxiety that Freud reaches in the 1926 essay, "Inhibitions, Symptoms and Anxiety," that forms the spine of *Volume XX's* discussion of anxiety. And it is from the third quarter where suffering might arise -- internecine suffering, between humans -- that Freud uses the newer formulation of anxiety to explore the current theoretical question around the origins and ends of a more global human aggression. By the end of the work, the broader question of the origin of human aggression and

its end pushes Freud to a dark-minded turn, perhaps even outright despair. Freud (2002, p. 186) writes,

> The fateful question for the human race seems to be whether, and to what extent, the development of its civilization will manage to overcome the disturbance of communal life caused by the human drive for aggression and self-destruction. Perhaps in this context the present age is worthy of special interest.
>
> Human beings have made such strides in controlling the forces of nature that, with the help of these forces, they will have no difficulty in exterminating one another, down to the last man. They know this, and it is this knowledge that accounts for much of their present disquiet, unhappiness and anxiety. And now it is to be expected that the other of the two 'heavenly powers', immortal Eros, will try to assert himself in the struggle with his equally immortal adversary. But who can foresee the outcome?

It is with this closing passage that Freud slides into a formulation of anxiety more or less grounded in the mechanism of damnation. Something like -- not the thing itself as Freud was an avowed atheist -- a Biblical conflagration approaches, and not at all unlike the Book of Revelation, its approach cannot be resisted. Here the model of anxiety is perpetual since it arises from "the human drive for aggression and self-destruction." (ibid.) Its ongoing presence is immutable, cannot be negotiated away, and will invariably to a conflict between Freud's two fundamental drives, the Eros which seeks out pleasure and retracts from danger and the Thanatos which impels individuals towards self-destruction. But Freud's consideration here in *Civilization and its Discontents* goes towards groups of individuals and to society as a whole. In pursuance of this, Freud (2002) writes,

> What means does civilization employ in order to inhibit the aggression it faces, to render it harmless and possibly eliminate it? We have already become acquainted with some of the methods, but not with the one that

> seems most important. We can study this in the development of the individual. What happens to him to render his aggressivity harmless? Something very curious, which we would not have suspected, but which is plain to see. The aggression is introjected, internalized, actually sent back to where it came from; in other words, it is directed against the individual's own ego. There it is taken over by a portion of the ego that sets itself up as the super-ego, in opposition to the rest, and is now prepared, as 'conscience', to exercise the same severe aggression against the ego that the latter would have liked to direct towards other individuals. The tension between the stern super-ego and the ego that is subject to it is what we call a 'sense of guilt'; this manifests itself as a need for punishment. In this way civilization overcomes the dangerous aggressivity of the individual, by weakening him, disarming him and setting up an internal authority to watch over him, like a garrison in a conquered town.

In the closing stages of his life's work, it is here that Freud offers what could be considered the most confident formulation of anxiety. His earlier reconciliation of anxiety notwithstanding -- where anxiety is formulated as arising from trauma at the loss of the object of desire -- Freud offers here a formulation where the individual self is as fatalistically inescapable as anxiety itself. Anxiety, for Freud, is an interior process. While the nature of its character and structure is still being attempted to be defined, the fact of its interiority cannot be negotiated. Interiority however, is not the final state of anxiety, as this formulation of Freudian anxiety presents not only at the level of the individual, but also at the level of society more broadly. Like aggression, anxiety pervades society. It stands as the result of an internal process, but one that is present in each individual.

But by what mechanism is this structure transmitted across all individuals in society? Simply the idea that all individuals respond to the stress of aggression in exactly the same way. That response, as Freud outlines here, is simply the development of a superego which turns the

resources of aggression -- resources the individual would have turned outwards -- inwards onto the individual themselves. Following the logic here however, makes it harder to spot something closer a double bluff that Freud pulls. They (ibid.) start by asking "What means does civilization employ in order to inhibit the aggression it faces, to render it harmless and possibly eliminate it?" And just a few, short sentences later, the answer comes when Freud (ibid.) writes, "We can study this in the development of the individual." Thus the double bluff becomes clear. Freud has setup a localized problem, one localized to the broadest possible calibration -- all of society. It need not be restated here that a subject of such scope is a radical break with the long-held precepts of Freud's earlier writings. Freud's work, even his later writings, is characterised by a focus on the individual psyche. The promise of an expansionist investigation to encompass a psychoanalytic baseline for all of society is unexpected, but for supporters of Freud might have been a much anticipated break with the past. And yet, even with Freud at the precipice of something entirely new, a new line of thought that is already a radical break into conceptually new terrain, they retract and collapses the model of anxiety back to the level of the individual. It seems a retreat.

Ultimately, despite a clear formulation of anxiety in the later stages of his career -- anxiety as arising from trauma, the trauma experienced at the loss of an object of desire -- Freud nevertheless remains uncertain as to the scale of anxiety. Is anxiety personal, or pervasive throughout society? When offering a compact, all-encapsulating expression of Freud's model of anxiety, this hesitation should be recalled.

Lacanian Anxiety

Lacan's call to return to Freud across his popular lectures and various personal writings has now become somewhat infamous. The reason for this is self-evident. In the more or less

three quarters of a century between Freud pioneering the psychoanalytic method and Lacan at his height, the study of psychology has been redefined in key ways. In short, the field has drifted from its original vision; post-Freudians must be withdrawn from just as much as behaviourists may need to be retracted from in the eyes of an idealised neo-Freudian. The real work of psychology might need to be returned to. However, despite dissenting voices like those of Jung or James or Pavlov or Watson or Skinner, Lacan might be responded to a third force, one distinct from either post-Freudian or behaviourist thought. The intellectual movement of postmodernism. While the innovators of psychology who followed on from Freud is more fittingly a historiography of psychology, and given the constraints of word count, falls arguably outside the scope of this dissertation, and while behaviourism is considered elsewhere in this dissertation, Lacan is foundational in to a psychological understanding of anxiety and directly in dialogue with postmodernism. Hence it becomes necessary, in the interests of providing context, to very briefly consider the precepts of postmodernism before more fully discussing Lacan. To do so, a brief consideration of Lyotard's *The Post-Modern Condition: A Report on Knowledge* follows.

Lyotard (1984) begins by considering the problem of legitimation. By an appeal to what grander, underlying reality or principle of organisation are the modern sciences, arts, political economy or any systematised form of human knowledge or human activity able to to validate and sustain themselves? For Lyotard (1984) such systematised forms of human knowledge, activity or organisation can only make such appeals to grand narratives which hold certain truths as unambiguously correct. However, also for Lyotard (ibid.) all such grand narratives (sometimes they calls these metanarratives) have lost any claim to credibility. Take for example the knowledge discipline of science (Lyotard) which makes claims of being singular and objective,

and above all an accurate understanding of reality. Yet that very search for a singular corrective perspective is coercive in that, not only does such a perspective exclude all others, not only does such a perspective delegitimate -- and delegitimates other perspectives on no firm basis of certainty (Einstein famously rejected quantum theory from ideological perspectives) -- but also consider how the work of thinkers like Paul Feyerabend or Thomas Kuhn point to pragmatics of science being driven by populism rather than certainty. This is the modernist trend in thought -- the perpetual search for the certain, for the One Above All. However, what Lyotard argues for is variance, differentiation and heterogeneity of thought. And they ground this appeal in the basic uncertainty of the world and the collapse of metanarratives which would allow adherents to legitimate their claims. While the collapse of metanarratives is important in understanding the work of Lacan, of an even greater importance is the method Lyotard applies to his study of postmodern epistemology; these are language games. Taking a cue from Wittgenstein Lyotard (1984) focuses his analysis on such language games. They (ibid.) define them as follows. Speech is not monolithic, but utterances conform to categories of kind. Linguistically, performatives can be differentiated from pragmatics, just as they can from the promissory. Each of these differentiated kinds of statement comes with a unique set of rules. These rules position the sender (the person making the statement), the addressee (the person receiving the statement) and the referent (the object or person being spoken about) in different ways and both inscribe and proscribe the people and objects in these roles with different capacities, opportunities, limitations, et cetera. Understanding such language games will be crucial in following Lacan's reinterpretation of the Wolf Man, *The Uncanny*, Freud's on model of anxiety, and even in following Lacan's model of anxiety.

The Mantis and the Mask

How could the sensation of anxiety be described? For Lacan (2014) perhaps the best way to describe the sensation of anxiety relies on wearing a mask. For the moment, a literal mask. Lacan summons up an old French fable, the Cave and the Three Brothers, into which the protagonists enter a darkened space and are forced to confront a sorcerer. For the purposes of Seminar X, Lacan's 1962–1963 seminar on anxiety, it is Lacan himself who enters this darkened space -- a space whose nature will hold greater thematic value later when Lacan's analysis turns to Freud's essay *The Uncanny* -- emboldened by wearing a mask. The very fact of Lacan being emboldened belies his trepidation, or perhaps even outright fear. Soon enough, this fear is more fully realised. Lacan encounters an animal, a female praying mantis they states, reasserting a scenario they defined the previous year in Seminar IX. It is the very animal his mask mimics. It is here that anxiety flares. Lacan alludes to the sexual cannibalism that is prevalent in some 95% of female praying mantis. He -- the figurative he in Lacan's story -- is uncertain as to which mask he wears, the male or the female. He is unable to verify which mask he wears as the unremitting gaze of the female, and the eyes themselves by not being reflective, preclude him using them as a mirror. How exactly will he be perceived by the female? For Lacan, this anxiety -- the sensation of uncertainty at what we mean to the other. For Lacan (2014, p. 72), this sense of anxiety can only fully be apprehended through structuralist linguistics. They write,

> It justifies my having placed at the centre of the signifiers on the board the question I introduced long ago as the hinge between the two storeys on the graph, inasmuch as they structure the subject's relationship with the signifier, which strikes me as having to be the key to what Freudian doctrine introduced regarding subjectivity, Che vuoi?, Que veux-tu?, What wouldst thou? Push the functioning, the insertion of the key, a little further and you have, Que me veut-Il? with the ambiguity that the French

> permits with respect to the me between the direct or indirect object. It's not simply, What does the Other want with me? but also a suspended questioning that directly concerns the ego, not How does He want me? but, What does He want concerning this place of the ego?

Che vuoi? What do you want? *Que veux-tu?* What do you want? *Que me veut-Il?* What does He want from me? It is still very early in the first lecture of Seminar X, yet Lacan has already found a language game in the same mould as Wittgenstein and Lyotard. Here, for Lacan (2014) mathematics is used to bring precision to psychoanalytic theory. This is the kind of paralogy prefigured in Lyotard's (1984) *The Post-Modern Condition.* If all knowledge is subject to metanarratives that have collapsed in on themselves, then how do we resist systems that present as self-justified, self-evident, but systems that are totalising and ultimately tyrannical? Lyotard (ibid.) suggests that if no system can be validated by a grand narrative, then the disavowal of some systems is a political action, silencing dissenting voices. For Lyotard the postmodern condition privileges dissent and nonconformity of thought over consensus which is always a veiled exercise of disempowering the Other. This is the sense in which Lyotard uses the term paralogy -- as the levelling of power to include discourses that would traditionally be marginalised under modernist consensus. For Lacan this means the heterogeneity of deploying algebraic substitution and the graphs of differential calculus to penetrate psychological theory. In parallel to the mathematics, Lacan leverages linguistics to understand the relationship between the self and the other, describing the uncertainty they see as lying at the root of the encounter. Though his method might be similar to Lyotard or Wittgenstein, Lacan plays a very different kind of language game just a few paragraphs later. Lacan (2014, p. 73) writes,

> If, therefore, you know how to manage with regard to anxiety, trying to see how will enable us to make some headway. And like-wise, I couldn't produce anxiety myself without managing it in some way. Maybe that's a pitfall. I oughtn't to manage it too quickly.
>
> Nor does this mean, in any way, that, through some psychodramatic game, my goal should be to vous jeter, to cast you into anxiety - with the pun I've already made on the je in jeter.
>
> Everyone knows that projecting the I onto the inroad to anxiety has for some time been the ambition of a philosophy that is termed existentialist. There's no shortage of references, from Kierkegaard to Gabriel Marcel, Shestov, Berdyaev and a few others. Not all of them have the same place, nor can they be used in the same way. But I insist on saying at the start of this disquisition that this philosophy in so far as, from its patron saint, named first off, down to those whose names I've listed after him, it incontestably shows some decline - is marked, I feel, with some haste and even some disarray, I'd say, in relation to the reference in which, in the same era, the movement of thought has put its trust, namely, the reference to history. In relation to this reference, existentialist thought is born of and precipitated by a disarray, in the etymological sense of the term.

In French *je* is the pronoun I and forms part of the word *jeter*, to throw. *Vous jeter*. You (I) throw into anxiety, with this seminar, Lacan offers playfully. By these acts of substitution however, Lacan makes the paralogical connection between the formal psychoanalytic study of anxiety, and the philosophical project of existentialism. Yet having made that connection, Lacan then reverses course and demonstrates how the linguistic markers that surround existentialism point a perpetual resurfacing of disarray. This is the kind of analysis, blending together mathematics and linguistics only then to infuse those into psychoanalytic theory, that characterises Lacan as postmodern.

The Wolf in the Frame

Despite regularly claiming a return to Freud, that might in some ways appear as a slogan or a protestation of a sort, Lacan does literally return to Freud in *Seminar X;* first to the case of

Sergei Pankejeff who Freud would imprint on the popular imagination as the Wolfman, then to Freud's own skirmish with the genre of horror and linguistics, the 1919 essay "The Uncanny."

It bears refreshing what Pankejeff had to say during treatment. Freud (2003, p. 84) records,

> I dreamed that it is night and I am lying in my bed (the foot of my bed was under the window, and outside the window there was a row of old walnut trees. I know that it was winter in my dream, and night-time). Suddenly the window opens of its own accord and terrified, I see that there are a number of white wolves sitting in the big walnut tree outside the window. There were six or seven of them. The wolves were white all over and looked more like foxes or sheepdogs because they had big tails like foxes and their ears were pricked up like dogs watching something. Obviously fearful that the wolves were going to gobble me up I screamed and woke up. My nurse hurried to my bedside to see what had happened. It was some time before I could be convinced that it had only been a dream, because the image of the window opening and the wolves sitting in the tree was so clear and lifelike. Eventually I calmed down, feeling as if I had been liberated from danger, and went back to sleep.

Wolves like crows appear in a tree outside the bedroom window, only to silently surveil the child sleeping within. They appear in a pack of seven, maybe of six. Although they are wolves, they appear uncharacteristically so; because they lack the shortened tail common to wolves, they might seem as foxes, or even domesticated sheepdogs. But these wolves certainly are neither foxes nor sheepdogs, because they instigate a fear in the dreamer. In response the dreamer screams, and wakes. Clearly, there is a rich array of symbolism available for interpretation. But in his study of anxiety, Lacan largely ignores all of these, focusing instead on the single action that Pankejeff himself focused on; the opening of the window. Lecture VI of *Seminar X*, "That Which Deceives Not," in which Lacan addresses both the Wolfman and "The Uncanny," they begin with a flood of semantic concepts. They are not interested in presenting his

auditors with a metaphysics, Lacan (2014) tells us, instead what they offer is closer in structure to brainwashing. They (ibid.) remind their audience that among them are not only fellow psychoanalysts, but also a group of their own analysands. They (ibid.) reminds their audience that this kind of doubling of relationship -- one in which they some times hear their analysands speak, and at others when they hear Lacan speak -- is significant, and tied to surveillance. This not only prefigures themes from the Wolfman case, but also foreshadows a discussion on Freud's discussion of doubling in "The Uncanny." Lacan (ibid.) goes on to suggest that, despite the term recently being claimed by a populist sociocultural agenda, "brainwashing" is a kind of cypher that signals that Lacan is intellectually heterogenous in his method, while many others remain trapped within paradigms of knowledge production. (As a note for a bridge to a later stage of this dissertation; not only does this intellectual heterogeneity connect with Lyotard's paralogy, but also, in important ways his focus on the production of new knowledge breaks with the insular and exclusionary tradition of reliance on the writings of prominent figures from the past. This kind of reliance was what might be considered the ideological "opponent" targeted by Francis Bacon in his essay "The Great Instauration" in which Bacon laid out scientific method.) All of this for a single purpose Lacan (2014, p. 46) writes, to underscore the fact that anxiety has a structure, which can be defined as,

> …the mirror that is seen from one edge. Now, a mirror doesn't stretch out to infinity. It has limits. If you refer to the article from which this diagram has been extracted, you'll see that I make a point of mentioning the limits of the mirror. This mirror allows the subject to see something from a point located somewhere within the space of the mirror, a point that isn't directly perceivable for him. In other words, I don't necessarily see my eye in the mirror, even if the mirror is helping me to perceive something that I wouldn't see otherwise. What I mean by this is that the first thing to be put forward concerning the structure of anxiety - and which you

> always neglect in the observations because you're fascinated by the content of the mirror and you forget its limits - is that anxiety is framed.

Lacan references angular reflection. Stand in one corner of the room and you'd be able to see through the door left ajar on the far side of the room, into a private chamber. Your gaze would be sufficient, your presence at the door across the room is not required. Yet standing alongside the mirror, rather than before it, you would be unable to see your own reflection, or your own eye. What you would perceive most clearly from this vantage point is the limit of the mirror, the fact that it exists as a thing that is framed. Lacan (2014, p. 48) pushes even further,

> Those who heard the presentation I gave at the Provincial Study Days dedicated to the fantasy… may recall the metaphor I used of a painting that comes to be placed in the frame of a window. No doubt an absurd technique were it a matter of better seeing what's in the painting, but that's not what it's about. Regardless of the charm of what's painted on the canvas, it's about not seeing what stands to be beheld outside the window.

Beholding the limit, the frame, for Lacan (ibid.) necessitates a shift in perspective, one that moves away from the content of the image and returns to the idea that all images in some way conceal the real. This is the role of the Imaginary in Lacan, the second order of representation, one in which fantasy of Wolfman features prominently. They (ibid.) continues,

> It so happens that in dreams people see appearing, and in an unambiguous way, a pure, schematic form of the fantasy. This is the case in the dream from the study on The Wolf Man. This recurring dream takes on all its importance, and Freud chooses it as central, because it is the pure fantasy unveiled in its structure. This observation has an unexhausted and inexhaustible character because it essentially concerns, from beginning to end, the fantasy's relation to the real. Now, what can we see in this dream? The sudden opening - these two terms are indicated - of a window. The fantasy is beheld on the other side of a windowpane, and through a window that opens. The fantasy is framed.

The Wolf in the Frame. Something, we cannot yet know what, is being concealed. The fantasy is standing in for something else. But it is a fantasy with structure. Lacan (ibid.) concludes,

> As for what you can behold on the other side, you'll recognize there the same structure as you can see in the mirror in my diagram. There are always two rods, one of a more or less developed support and one of something that is supported. In this dream, they are the wolves on the branches of the tree. I only have to open up any old collection of drawings by schizophrenics to scoop this up by the basketful, as it were. You'll also find a tree on occasion, with something on the end of it.

It is at this point that they shift to a drawing by Isabella, a schizophrenic. Imagine a tree with a thick and powerful trunk. Three eyes, stacked vertically predominate the trunk. Instead of leaves, words in the shape of foliage -- *Io sono sempre vista. I'm always in view*, as Lacan (2014, p. 61) translates. They (ibid.) write,

> What is there on the tip of the branches? For the subject in question, the role that the wolves play for the Wolf Man is fulfilled by signifiers. Beyond the tree's branches she's written out the formula of her secret, *Io sono sempre vista*. It's what she'd never been able to say until then. I'm always in view. I still have to pause to make you see that in Italian, as in French, vista is ambiguous. It's not only a past participle, it's also view, with its two meanings, subjective and objective, the function of viewing, of sight, and the fact of being a view, as one says a countryside view, the view that's taken as an object on a postcard.
>
> What I simply want to accentuate today is that the dreadful, the shady, the disturbing, everything by which we translate, as best we can in French, the magisterial German *Unheimliche*, presents itself through little windows. The field of anxiety is situated as something framed. Thus, you're coming back to what I introduced the discussion with, namely, the relationship between the stage and the world. Suddenly, all at once, you'll always find this term the moment the phenomenon of the Unheimliche enters. You'll always find the stage that presents itself in its own specific

> dimension and which allows for the emergence in the world of that which may not be said.

With this Lacan enters the Uncanny.

The Lack of Lack

Freud (2003a) plays with language in "The Uncanny," but not in the sense of the language games like those identified by Wittgenstein, Lyotard or Lacan. Instead, Freud turns to semantics, to connotative and denotative meaning. In the first part of the three part essay, Freud considers the translation and philology of the Uncanny as concept. Freud (2003a) notes that this essay will follow a study of both aesthetics and psychology, and to this end, Freud first considers the German words *Heimlich* and *Unheimlich*, the canny and the uncanny, or more literally from the German, the "familiar" and the "unhomely." This consideration takes the form of an exploration of "unheimliche" in translation. For Freud (ibid.) the field of aesthetics is warped, after a fashion, in that it mostly attempts to study beauty rather than strangeness or eeriness. This eventually leads to a formulation that the uncanny is the strange or eerie in the sense that it is what once was the familiar, but has now been repressed (Freud, 2003a). After considering E. T. A. Hoffmann's "The Sandman" and other literary works that would present the Uncanny in a literary setting, Freud settles on describing the sensation of the Uncanny. As is characteristic of discursive thinkers, Freud does not shrink from confronting ambiguity or what might even be considered something of a retreat. It is only when considering the full scope of the project to encompass the literary and the psychological that Freud (2003a, p. 88) recognises,

> The uncanny that we find in fiction - in creative writing, imaginative literature - actually deserves to be considered separately. It is above all much richer than what we know from experience; it embraces the whole

> of this and something else besides, something that is wanting in real life. The distinction between what is repressed and what is surmounted cannot be transferred to the uncanny in literature without substantial modification, because the realm of the imagination depends for its validity on its contents being exempt from the reality test. The apparently paradoxical upshot of this is that many things that would be uncanny if they occurred in real life are not uncanny in literature, and that in literature there are many opportunities to achieve uncanny effects that are absent in real life.

It is a kind of surrender, a retreat of sorts, this recognition that categorisation must remain reinforced and the two principle systems under investigation -- aesthetics and psychology -- might be better to leave separated. In practice itself, Freud (ibid.) seems to retrace a line of anxiety that Lacan (2014, p. 92) describes; not anxiety-as-doubt, but anxiety that invariably leads to doubt,

> Just because anxiety's link to doubt, to hesitation, to the obsessional's so-called ambivalent game, may strike you as clinically tangible, this doesn't mean that they are the same thing. Anxiety is not doubt, anxiety is the cause of doubt.

We see this as evolving from an earlier statement when Lacan (2014, p. 63) suggests,

> What do we always expect at curtain up, if not this brief moment of anxiety, which quickly passes, but which is never lacking in the dimension where, in going to the theatre, we do more than just come along to settle our behinds into a seat that has cost us perhaps dear, perhaps less - the moment when the three knocks are sounded and the curtain rises? Without this introductive moment of anxiety, which quickly dies away, nothing would be able to take on its value of what will be determined thereafter as tragic or comic.

For Lacan (ibid.) the theatre is the best example. There is always a moment of anticipation, which Lacan argues clinically conforms to the definition of anxiety, and that it is

anxiety that frames -- "frames" in the full complexity, discussed previously, that Lacan apprehends the word, as the use of something that linguistically conceals -- the understanding of the literary in which we are all about to be immersed. (We can reasonably concede the theatre as the praxis of the literary). In other words, for Lacan, anxiety always appears ahead of the literary, and by doing so, prepares us to appreciate (more in the sense of apprehend than enjoy, however both senses should be preserved) the literary. Beyond the literary, the anxiety that appears as anticipation becomes the more generalised experience of doubt. At this point it is important to note that anxiety becomes a tool for manipulating (primarily in the sense of "operating," but also in the repressed sense of "exploiting" or "influencing") the world.

The mechanism that undergirds the appearance of both the literary apprehension, and the more generalised sense of doubt is the pervasive presence of the Uncanny, the Unheimlich. As with much of Lacan, they will argue for the Uncanny taking on a linguistic dimension. To properly situate the earlier quote, Lacan (2014) writes,

> …the dreadful, the shady, the disturbing, everything by which we translate, as best we can in French, the magisterial German Unheimliche, presents itself through little windows. The field of anxiety is situated as something framed. Thus, you're coming back to what I introduced the discussion with, namely, the relationship between the stage and the world.
>
> Suddenly, all at once, you'll always find this term the moment the phenomenon of the Unheimliche enters. You'll always find the stage that presents itself in its own specific dimension and which allows for the emergence in the world of that which may not be said.
>
> What do we always expect at curtain up, if not this brief moment of anxiety, which quickly passes…

But what exactly is the Unheimlich for Lacan? And what is its connection to the Heim (home)? Lacan builds this connection through the French concept of the hôte, the individual so overwrought with anxiety that they have become hostile. Lacan (2014, p. 56) writes,

> Anxiety is the appearance, within this framing, of what was already there, at much closer quarters, at home, Heim. It's the occupant, you'll say. In a certain sense, yes indeed, of course, this unknown occupant that appears in an unexpected way is absolutely related to what's encountered in the Unheimliche, but it's too little to designate it like that because, as the term indicates very well for you in French, this hôte, in its ordinary meaning, is already someone well wrought through with expectation.
>
> This hôte is what had already slipped into the hostile with which I began this talk on expectation. This occupant, in the ordinary sense, isn't the Heimliche, it's not the inhabitant of the house, it's the softened up, appeased and admitted hostile. That which is Heim, that which belongs to the realm of Geheimnis, has never passed through the twists and turns, the networks, the sieve of recognition. It has stayed unheimlich, not so much inhabitable as inhabiting, not so much in-habitual as in-habituated.
>
> The phenomenon of anxiety is the sudden appearance of the Heimliche within the frame, and this is why it's wrong to say that anxiety is without object.

Here it should be emphasised that Lacan manages to connect the Uncanny with the hostile. However, Lacan does not as yet draw his final conclusions, as they continue to playfully explore the linguistic root "heim." Not only does heim appear as a root for the words Heimlich and Unheimliche (and for the attendant adjectival forms of Heimliche and Unheimliche), but heim also appears as a root for the word Geheimnis or secrecy. It is through an interaction of Heim, Unheimlich, Geheimnis and the hôte that anxiety finds its clearest structure, Lacan (2014). We have unknowingly allowed the stranger into the home. We have been unable to recognise the true nature of this stranger, their true nature remains secret. Concealed from us like the world concealed behind a window covered by a picture frame with a painting inside. Something that

was once familiar has now become iredeemibly hostile. Yet, Lacan (2014, p. 57) is able to formulate this psychoanlytic arrangement at the level of linguitics as well,

> Signifiers turn the world into a network of traces in which the transition from one cycle to another is thenceforth possible. This means that the signifier begets a world, the world of the subject who speaks, whose essential characteristic is that therein it's possible to deceive.

Which they (ibid.) clarifies as,

> Anxiety has a different sort of object from the object whose perception is prepared and structured. By what? By the model of the cut, of the furrow, of the unary trait, of the there it is, which in operating always remain tight-lipped - the tight lip or lips of the cut - which become a closed book on the subject, unopened letters sending him off again under closed seal to further traces.
>
> …
>
> Anxiety is this cut - this clean cut without which the presence of the signifier, its functioning, its furrow in the real, is unthinkable it's the cut that opens up, affording a view of what now you can hear better, the unexpected, the visit, the piece of news, that which is so well expressed in the term pressentiment, which isn't simply to be heard as the premonition of something, but also as the pre-feeling, the pre-sentiment, that which stands prior to the first appearance of a feeling.
>
> Things can branch off in every possible direction starting off from anxiety. What we were waiting for, when all's said and done, and which is the true substance of anxiety, is that which deceives not, that which is entirely free of doubt.

It is precisely this premonition, this pre-feeling that must be applied to the Unheimlich itself. As Lacan (2014, p. 66) reminds us,

> The Unheimliche is what appears at the place where the minus-phi should be. Indeed, everything starts with imaginary castration, because there is no image of lack, and with good reason. When something does appear there, it is, therefore, if I may put it this way, because lack happens to be lacking.

As a side-note, the minus-phi occupies a position of privilege in Lacan's algebraic notation, one which they (Lacan, 2002, p. 28) define as,

> I've written (minus-phi) at the top, because we'll have to put it there next time. This minus-phi is no more visible, no more tangible, no more presentifiable up there than down here, under (a), because it hasn't entered the imaginary.

For Lacan the imaginary holds a technical definition; it one of the three strands or registers of the so-called Borromean Knot that they use to represent reality (the other two registers being the symbolic and the real). For the moment, and because of Lacan's more relaxed use of the term here, we can reconcile the imaginary as not being much different from Freud's use of the imaginary in "The Uncanny." Minus-phi comes to reference those little windows through which the Uncanny might, and can only, appear. But a final clarification appears much later for Lacan (2014, p. 78),

> At the level of this symbolization - that is, in the relation to the Other in so far as the subject has to constitute himself in analytic discourse - one of the possible forms in which lack appears is the (minus-phi), the imaginary support of castration.

To return to where the Uncanny appears in place of minus-phi, it must be recognised that doubt reappears within the self, signalling that anxiety has already taken place. It is with this in mind that Lacan (2002) prepares for the final definition of anxiety with a brief allergorical tale. They posit the definition of a lack, suggesting that one might consider how we can know for certain that a certain volume is missing; simply by checking on the shelf. If a gap (a lack) can be found between volumes IX and XI as they rest on the shelf, it can be inferred that volume X has been borrowed, or at least needs to be accounted for by some other means. But say that the book

being looked for is very old and only one copy has been obtained. When inquiring at the loan desk, the librarian advises you that there is a note appended to the volume; four prints are missing. Lacan (2014) does the double-negative that has now been created -- missing pages in a missing book -- mean that those missing pages would suddenly appear on the shelf? Lacan (ibid.) is exclamatory in his declaration, "It's blindingly obvious that it wouldn't." This lack of lack described here would allow for a firmer grasp of Lacan's (2002, p. 28) earlier formulation where embarrassment is opposed with turmoil,

> …the opposition that was already implied, and even expressed, in my first introduction of these terms, between what there's too much of in embarrassment, and what there's too little of in turmoil, esmayer. Turmoil is essentially, so I told you, the evocation of the power that fails you, the experience of what you lack in need.
>
> Linking up these two terms is essential for our topic because it highlights its ambiguity. If what we're dealing with is too much, then you're not lacking it. If it so happens that we're lacking it, why then say that elsewhere it's embarrassing us?

All of which in turn connects with the Uncanny appearing in the place of minus-phi, as cited earlier, "because lack happens to be lacking" (Lacan, 2002, p. 42). It is by this perplexing, but ultimately sound, logic that Lacan returns us to the idea that the something that has entered, the thing we do not and cannot recognise, is lack itself, and in the face of such lack of lack, we must begin to reinterpret Freud's final formulation not as anxiety arising out of object-loss, but we recognise ourselves as the object lost to the desire of the other. Not the lack of, but the over-proximity of desire.

Watsonian Anxiety

Like Freud or B. F. Skinner, the figure of John Broadus Watson seems intractably caught in the grip of myth. Watson's life is marked by hubris, failure and ostensibly others, even his own children, paying for his defeat with depression if not outright despair. To add to it, the one landmark experiment Watson is notorious for, before fleeing to the relative safety of advertising -- Little Albert -- is fraught with bad methodology from the start. No control group had been setup, experimenter bias was never considered, fraternisation between researchers would eventually result in marriage, results were never independently verified -- no could they have been without violating child safety laws -- ethical controls were simply absent, and the arguable damage done to the experimental subject was never undone in desensitisation procedures. Yet for all of this Watson's findings introduce a wholly new conceptualisation of anxiety, one in which anxiety is no longer proper to the subject, nor a result of internal processes arising from the ongoing repression of baser animal instincts, or simply continued exposure to society itself. What Watson proffers is elegantly simple; an anxiety that is exterior individuals, one that can be induced through acts of -- granted, a dark-minded variety that is reliant on the correlation of aversives -- creativity, and ultimately, one that can be nonspecified at both an individual and intersubjective level. While the apparent contradictions between the Freudian and the Lacanian models of anxiety must still be reconciled for there to be an viable working definition of anxiety in a functionalist sense that would meet the needs of educational psychology, Watsonian anxiety is causative (in both senses of the term; "caused by" and "causes") and its origins are exteriorised. Understandably, this difference in character of the anxiety model might simply be a feature of Watson being located in the behaviourist school of thought, while Freud and Lacan -- although separated by modernist and postmodern sensibilities -- both fall on the side of mental

interiority and theoretical models, and thus, against, at least conceptually, experimental psychology.

Over a 14-page journal-style report, Watson and Rayner (1920) outline the effects of their experimentation after defining the experimental environment. Albert B., the sole subject of experimentation and who would later commonly come to be known as "Little Albert," would be placed on a mattress atop a table in a room in which Watson and Rayner would observe introduce various objects and animals. Part of the protocol for establishing the environment was the introduction of a white rat, a steel hammer and a steel beam suspended from the ceiling. Not much is known about Albert, but Watson and Rayner (1920) confirm that Albert "was reared almost from birth in a hospital environment," where "his mother was a wet nurse." Prior to experimentation, a series of baselines was established. Little Albert was tested for signs of anxiety at interaction with the rat. Other objects, animals and materials were similarly tested for signs of anxiety at interaction. Among these were white hair, white cotton, rabbits, soft toys that were white in colour. At no point during these baselines were there any signs of anxiety at interaction.

In the opening paragraph of their paper, Watson and Rayner (1920, p. 2) define a unique research question,

> In recent literature various speculations have been entered into concerning the possibility of conditioning various types of emotional response, but direct experimental evidence in support of such a view has been lacking. If the theory advanced by Watson and Morgan to the effect that in infancy the original emotional reaction patterns are few, consisting so far as observed of fear, rage and love, then there must be some simple method by means of which the range of stimuli which can call out these emotions and their compounds is greatly increased. Otherwise, complexity in adult response could not be accounted for. These authors

> without adequate experimental evidence advanced the view that this range was increased by means of conditioned reflex factors. It was suggested there that the early home life of the child furnishes a laboratory situation for establishing conditioned emotional responses. The present authors have recently put the whole matter to an experimental test.

In other words, Watson and Rayner are seeking to explain the fact of emotional complexity in adults given the apparent lack of such complexity -- apparent given Watson and Morgan's earlier research that infantile emotional range comprises only three modalities, those of fear, rage and love -- in infants. Where does emotional complexity come from? Watson and Rayner (ibid.) are looking for "some simple method," and they settle on testing for "conditioned reflex factors," by which they mean classical conditioning will be used whether aversives can be used to compound emotional complexity from the dearth of such emotional complexity. Classical conditioning will be discussed in greater depth in Chapter 4 for of this dissertation. The reason for this division of thought in the argument is that as classical conditioning falls under the rubric of behaviourism it is more proper to a discussion of learning theories, a discussion offered in Chapter 4. However, since the work of Watson and Rayner directly relates to a discussion on anxiety, the Little Albert experiment is placed here. Despite its variant juxtaposition, discussing the Little Albert experiment would neither be possible nor prudent, without at least some brief definition of terms. By the time the world was preparing for the 1920s, classical conditioning had already been part of psychological study for at least 30 years. Since the 1890s, Russian psychologist Ivan Pavlov had experimented on creating involuntary responses upon presentation of what could be termed a neutral stimulus. Pavlov's experiment was simple. Step on, observe that dogs would salivate at steak. This is an unconditioned response, since the dogs require no

training (or, conditioning) to respond in this way. Step two introduce a neutral stimulus, like a bell, upon presentation of the unconditioned stimulus. Step three, hypodissertatione that an associative act within the dogs' central nervous system would salivation to initiate even if the primary unconditioned stimulus were removed. Step four, test the hypodissertation at step three by ringing the bell in absence of the steak and observing whether or not salivation occurs. Pavlov found his hypodissertation to be correct and deduced that such an associative process as theorised must have taken place. Watson and Rayner would follow the model of Pavlovian experiments, but would test using the introduction of an aversive to interaction between Little Albert and the rat. An aversive is simply a negative stimulus that if reinforced would reduce occurrence of a certain behaviour. Moving from involuntary reflex to voluntary action is by definition a move from classical conditioning to operant (or instrumental) conditioning. As classical conditioning is experimentally defined by Pavlov as early as the 1890s, so is operant conditioning defined by B. F. Skinner. For reasons similar to those discussed earlier under Pavlov, Skinner is considered in Chapter 4 along with other educational theories. However, definitional activity of Skinner is not required here and consequently is not offered, with the single proviso that operant conditioning differs from classical conditioning by a single significant measure; that operant conditioning seeks to induce voluntary action, while classical conditioning seeks to induce involuntary reaction.

At this point the Little Albert experiment can almost be anticipated correctly, without needing to be explained. Watson and Rayner would allow Little Albert free range of motion, would not impede the child's movement by any measure and would consistently, through passive means, encourage Little Albert to approach the rat for the purposes of play. It was at this point

the hammer would be brought down. Literally, as Albert approached the rat out of exploratory curiosity, Rayner would bang the steel head of the hammer on the suspended steel beam in order to cause an alarming or frightening sound. Watson and Rayner (1920) record that the clang would cause Little Albert to instantaneously retract, like a human hand from a heat source, from the rat. Over time, this kind of behavior -- shrinking from falsely perceived danger -- would come to present even in the absence of the aversive (the metallic clang) just as Pavlov's experiments predicted. And in keeping with the predictions made by Pavlov's theory, an associative connection must have been formed between the neutral stimulus of the rat and the aversive of the metallic clang. In the later stages of the experiment, nearing the one-year mark of the experiment, Watson and Rayner (1920) find that a process of generalization had begun to take root. In the eleventh month of experimentation, Watson and Rayner (1920) observed that surprise production of the rat -- i. e. suddenly revealing the rat from concealment, like that of a basket -- would elicit an anxiety response. However, a little under three weeks after, by day 20 of the same month, Watson and Rayner (1920) found that the expression of anxiety had become generalised and would be provoked at the introduction of a rabbit, and a dog, but not blocks. A little short of the 13-month mark, at one year and 21 days, Watson and Rayner (1920) noted that even the white beard of a Santa Claus mask produced an anxiety affect in Little Albert.

The lack of ethical restraint and oversight seems unconscionable, however Watson and Rayner's work in redefining the concept of anxiety, its source and its character, the creative nature of its induction and, by implication, the transmissibility of its constitution seems unfairly overlooked in the literature. Watson's anxiety is distinguishable from Freud's model of anxiety which, prior to the 1920s (Freud, 1925) saw anxiety as "transformed libido," and after, would see

anxiety as either a signal or as a pervasive society-wide anxiety that arises from humans needing to repress their inherent base natures in order to sustain peaceful coexistence. Similarly, Watson's anxiety is distinguishable from the Lacanian model that seeks to reemphasise anxiety (ultimately) as a tool and method for manipulating a larger, more psychically impenetrable world where phobia takes on a dimension of utility and can delineate safe and knowable spaces from dangerous and unfathomable ones. Watsonian anxiety, must be recognised as an entirely novel kind of anxiety -- anxiety as commodity. Rather than the result of a single or series of internal processes -- a definitional baseline that both the Freudian and Lacanian models share in -- Watsonian anxiety is completely exteriorised, reproducible, exchangeable, fungible and, in at its pinnacle, consumable. A dark prospect to be certain, but not one entirely absent of hope; if anxiety can be exteriorised and rendered as a commodity, it becomes subject to the same general principles all commodities are subject to. Commodities can be shelved and never interacted with, commodities can be lost to breakage, commodities can be destroyed. Whereas Freud and Lacan offer models of anxiety that are both inherent and perpetual to the human condition. Watson, by contrast, constructs a model of anxiety that sees the phenomenon as counter-teleological (there is no building towards anxiety, and anxiety is never inevitable) and one where anxiety is, finally, extinguishable. In Watson and Rayner's own words, they explore the possibility of extinction, however sadly never enact the possibility with Little Albert. Watson and Rayner (1920, p. 3) round out their opening comments by describing four basic protocols for their experiment, where they write,

> IV. If after a reasonable period such emotional responses have not died out, what laboratory methods can be devised for their removal?

Amid what could be argued to be the grossest transgression of ethical bounds in 20th century psychology, Watson and Rayner offer the comparatively most optimistic model of anxiety. One that does not rely on damnation and perpetuity mechanics, but rather one that offers a reset to a baseline normal, a reversibility and, if needed, the extinction of anxiety itself.

This chapter considered three kinds of anxiety -- Freudian, Lacanian and Watsonian -- in order to provide a baseline for understanding, and working definition of the psychological phenomenon.

CHAPTER 3: MIMETIC ANXIETY

Lacan finds an apparent inversion of anxiety in Freud. Freud finally settles on anxiety as object-loss, separation from object of desire. Lacan on the other hand suggests anxiety as arising from an over-proximity to the object of desire, resulting in a lack of a lack of desire. Lacan, moreover, reaches this definition by claiming it to be there, latent but not apparent in Freud, and that through a process of diligent and intelligent interpretation -- rarefied through the disciplines of linguistics and mathematics, and refracted through postmodern sensibility -- Freud might be understood to actually be saying the opposite of what they seem to be saying in a plain, common-sense understanding. But how can the one be reconciled with the Other? How can Freud be reconciled with Lacan, and more importantly with what Lacan claims of Freud? One key piece might be to discover how many elements are in play here. While on the surface of things, both Freud and Lacan seem to suggest a dyad of Subject and Object (of desire), more elements might be needed to explain how the more complex Lacanian formulation might be derived from what is apparently the more simple Freudian structure. It is possible that finding this deeper understanding might not come from simply considering Freud and Lacan in isolation. It is here then that a kind of lateral move is proposed; casting a wider net, as it were, to consider what might prove useful to understanding the working dyad at a deeper level. Unexpectedly, consideration must now extend beyond the psychoanalytic and move towards learning theory, particularly the learning theory of Albert Bandura.

The Shift from Dyadic to Triadic Structures

Albert Bandura has come to be associated with observational learning, in that, his experiments were the first to note the phenomenon. Formally, the wealth of Bandura's research

has gone into developing social cognitive theory. After initial experiments in 1961 where experimental subjects, children aged 3 to 6 years, expressed frustration as physical violence toward a toy clown, after witnessing a stooge do the same, Bandura sought to expand the experimental scope. Bandura (1961, p. 14) writes:

> While these [earlier] studies provide convincing evidence for the influence and control exerted on others by the behavior of a model, a more crucial test of imitative learning involves the generalization of imitative response patterns to new settings in which the model is absent.

Continuing (ibid.),

> In the experiment reported in this paper children were exposed to aggressive and nonaggressive adult models and were then tested for amount of imitative learning in a new situation in the absence of the model. According to the prediction, subjects exposed to aggressive models would reproduce aggressive acts resembling those of their models and would differ in this respect both from subjects who observed nonaggressive models and from those who had no prior exposure to any models. This hypodissertation assumed that subjects had learned imitative habits as a result of prior reinforcement, and these tendencies would generalize to some extent to adult experimenters (Miller & Bollard, 1941).
>
> It was further predicted that observation of subdued nonaggressive models would have a generalized inhibiting effect on the subjects' subsequent behavior, and this effect would be reflected in a difference between the non- aggressive and the control groups, with subjects in the latter group displaying significantly more aggression.

In other words, could aggression be replicated by child subjects, in other locations than those in which the subjects themselves were exposed to the aggression? Bandura's thoughts on the matter take on a more concrete form when they begin to criticise the cognitivist school of

learning theories, which hold that behaviour is a result of an inner model. Bandura (1977, p. 77) writes,

> Many theories have been proposed over the years to explain human behavior. Until recently, some theorists held that motivational forces in the form of needs, drives, and impulses, frequently operating below the level of conscious- ness, were the major determinants. Since the proponents of this school of thought consider the principal causes of behavior to be forces within the individual, that is where they look for the explanations of why people behave as they do. Although this view enjoyed widespread popularity and influence, it did not go unchallenged.
>
> Theories of this sort were criticized on both conceptual and empirical grounds. The inner determinants often were inferred from the behavior they supposedly caused, resulting in description in the guise of explanation. A hostile impulse, for example, was derived from a person's irascible behavior, which was then attributed to the action of an underlying hostile impulse. Similarly, the existence of achievement motives were deduced from achievement behavior; dependency motives from dependent behavior; curiosity motives from inquisitive behavior; power motives from domineering behavior, and so on. There is no limit to the number of motives one can find by inferring them from the kinds of behavior they supposedly produce. Indeed, different theories have proposed diverse lists of motivators, some containing a few all-purpose drives, others embracing a varied assortment of specific drives.

Bandura thus accuses cognitivist theory of circular reasoning. Description was being presented as analysis, or worse as explanation. Phenomena identified in behaviour were then presumed to have been caused by cognitive proclivities toward the same. However a turning point is quickly reached with Bandura's own work. Bandura (1977) writes,
Developments in behavior theory shifted the focus of causal analysis from amorphous internal determinants to de- tailed examination of external influences on human responsiveness. Behavior has been extensively analyzed in terms of the stimulus conditions that evoke it and the reinforcing conditions that maintain it. Researchers have repeatedly demonstrated that response

patterns that are generally attributed to inner causes can be induced, eliminated, and reinstated by varying external influences. Results of such investigations have led many psychologists to view the determinants of behavior as residing not within the organism but in environmental forces.

Bandura (1977, p. 83) continues,

> Psychological theories have traditionally assumed that learning can occur only by performing responses and experiencing their effects. In actuality, virtually all learning phenomena resulting from direct experience occur on a vicarious basis by observing other people's behavior and its consequences for them. The capacity to learn by observation en- ables people to acquire large, integrated patterns of behavior without having to form them gradually by tedious trial and error.
>
> The abbreviation of the acquisition process through observational learning is vital for both development and survival. Because mistakes can produce costly, or even fatal con- sequences, the prospects for survival would be slim indeed if one could learn only by suffering the consequences of trial and error. For this reason, one does not teach children to swim, adolescents to drive automobiles, and novice medical students to perform surgery by having them discover the appropriate behavior through the consequences of their successes and failures. The more costly and hazardous the possible mistakes, the heavier is the reliance on observational learning from competent examples. Apart from the question of survival, it is difficult to imagine a social transmission process in which the language, lifestyles, and institutional practices of a culture are taught to each new member by selective reinforcement of fortuitous behaviors, without the benefit of models who exemplify the cultural patterns.

What therefore becomes crucial for Bandura, is the development of a triadic structure. Observational learning occurs not so much -- as per the romance of an evolutionary tale playing out on the African savannah, for example -- as the young child stargazing, but as the interaction between the child, the stars and the adult pointing at the stars to draw the young child's attention

to them. What presents as a means for survival enthralls for many thousands of generations subsequent. The behaviour of how to learn becomes ingrained in the system of knowledge transmission of the species. For the child however there is merely the relationship between the stars and itself, while the finger pointing at the stars becomes suppressed. This is the primary dynamic of Bandura's model of social cognition. For Bandura, this becomes the base for a dynamic system that interrelates the Self, the Environment and what Bandura terms, the Model. Bandura (1977, p. 16) writes further,

> As we know, internal personal factors and behavior also operate as reciprocal determinants of each other. To take one example, people's expectations influence how they behave, and the outcomes of their behavior change their expectations. The major weakness of the traditional formulations is that they treat behavioral dispositions and the environment as separate entities when in fact, each determines the operation of the other. For the most part, the environment is only a potentiality until actualized by appropriate actions; it is not a fixed property that inevitably impinges upon individuals. Lecturers do not influence students unless they attend their classes, books do not affect people unless they select and read them, fires do not burn people unless they touch them, and rewarding and punishing influences remain in abeyance until activated by conditional performances. Similarly, personal determinants are only potentialities that do not operate as influences unless they are activated. People who can converse knowledgeably about certain issues can affect others if they speak but not if they remain silent, even though they possess the means to do so. Thus, behavior partly determines which of the many potential environmental influences will come into play and what forms they will take; environmental influences, in turn, partly determine which behavioral repertoires are developed and activated. In this two-way influence process, the environment is influenceable, as is the behavior it regulates.

Consider two major trends within Bandura's thought in the text quoted above; the impermanence of the Environment, and the intemperance of the Self. The environment is non-stable (as categorically distinct from "unstable"), in that it "exists" only to the extent to which it

is manipulable and manipulated by subjective agency. Books do not read themselves, Bandura might well say, adopting the tone they do in the text quoted above. Without transgressing into the existentialist philosophy, the world in a practical sense, tends towards disappearance once interaction ceases. Books that do not read themselves, are the equal of unread books. But just as the world is impermanent, so too is the Self given to excess. The Self exceeds itself Bandura seems to suggest, spilling over from expectation into behaviour. No behaviour is defined simply as beheviour, however it relies on expectation as a driver mechanism, which in a kind of ouroboros, or Möbius strip as Lacan (2014, p. 45) references when they suggest,

> Let's see for ourselves now with what I've taught you to find in the Möbius strip. In taking this band - having opened it - and joining it back to itself by giving it a half twist on the way, you get with the greatest of ease a Möbius strip.
>
> An ant walking along one of the apparent faces will pass over to the other face without needing to go over the edge. In other words, the Möbius strip is a surface that has just one face and a surface with just one face cannot be turned inside out. If you turn it over, it will still be identical to itself. This is what I call not having a specular image.

It is strange, eerie, unexpected to find that Bandura speaking about observational learning fits in so neatly with Lacan speaking about anxiety; almost as if the two were writing together or somehow working on the same problem in offices just a few doors apart. However, historically this is not the case, and the facts contradict this notion of group-work. However the appearance of similar themes is eerie; eerie in the sense of the Uncanny having reappeared. It bears investigation then, the fuller context of Lacan is referencing when they introduce the Möbius Strip. Lacan (2014) discusses the Möbius Strip in Lecture VII, "Not Without Having It," and references the mathematical form only one other time, in passing during Lecture XV, "Men's

Business," to repeat what they had originally stated. The specific context is Lacan (2014) talking about the specular object after a discussion about the Rat Man. Lacan (2014, p. 89) describes the specular image as,

> To go quickly, what is it that makes a specular image distinct from what it represents? It's that right becomes left and vice versa.
>
> Let's put our confidence in the idea that we normally find our reward in trusting in what Freud says, even in his more aphorismatic moments. The ego is not only a surface but, so he says, the projection of a surface. Thus the problem has to be posed in the topological terms of pure surface. In relation to what it duplicates, the specular image is exactly a right glove becoming a left glove, which one can obtain on a single surface by turning the rim inside out.

This however does not stand in isolation, but builds directly upon Lacan's primary outline for the Lecture, presented at the very start. It is here that Lacan (2014, p. 99) references Freud's 32nd introductory lesson on psychoanalysis and suggests,

> It's been translated for us in a French whose unintelligibility you'll be able to judge. Mais il ne peut vraiment être question que de conceptions. But it can truly only be a question of conceptions. Full stop. En effet, il s'agit de trouver les idées abstraites, justes, qui, appli-quées à la matière brute de l'observation, y apporteront ordre et clarté. Indeed, what is involved is to find the right abstract ideas which, when applied to the raw material of observation, will bring order and clarity to it. Clearly, it's always unfortunate to entrust such a precious thing as the translation of Freud to Women of the Bedchamber.
>
> There's no full stop in the German text where I pointed that one out to you and there's no riddle in the sentence. Sondern es handelt sich wirklich um Auffassungen, it's a matter wirklich, really, effectively - and not truly - of conceptions, that is, by that I mean that the accurate abstract representations, Vorstellung, it's a matter of einzuführen, of bringing them to light, and of applying them to the Rohstoff der Beobachtung, the raw stuff of observation, which will allow one to get Ordnung und Durchsichtigkeit out of it, order and transparency.

The raw material of observation must be brought to order and transparency, Lacan suggests of Freud. A process that is mirrored in Lacan's thought by the specular image doubling, only to be turned inside out to form the Möbius Strip. Which in turn finds an analogue in the impermanence of the environment and the intemperance of the Self. Which itself relies on the triadic structure of the Self, the Model and the Environment. "Thirdness" pervades this set of ideas; the myriad of network paths that Lacan has drawn between himself and Freud, as much as within Freud and within Lacan individually, as much as the network pathways that can be drawn between Freud and Lacan, and Bandura, that have seemingly come to emerge by happenstance. Thirdness appears a signature, something that underwrites the entire discourse being offered. And in this regard, thirdness -- the presence of a third element -- seems to signal a possible method for reconciling Freud with Lacan, and with Lacan's rereading of Freud. It is here then that a stronger understanding of the interaction between the Self and the Model must be mapped. But to more fully understand this, a unique kind of interaction must be understood, that of copying or mimesis.

The Concept of Mimesis

In a limited sense, the scholarship around literature has been dealing with a "psychogenic world" at least since classical Hellenistic times. This is a point emphasised by Eric Auerbach (2003) in his *Mimesis*, which sets out to study the representational forms in literature. As a concept, mimesis will become critically important later in this chapter, albeit in a non-traditional, interdisciplinary way. Auerbach however, uses the concept of mimesis in its more traditional sense, allowing for little movement from the original Platonic sense of "imitation" and "representation" of the real in works of art. Auerbach's basic assertions comport well enough

with the idea of the "psychogenic world," that has already been developed; the sense in which both Freud and Lacan ostensibly intimate the world as standing in some relation to, whether itself generated by, or else as mirroring of, the inner tribulations of a Self. Appropriation of Auerbach's work becomes essential in this regard, because it pushes forward this "psychogenic world" which Lacan and Freud seem to suggest only to then conceal from broader, more studied consideration.

In the book's opening chapter, "Odysseus' Scar," Auerbach (2003) contrasts two modes of storytelling; one credited to Homer, originating in *The Odyssey*, the other coming from the Book of Genesis in the Bible, and credited to the author who would come to be known as the Elohist. Both stories are well known, even in the modern era, yet proceed by very different techniques.

Odysseus arrives home at Ithaca, twenty years after leaving for war. They doubt the faithfulness of his wife and arrives disguised by a god. Thinking him dead, suitors have made Odysseus' home their own and now force his wife to chose one among them. As befitting his status as guest, the disguised Odysseus has his feet washed by a servant. The servant recognises a scar that Odysseus received as a child while hunting at his grandfather's house. God appears to Abraham demanding he sacrifice his only son, Isaac. Isaac agrees to travel with his father, unaware of the fate that awaits him. After three days travel with many servants and a baggage train, father and son find themselves at the foot of a mountain which they then ascend. Isaac helps assemble wood to build an altar. Abraham produces a dagger, Isaac is confused, God stays Abraham's hand. Father and son descend the mountain.

What distinguishes the two texts is their relative psychological "penetrability" of their respective styles. Auerbach (2003) suggests that "the basic impulse" of the Homeric story is "to

represent phenomena in a fully externalized form, visible and palpable in all their parts, and completely fixed in their spatial and temporal relations." By distinction in the Biblical text, Auerbach (2003) stresses that while those personages also speak, "their speech does not serve, as does speech in Homer, to manifest, to externalize thoughts — on the contrary, it serves to indicate thoughts which remain unexpressed." The Biblical text allows for greater psychological penetration. Why would God make this demand of Abraham? Why would Abraham comply? How do the servants who journeyed with father and son for three days perceive these events? What was the character of that journey, was it arduous, easy? None of these questions are answered but textual clues offer the keen reader intimations.

It is this capacity to offer clues that allow for the more perspicacious reader to develop an interior world of the events that moves from a dyadic structure to a triadic one. With Homer, a story is told in the present, or more correctly in the eternal present, and the forward momentum of the scar revealing the true identity of its bearer can immediately be suspended to whisk readers into another immediate present — one that is now some forty years in the past — where Odysseus is but a boy and setting forth on a hunt with his grandfather. The Elohist however, elides detail forcing the reader to supply their own. Homer assumes an audience that is present, possibly one too enthralled to escape. The Elohist assumes an audience in the future, one that will find what has been written, will cogitate on it, will imagine themselves "into" the telling.

It is in this way that Auerbach unearths a "buried" triadic structure within the dyadic structure of storytelling. Storyteller-audience, becomes storyteller-audience-future.

Auerbach both exposes and forces a reconsideration of the "psychogenic world" intimated by both Freud and Lacan (separately). As discussed earlier, Freud deems technology

simultaneously insular and circular, in that it poses problems that only it can solve, and yet for the anxiety it imprints on all, the technological world acts as a kind of mirror for these internal tensions. For Lacan, also discussed earlier, there is little difference. The material world seems to provide a kind of "psychic opportunity" that allows the externalisation and explication of anxiety as the more concrete phobia that can then be dealt with. With Auerbach, texts that allow for psychological penetration and prepare for communities that do not yet exist, are the first step in reversing this narrative of the psychic opportunity. It is way that the social dimension need no longer be excluded, and analysis need not be collapsed back into the level of the individual. But Auerbach prompts further concerns. Primarily, anxiety's formulation as dyadic structure between Self and object of desire is thrown into question. What, if any, role does the collective play in the desire that drives anxiety?

A Map of Mimetic Theory

Over the course of four books — *Deceit, Desire and the Novel*, in 1976, *Violence and the Sacred*, in 1979, *Things Hidden since the Foundation of the World*, in 1987 and *The Scapegoat*, in 1989 — interdisciplinary scholar René Girard proposes a radical theory of human existence. Core to this theory is the idea of mimetic desire, the idea that rather than follow the dyadic structures of Freud and Lacan where desire exists in singular, linear relation to an object, desire in fact structures itself as triadic; that imitation, the most basic of human capacities, results in a model always being involved in the desire of an individual subject. We are no longer alone in our desires, nor have we ever been, Girard seems to argue. We are always involved with the desire of another, a model whose opinions and behaviours we privilege above our own.

Girard's work spans the disciplines of literature, classical studies, anthropology, and social psychology. To fully describe his work, an evolutionary arc must be traced. Beginning in *Deceit, Desire and the Novel*, Girard discusses the notion of the "romantic lie"; the idea that our desire arises spontaneously from within ourselves, at some hidden and impenetrable psychological depth. After considering the tale of the Impertinent Curiosity in Cervantes' *Don Quixote* — a tale in which a protagonist foists his love of his wife upon his best friend, and one that is seemingly repeated throughout literary history in Dostoyevsky, in Proust and in Shakespeare — Girard (1976) reveals a triadic structure to desire. Rather than move in a "linear" manner between desiring subject and object of desire, desire seems always to involve a mediator, what Girard will later come to call a "model". Girard (1976, p. 28) writes of the object of desire,

> The mediator's prestige is imparted to the object of desire and confers upon it an illusory value. Triangular desire is the desire which transfigures its object.

It is not only that desire is mimetic and transformed by the introduction of an always unseen mediator, but also that the object of desire lacks any real value.

Mimetic desire thus prefigures a kind of closeness, a kind arguably not dissimilar to that imagined by Lacan. When another is involved in the desire of the Self, when the Self is no longer entirely its own, closeness ensues. It is at this point Girard (1987) that a burden is placed upon localised resources, one that only grows as time passes. It is by this mechanism that mimetic desire, desire for the desire of the Other, that society is formed and that acquisitive mimesis slides into conflictual mimesis, what Girard (1987) refers to more correctly as "mimetic rivalry."

Girard (1987, p. 194) goes on to suggest that mimetic rivalry is obfuscated by modern institutions. He (ibid) writes,

> What permits us to conceive abstractly of an act of violence and to view it as an isolated crime is the power of a judicial institution that transcends all antagonists. If the transcendence of the judicial institution is no longer there… the imitative and repetitious character of violence becomes manifest once more… At the level of the blood feud, in fact, there is always only one act, murder, which is performed in the same way for the same reasons, in vengeful imitation of the preceding murder. And this imitation propagates itself by degrees. It becomes a duty for distant relatives who had nothing to do with the original act, if in fact an original act can be identified; it surpasses limits in space and time and leaves destruction everywhere in its wake; it moves from generation to generation. In such cases, in its perfection and paroxysm mimesis becomes a chain reaction of vengeance, in which human beings are constrained to the monotonous repetition of homicide. Vengeance turns them into *doubles*.

Here Girard introduces three significant concepts that embellish mimetic rivalry. First, the notion of transcendence — that social institutions likes the justice system can "capture" individuals and enforce a kind of uniformity on them. Second, the notion of mimetic occlusion, or mimetic obfuscation — that institutions can express critical awareness of underlying "truths" and yet somehow still conceal these in the execution of their duties. Finally the notion of "doubling" — which in more modern register might be considered "cloning" — which prefigures both, an expansion from the level of the individual to that of the collective, and a second-order expansion from the present to a persistent and continuous future. Thus, in a single insight, Girard resurrects Freud's hesitation around technology as simultaneously insular and circular, Lacan's hope that the material world is explicative of individuals' desires as the embodiment of the future in the present. Girard resurrects these hidden and disparate conceptualisations, and supplies a triadic meta-structure that these can be fitted into. Even our rivalry, Girard seems to be suggesting, is evidence that what we are, we are in relation to the forces of history that already allow us to imagine ourselves as antiquated and primitive. This triadic structure only serves to

emphasise Girard's (1987) reading of Plato's exclusion of the acquisitive elements of mimesis as insufficient.

Things Hidden since the Foundation of the World

At this point, mimetic rivalry would seem to prefigure some kind of Malthusian apocalypse, some manner of internecine genocide, in which increasing demand for ever more limited resources results annihilation, or least reduction of the greater population back to a more manageable quota. However, for Girard, conflictual mimesis is not the end of civilisation, but its start. It is in this way that the Girardian triadic structure of mimesis in its fuller scope (mimetic desire, mimetic rivalry, etc.) reconnects the individual to collective and overcomes the need for Freudian and Lacanian formulations of anxiety to disregard the social dimension. As this latter point is not self-evident at this point, an explication is offered over the course of this subsection.

In *Things Hidden since the Foundation of the World* Girard (1987), in conversation with neuropsychologist Jean-Michel Oughourlian, suggests that social cohesion depends on a dichotomy of prohibition and ritual. Moreover, in moments of extreme mimetic crisis, "the concern is not to avoid, but to reproduce the mimetic crisis," Girard (1987) claims. In this case mimetic crisis can be considered the intensification of mimetic rivalry to the point where violence against members of the same community can no longer be abstained from. Amid this danger, Girard (1987, p. 122) notes,

> …they conscientiously mimic their own dissolution in mimetic hysteria; it is as if they believed that a simulated disintegration might ward off the real disintegration. But the distinction is dangerous: it is in effect the very difference between the original and the copy that is compromised by the religious conception of mimesis.

At this point, a mystery emerges. Girard (1987, p. 3) states,

> The mystery is that societies that usually react to a certain danger by attempting to evade it should suddenly reverse their tactics, particularly when the danger seems acute, and take up the opposite strategy, the one that ought to terrify them the most.

It is this mystery that allows for the ostensible contradiction between ritual and prohibition to remain unresolved and somehow, irreconcilable. But Girard will offer an insight later in this text that will move to resolve the paradox.

Before moving to resolution however, it is important to note that *Thing Hidden since the Foundation of the World* is not Girard's first skirmish with these notions of mimetic crisis and the fallout of mimetic rivalry. Girard has explored these theme as early as 1979, in *Violence and the Sacred*. It is in this book that Girard (1979) explains another dichotomy in ritual sacrifice, that of its permissibility, in terms of the "legal" standing of the ritual victim and the sublimated role of violence in the performance of such ritual.

Girard (1979, p. 12) notes,

> In many rituals the sacrificial act assumes two opposing aspects, appearing at times as a sacred obligation to be neglected at grave peril, at other times as a sort of criminal activity entailing perils of equal gravity.

before continuing to observe,

> Because the victim is sacred, it is criminal to kill him—but the victim is sacred only because he is to be killed. Here is a circular line of reasoning that at a somewhat later date would be dignified by the sonorous term ambivalence.

For Girard, this "ambivalence" conceals a kind of violence that can only be described as irrational. This violence is mimetic in nature — it is a representation in the self, of the violence nonconsciously sensed in another. Unlike the transcendent institution of justice in which modern violence is suspended, and to which only the State has access, this violence is not rational and cannot be curtailed. Girard (1979, p. 13) considers,

> Violence is frequently called irrational. It has its reasons, however, and can marshal some rather convincing ones when the need arises. Yet these reasons cannot be taken seriously, no matter how valid they may appear. Violence itself will discard them if the initial object remains persistently out of reach and continues to provoke hostility. When unappeased, violence seeks and always finds a surrogate victim. The creature that excited its fury is abruptly replaced by another, chosen only because it is vulnerable and close at hand.

For Girard it is this notion of surrogacy of victimhood that achieves a kind of “industrialisation” during the Agrarian Revolution. With the emergence of fixed human settlements during which times crops are raised and the domestication of animals becomes widespread, Girard (1979) notes the practice of raising livestock specifically for the purposes of such surrogacy,

> A sort of "symbiosis"… exists between this tribe and their cattle, offering an extreme and almost grotesque example of the closeness that characteristically prevails between pastoral peoples and their flocks.

In short summary of the foregoing, Girard begins by identifying an "ambivalence" that lies at the heart of ritual sacrifice. Sometimes ritual is an obligation beyond necessity, at other times ritual is conspiratorial and elicits stern punishments if discovered. Girard suggests that this

ambivalence of ritual can be traced back to an ambivalence in the standing of the sacrifice; that it is "criminal" to harm or kill the sacrifice because the sacrifice is sacred. However this standing of sacredness only exists because the sacrifice is intended to be sacrificed. This second-order ambivalence in turn exists, Girard argues, only because of the irrational nature of violence in that it seeks out surrogate victims. Girard cites occurrences in the ethnographic record where a perverse kind of "symbiosis" emerges as humans begin to husband livestock specifically to answer the demands of such surrogacy. It is at this point that Girard's later conversation in *Things Hidden since the Foundation of the World* can be returned to. Here, Girard confronts the notion of "commemorative violence" first suggested by Freud (2001) in *Totem and Taboo*, by considering what they will later term "the lie of the first murder." Girard (1987, p. 266) offers,

> The idea that a group would gather to immolate any sort of victim in order to commemorate the 'guilt' they still feel for a prehistoric murder is purely mythical. What is not purely mythical, by contrast, is the idea that men would immolate victims because an original, spontaneous murder had in fact unified the community and put an end to a real mimetic crisis. In this light, ritual becomes comprehensible as an attempt to avert the real threat of crisis; the crisis would be reproduced not for its own sake but for the sake of its resolution; it would be a matter of achieving what is perceived to be the only satisfactory resolution to any crisis, past, present or future.

Girard thus suggests Freud as committing a fundamental error in comprehension. Rather than commemorate an atavistic guilt which has engulfed all in society — not unlike a transcendent judicial system that has at its disposal the full violence of the State — ritual sacrifice is performed again and again as the result of a kind of trial and error. For Girard it is clear that the logic of ritual sacrifice follows the pattern of mimetic violence in the past having

resolved mimetic crisis, therefore by logical extension the repetition of mimetic violence should repeat the resolution of the current mimetic crisis. Girard (ibid.) continues,

> This would resolve the paradox confronting us. There would be no contradiction in intent between prohibitions and rituals; prohibitions attempt to avert the crisis by prohibiting those behaviours that provoke it, and if the crisis recurs nonetheless, or threatens to do so, ritual then attempts to channel it in a direction that would lead to resolution, which means a reconciliation of the community at the expense of what one must suppose to be an arbitrary victim. In fact no individual victim can ever be responsible for the mimetic crisis.

By this, Girard suspends the need for obfuscation of the social dimension of anxiety, and a corresponding need (in Freud) for anxiety to be collapsed into the treatment of the individual and (in Lacan) for the material world to provide resources for the externalisation of anxiety in the form of phobias.

In his consideration of the role Girardian mimetic theory plays in the observation of quantum phenomena, Bandera returns to the notion of the blood feud and Girard's well-worn example of the Appalachian clan dispute between the Hatfields and McCoys. Bandera (2019, p. 88) echoes Girard's own sentiment on this point by suggesting,

> This is the classic “Hatfield and McCoy” scenario, in which two rivals are so intent on fighting each other that they have forgotten what they are fighting about. It is also the fundamental logic underlying all forms of mob violence and persecution.

Bandera (ibid.) adduces this to an explosion of mimetic rivalry,

> Subject and model become entangled in what Girard calls a “double bind” (borrowing the term from Gregory Bateson), in which each person imitates the other’s desire, thereby intensifying the rivalry between them. The situation escalates under a form of positive feedback, in which

> imitation fuels rivalry, which drives stronger imitation, which fuels more intense rivalry…

For his own part, Girard (1987, p. 327) articulates the importance of the double bind no less stridently, suggesting,

> the mimetic process, without being foreign to language, is prior to language and goes beyond it in every respect; for this reason, the mimetic process makes it possible to universalize the principle of the double bind, to apply it to the whole process of mimetic appropriation

Girard (1987) leverages the concept of a universal double bind to redouble focus on the object in the subject-model-object triad of mimetic desire.

> To untie the knot of desire, we have only to concede that everything begins in rivalry for the object. The object acquires the status of a disputed object and thus the envy that it arouses in all quarters, becomes more and more heated.

But the object appears only to seemingly disappear. Girard (1987) continues,

> The value of an object grows in proportion to the resistance met with in acquiring it. And the value of the model grows as the object's value grows. Even if the model has no particular prestige at the outset, even if all that 'prestige' implies — *praestigia*, spells and phantasmagoria — is quite unknown to the subject, the very rivalry will be quite enough to bring prestige into being.

It is the "disappearance" of the object however, that ushers in a return of focus on the model, potentially fuelling yet another cycle of mimetic rivalry. It is at this point of mimetic crisis, that Girard (1987, p. 311) suggests as the point where psychosis is likely to emerge. They write,

> At his own expense, the subject manages to release the logic of mimetic desire. Desire becomes detached from the object, bit by bit, and attaches

> itself to the model. This development is accompanied by a marked aggravation of the symptoms — for behaving normally is not a matter of escaping from mimetic desire (no one can do that) but of not giving in to it to the extent of losing sight of the object entirely and only being concerned with the model. Being rational — functioning properly — is a matter of having objects and being busy with them; being mad is a matter of letting oneself be taken over completely by the mimetic models, and so fulfilling the calling of desire. It is a matter of pushing to final conclusions what distinguishes desire — only very relatively of course — from animal life and of abandoning oneself to a fascination with the model, to the extent that it resists and does violence to the subject.

But if the object itself is uncertain, Bandera (2019) reminds us that the model is equally uncertain. Since mimetic desire multiplies models who imitate each other, it can no longer be clear who the original model is, or from where desire truly arises. Bandera (ibid.) states,

> The triangular configuration of object-subject-model is a minimal description of the relational nature of human desire. The key insight, however, is that this is a collective phenomenon involving multiple people, as opposed to an independent autonomous connection between the subject and the object. This has led Girard to replace the concept of individuality with that of "interdividuality," expressing the fundamentally relational nature inherent in each person.

The concept of interdividuality stands opposed to the dyadic, "linear" as Bandera (2019) terms it, structure posited by both Freud and Lacan in the formulation of the concept of anxiety; a formulation that necessarily occludes the social/collective dimension of anxiety only to privilege diagnosis and treatment of the individual. By contrast, Girard is able to assert a kind of objectlessness to desire. One that would instead redouble the need for the model to reappear in the discourse. But as demonstrated, this model is not singular, but multiple. The nature of

mimesis itself means that there is never a single model that can be pinned down, only a multiplicity. As Bandera (2019) writes,

> This collective dimension opens the door to a variety of ways in which the relation between subject and model can manifest itself. The most profound and interesting effects of mimetic desire are found, not only between two people, but between communities, between societal classes, between a person and the collective understanding of cultural institutions.

And later in that same passage (ibid.),

> To be a human being is to be part of a culture, and a culture is essentially a fabric of models—a sphere of influence that transcends the subject in the same way that “humanity” transcends each human. This understanding of mimetic desire on an anthropological level makes it sometimes difficult to trace the precise connections between subject and model.

In *Things Hidden since the Foundation of the World*, Girard talks about this transcendent aspect of the multiplicity of the model in a far narrower band of focus, by reminding readers how a model's mimetic desire might turn from an object towards the subject (here Girard uses the term "disciple"). This would effectively cause the model to become the disciple of the disciple, and the disciple to become the model of the model. Girard (1987, p. 368) writes of this,

> These vanishing differences are nothing more than interruptions in reciprocity, and they always involve an element of the arbitrary, since they are rooted in the victimage mechanisms and in mimetic rivalry; they dissolve in the face of violence, which makes everything return to the pure state of reciprocity. In rivalry, everyone occupies all the positions, one after another and then simultaneously, and there are no longer any distinct positions.

He continues (ibid.),

> Everything that one of the partners to violence experiences, thinks about, or carries into action at a given moment, will sooner or later become observable in the other partner. In the last analysis, there is nothing that can be said of any one partner that must not be said about all partners without exception. There is no longer any way of differentiating the partners from one another. This is what I call the relationship of *doubles*.

Girard's relationship of doubles resurrects both the annihilation of the self in history as seen in blood feuds like those of the Hatfields and the McCoys, and the anticipation of history as prefigured by Auerbach in his analysis of the Elohistic mode of writing. This announces the tipping point for this chapter; if mimetic desire can exist and resurrect the social dimension shunned by Freud and Lacan in their respective formulations of anxiety, and if those Freudian and Lacanian formulations of anxiety are both contingent on desire, could there be something akin to mimetic anxiety? In short, could mimetic desire itself, double itself with Freudian and Lacanian anxiety, and reconstitute as mimetic anxiety? The remainder of this chapter explores exactly the mechanism by which mimetic anxiety might be ushered in. However to do so, the triadic structures of Kant and Hegel, social representation theory, actor-network theory, interobjectivity, the Rashōmon effect, synesis and a category of problems in the field of ethics known as double-effect problems must first be considered.

Towards a Mimetic Anxiety

To begin, a simple diagram of mimetic anxiety can be sketched out. In the first phase, mimetic systems continue, unbated. These are the systems described by Girard, the familiar processes of mimetic desire that slowly build towards mimetic rivalry and eventually mimetic crisis. The object fades, before disappearing entirely. The individual model sinks anonymously into the ubiquity of interdividuality. This phase is disrupted however, and a new movement is

initiated, one not envisioned by Girard, yet one leveraging scholarship beyond Girard's theories, this moment is perfectly valid.

This moment appears when a synetic demand is created; synetic as in deriving from synesis. This concept will be discussed at fuller length later in this chapter, but for the moment it is enough to suggest that this synesis conforms analogically to the linguistic definition of synesis, which is notional rather than structural agreement between verb and subject or between verb and object. The second phase thus, a novel phase, is the synetic demand placed upon the subject. The demand is not interdividual in character, rather it turns the subject's awareness outwards; towards the material world.

The demand is placed on the subject by the subject's own awareness of the model's competence. Or maybe, "awareness of the model's competence" is too much of a burden to place on the concept. Maybe the awareness is sublimated, nonconscious. Nevertheless, this novel second phase of the mimetic cycle, the synetic demand, occurs when the subject focuses on the material world and some degree of awareness is reached as to the model's competence at operating some aspect of that material world.

Traditional and familiar mimetic forces kick in once again. At a nonconscious level, mimetic desire is aroused in the subject. If the model is able to operate that aspect of the material world in that way, why not the subject?

This forces the ushering into existence of a Bifurcated Self. A schism emerges. There is the Self that Masters, the self that wishes to perform the action performed by the model, the self that anticipates its own mastery of the world in the same way the model has mastered the world. There is also an Othered Self. A Self that Measures, a self that must adjudicate whether or not,

and if so, how well, and if not, why not, the Self that Masters has mastered this aspect of operation of the material world.

It is at this point that another explanatory mechanism is required. However, for the moment, it is sufficient to note that this state of the Bifurcated Self results in what could be considered mimetic anxiety. Which Self is the subject more like? As the demands of social cohesion build towards mimetic crisis, each of the Selves — the Self that Masters and the Self that Measures — come more and more to stand in for themselves, each becoming more strident, more entrenched, more recalcitrant, and in so doing, placing greater and greater stresses on the subject who is now drowning in ambivalence. Shortly, this chapter will introduce a technical sense to the familiar term "ostracism" to describe how a sense of anxiety is emergent from this milieu. However, this emergence of ostracism is contingent upon a set of ethical dilemmas that have recurred since the time of Thomas Aquinas — the double-effect problem.

In short, double-effect problems recognise the mimetic nature of action and ask for full consideration of the multiplicity of potential effects a problem might have. Originally taken as a measure of permissibility, double-effect problems might be expanded from the more classical formulations of "Is it permissible to take another's life to save my own," to more modern versions like, "What consideration should be given to chemotherapy versus quality of life, given that chemotherapy is essentially the introduction of poison into the body." Just as mimetic desire predicts mimetic rivalry, double-effect problems are predicted by a linguistic mechanism described by Loftus and Palmer (1976).

The Synetic Demand

To properly understand the nature of synesis and the synetic demand, discussion must return to Solomon Asch and now-famous conformity experiment — known also as the Asch Line Test. While the more-tenuous-than-first-believed connection between data and theory will be explored later in this chapter under a discussion around the Rashōmon Effect, it is worth noting for now that an alternate theory to Asch's hypodissertation of conformity might sufficiently explain the data gathered during experimentation. To begin with however, Asch must first be fully explained.

Asch (1961, p. 18) writes of his own experiments,

> We employed the procedure of of placing an individual in a relation of radical conflict with all other members of a group, of measuring its effect upon him in quantitative terms, and of describing its psychological consequences.

In practice this meant that an experimental subject would remain unaware of the mechanism of testing. The experimental model would see the subject be placed in a group with experimental confederates the subject would be coerced into believing were fellow subjects. The confederates would act as stooges, deliberately supplying incorrect answers, thereby creating the "radical conflict" that Asch sought to measure. This radical conflict would take the form of a simple recognition test. The subject was duped into thinking that test was primarily visual; that all that would be required would be to correctly identify two lines of equal length, on two separate cards. On the first card, a single comparison line appeared. On the second card, a line equal in length to the comparison appeared among one visibly shorter and another visibly longer line. The subject was required to identify the correct line on the second card. This was a task that subjects were able to perform correctly during the control when subjects were not grouped with

confederates, with a 99.6% accuracy as Asch (1961) notes. However, the task of the confederates, the "radical tension," was to audibly offer an incorrect answer. Under these conditions, Asch (1961) notes subjects conformed with group opinion and ignored the easily discernible right answer 75% of the time.

Asch labels this impulse to repeat the clearly incorrect answer, "conformity". However, rather than simply labelling the action, what is the underpinning mechanism that drives conformity under these conditions? Here, mimetic analysis might prove useful.

Consider information gathered during this experiment from the point of view of the experimental subject. Before any other information about the test reaches the experimental subject, they are assured that they have been chosen to participate in this experiment.

The importance of this single fact cannot be overstated and, in fact, is critical to every other piece of information that the experimental subject acquires. Having been chosen creates expectation; it communicates to the subject that there is an expectation of performance, that an outside authority anticipates a certain level of competence, that the experimental subject is expected, by an outside agency that has already determined their potential, to perform within certain known parameters.

The hidden nature of authority might sway the theory of conformity closer to Milgrim's findings, however this hidden nature of authority also creates a mimetic opportunity. Like the subject involved in the triadic structure of mimetic desire, the experimental subject in Asch's Line Test becomes subsumed by interdividuality. They no longer stand in for themselves, and instead become involved in the authority figure that has deemed them capable. But this act of mimesis is only the first in a series.

Shortly thereafter the experimental subject is introduced into the group of confederates and duped into believing they too are experimental subjects. The experimental subject's self-perception is thus mimetically extended to these Others. What the experimental subject believes about themselves — the vindication they feel at having been selected to participate, the pleasure at having been endorsed by an outside authority — is now protracted to all other "experimental subjects".

What happens then when these "experimental subjects" express a competence that is at odds with the subject's base understanding of the world? Mimetic crisis; a violence looms. This mimetic crisis can only be forestalled by self-effacement as Girard (1979) suggests in *Violence and the Sacred*. In such a case, the self-effacement is self-sacrifice; the subject suspends their individuality for the benefits that come with interdividuality. Experimentally, this self-sacrifice might be misinterpreted as "conformity".

While mimetic analysis might provide an alternate formulation to the mechanism of conformity, this formulation hinges on a critical moment — the recognition by the subject of a competence in the second-stage model (the confederates) that if it remains undeclared publicly might precipitate mimetic crisis and an attending violence. But just as the theory of conformity proffered by Asch suggests an obligation of explanation, so too does this moment of recognition. Or, stated in a way that would produce a falsifiable result, what demands can be placed on the experimental subject that would require awareness of another's competence in operating some aspect of the material world? The explanation here is twofold and contingent upon and understanding of Social Representation Theory (SRT) generally, and the specific concept of interobjectivity that falls within the broader scope of Actor-Network Theory (ANT).

SRT focuses on the roles of influence and communication that arise from social representations. First developed by Serge Moscovici in 1961 to study the ways in which psychoanalysis was understood by different social groups in France, the primary purpose of the field of study is to "make the unfamiliar… familiar", according to Moscovici (1984).

SRT would also come to be understood as "a system of values, ideas and practices" in Moscovici's (1972) own words, focussing on two primary objectives. The first of these objectives would be for SRT to describe how social representations "flesh out" a kind of "social operating system", similar to that of a computer, that grounds an individual within the material world. This "operating system" would orient individuals, allowing them to "operate" the world and thereby master the world they live in.

The second object recalls Auerbach and the Elohist's unspoken intent of establishing a community that stretches forward in time, where two members of that community — who have never met — might be able to recognise each other as being of the same community. Moscovici and others have deemed this second object of SRT as the study of ways in which social representations transition to become a shared code for social exchange.

SRT therefore, could be considered to imagine a mimesis that extends beyond interdividuality and one that places the mimetic in relation to intangible social representations. It is this mimetic relation that requires awareness in the subject of the competence in operating a newly discovered aspect of the material on the part of the model. SRT, at least in on part, explains the subject's awareness of the model's competence.

The second part of this demand for the subject's awareness of the model's competence some part of the material world can be explained by the concept of interobjectivity.

Interobjectivity was first described by Bruno Latour in an eponymously-titled, 1996 paper which forms part of Latour's canon developing the broader framework of ANT. ANT suggests the idea that nonhuman actors, like technology for example, have a similar effect on social processes as human actors do. This primarily because the social is not apprehended as a superstructure, rather as a network of interactions. The prominence supposed by ANT has led to calls for the theory to be reconsidered as Actant-Network Theory, in that the term "actor" might be overly anthropocentric, and in that regard, misleading.

"On Interobjectivity", sees Latour (1996) begin by considering the differences between the social organisations of higher order primate groups and the social organisation of humans. A key difference for Latour (1996) is the necessity of copresence in the social organisation of higher order primates, like chimpanzees. To interact with each other, chimpanzees need to be present, and present at the same time. As already discussed under Auerbach, this is not a demand placed on human social organisation. With humans social representations such as texts can allow for interactions unfettered by space or time, but so too can material objects. Such objects that facilitate interaction no longer constrained by space or time are said to be interobjective.

As with SRT, interobjectivity allows for a reconceptualisation of the mimetic dimension. It is no longer enough to simply inscribed social representations with mimetic opportunities, what is required is a deeper understanding of the mimetic opportunities latent within the material world itself. Asch's two charts depicting four lines presents a direct material and mechanical challenge to the subject, one already mastered, ostensibly, by the confederates. This falsified mastery thus places a demand on the subject through the prediction of mimetic crisis that can only be resolved through self-sacrifice. The nature of that demand however — which is emergent

from both social representations and interobjectivity — could be considered similar to the linguistic sense of "synesis".

The 1999 (p. 6128) edition of the *Routledge Dictionary of Language and Linguistics* defines synesis as,

> Interpretation of a syntactic structure according to semantic content instead of grammatical structure, which often results in variation in agreement…

This is notional or situational agreement, where the a verb form that agrees with the sense of the subject of the sentence, rather than the correct number of that subject. As with much in the field of linguistics, explanations seem only to complicate concepts and practices most native speakers of a language already intuitively grasp. An example synesis might be, "All data points to the certainty that…" Here the correct form of the verb should be "point" since data is plural, rather than singular. However, consistent use has regularized the phrasing "All data points to…"

Synesis however, is not a linear or static linguistic practice; it can be used to emphasise certain aspects of meaning without stating these bluntly. Consider, "The government stand united…", versus "The government stands united…" In the second sense, the unified nature of the government is emphasised. In the first sense, a picture of factionalism becoming overcome is painted with the use of the plural form of the verb stand. Which version is more true? Neither entirely, or perhaps both simultaneously. Synesis can be used to underline some aspects of an ambivalence while simultaneously deprioritizing others.

It is in this sense that the co-demands of social representations and interobjectivity creating awareness of a model's competence to operate some material aspect of the world could

be considered synetic. Social representations and interobjectivity together demand a situational agreement that on the horizon of the mimetic, others competence should be more important than one's own. And that ultimately, the subject themselves can be liberated to recognise a looming mimetic crisis and may undertake self-sacrifice.

On Ostracism

Not used in its literal sense, ostracism is a novel concept that, shortly in this chapter, will be used to explain the emergence of anxiety on the appearance of the Bifurcated Self. It should be noted that the formulation of ostracism as a technical component of analysis is not arbitrary, but arises from an attempt to reconcile the Freudian and Lacanian formulations of anxiety. From earlier, the former posits anxiety as a result of a separation from the object of desire, the latter as too much closeness to the object of desire that ultimately ends in a "lack of a lack" of desire. Distance and nearness, the two formulations seem antithetical, if not openly antagonistic. The proposition of their antitheticality however suggests resort a now-famous philosophical measure; the application of the dialectic of Hegel might append here. The well-worn formula suggests knowledge occurs in three phases, dissertation-antidissertation-syndissertation. Critically, that one construction of knowledge — a dissertation — must be engaged by its opposite — an antidissertation — and undergo destruction and ultimately revision — syndissertation — before that construction of knowledge could be said to be complete.

But philosopher Walter Kaufmann (1966, p. 413) suggests that an error in the historical record is responsible for attributing this triadic structure to Hegel,

> Fichte introduced into German philosophy the three-step of dissertation, antidissertation, and syndissertation, using these three terms. Schelling took up this terminology; Hegel did not. He never once used these three

> terms together to designate three stages in an argument or account in any of his books.

However, it is not only a question of authorship, but one of function as well. Whether Hegelian or Kantian, what synthetic formulation of anxiety could emerge when the Freudian and Lacanian are brought into proximity? In essence, it becomes consequential at this point to question what, if any, conceptual framework might be redeemed from the promised annihilation of two conceptually antagonistic formulations. What might be required is a new strategy that accommodates both.

An alternate procedural arrangement of elements that leads to the production of a novel concept might be found in an unlikely place; in the 1950 Akira Kurosawa period drama *Rashōmon*. An adaptation of two short stories, *Rashōmon* depicts the fraught nature of human memory and the ecliptic nature of human vanity during the testimony of four witnesses under conditions of a courtroom trial. The motion picture has become distinguished in that it articulates a novel psychological phenomenon.

In *Sociological Methods & Research*, Roth and Mehta (2002, p. 1) describe the motion picture thus.

> Akira Kurosawa's 1950 film Rashomon presents four different accounts of a contested event—the murder of a Japanese nobleman and the rape of his wife. As the events are retold from four different points of view, the viewer is left wondering which of the four witnesses was telling the truth and whether a single "truth" really exists. The film makes clear that there are different truths for these characters, for they are not simply lying to protect themselves (in fact, the version of each main party to the crime implicates the teller for the murder); rather, they have deceived themselves into believing the version they have told. These same questions about truth might be asked about contested events in social research. When multiple sources relate different and sometimes

> conflicting accounts of an episode, how do we decide who is "right"? Is it possible that they all are right?

Which prompts their definition of the concept of the Rashōmon Effect as (ibid.),

> These questions may appear fundamentally incompatible, for they imply different perspectives about the meaning of truth and objective reality. These two perspectives, and the concordant forms of analysis they imply, have traditionally divided social scientists in several fields. The positivist approach maintains that a true explanation or cause of an event or social pattern can be found and tested by scientific standards of verification. The interpretivist approach does not seek an objective truth so much as to unravel patterns of subjective understanding. The latter assumes that all versions of the truth are shaped by the viewers' perceptions and understanding of their world. In the case of a contested event with many different versions, the analyst's job is to uncover what these versions reveal about the people who tell them, their positions in the social structure of their communities, and their cultural understandings.

In the journal *Anesthesia & Analgesia*, Shander and Gross (2018, p. 226) consider the application of the Rashōmon Effect to the interpretation of data.

> In *Rashomon*, human self-interest obscures the truth, although the forgetful nature of the human mind should not be written off altogether. In a retrospective study, it is mainly unintended bias and uncontrolled confounding. An investigator attempting to study the impact of a treatment on outcomes of a patient is faced with a dilemma: what were the factors that together made the treating clinicians decide to administer the treatment in question, and what were the independent effects of those factors on the outcomes that are being studied? The intricate web of possible causations and interactions does not end here.

Data do not come with a ready-made narrative Shander and Gross seem to contend. They caution about the necessary task of interpretation, and suggest that even noble-minded

researchers might unknowingly be subject to the deleterious effects of self-interest as it moves to obscure and confound truth.

As Shander and Gross (2018, p. 326) remind us,

> In his critically acclaimed masterpiece, *Rashomon*, Kurosawa retells the story of a heinous crime from views of those involved as well as a self-proclaimed witness, each account contradicting the others. At the end, we are left baffled on what really happened as each testimony seems to offer some credibility, and we are not much closer to knowing the truth.

This is fictional engagement in which truth must be sorted from boast, just as it must from falsehood. What the Rashōmon Effect presents is a kind of simultaneity where all accounts are needed to reach some semblance of truth.

Borrowing from the Rashōmon Effect and taking simultaneity as an analytical tool, not only moves away from attempting to force a Kantian, or Hegelian triadic structure to operate on Freud's and Lacan's respective formulations of anxiety, but also allows for a broader, more lateral range of analytical considerations. What if the Freudian formulation of separation from the object desire did not need to be supercollided with the Lacanian formulation of "a lack of a lack of desire," or more, colloquially, "too much closeness" to the object of desire? What if instead of needing to treat the Freudian and the Lacanian formulations as antithetical — as Kant might — and labor, perhaps fruitlessly, to produce a new synthetic view that somehow encompasses the seemingly irreconcilable formulations, a simultaneity might instead be considered? What if neither Freud's separation, nor Lacan's excessive closeness require a Negative before either could be rendered more Concrete?

If such consideration is give due weight, a new question would emerge — how would anxiety be constituted if the concept must simultaneously meet the demands of separation and closeness? In other words, under what conditions can separation and attachment exist as coeval, without being commingled?

Naturally the state of ostracism is suggested. One cannot be excluded from a group that has no meaning for oneself, and similarly a group for which one has no meaning. It is only when one is valued by certain group that one's exclusion from said group would have meaning both for the group in question and for oneself. This ambivalence, where a subject is both ostracised and somehow still subject to an Other, functions at the metaphorical level as well. Consider the Bifurcated Self. Ostracism turned inwards becomes an effective metaphor to describe the mechanism by which an anxiety arises. The subject strains towards either the Self that Measures or the Self that Masters. Yet, mimetic forces ensure each of those Selves become more distinct from the other. The subject strains under a pressure where neither aspect, neither Self can fully encompass its entirety. Anxiety sets in and a completeness is yearned for.

Double-Effect Problems

In *Double-Effect Reasoning: Doing Good and Avoiding Evil*, philosopher T. A. Cavanaugh (2006) describes a category of ethical problems that date back to medieval thinker Thomas Aquinas. Succinctly put Aquinas' example was the consideration of the permissibility of causing the death of another in order to save one's own life. The ethical framework under which this consideration was made was morality as viewed through the Biblical notion of sin. Cavanaugh however identifies key hallmarks of Double-Effect problems — among them

proportionalism, anti-consequentialism, deontological alternatives, and the i/f or intended/foreseen distinction — that expand the definition of Double-Effect problems.

At its heart, Double-Effect problems are of the kind where our usual path to action — one that aims to do good and avoid evil — is disrupted for some reason. Cavanaugh (2006, p. 16) considers,

> Yet, as we pursue good and avoid evil, a tangled mass confronts us. The good we do results in evil; the evil we avoid prevents the realization of some good.

In the modern era particularly, Double-Effect problems have gained some traction in philosophy and psychology, if not outright popularity. This is due in no small part to the work of Phillipa Foot (1967) who originally conceived of the Trolley Problem. Recently the Trolley Problem has been reconstructed to involve driverless cars, but this reinvention will become self-evident once the original Problem is described.

Consider a runaway tram-car. Its brake does not function, and a last moment for action is impending and falls only to you. That action is your decision to flip the switch and change tracks, or not flip the switch. Flipping the switch will ensure the death of the two people onboard the tram, as the car will be turned onto an uncompleted track and its momentum will force it over a precipice. Not flipping the switch will ensure the deaths of a dozen or more orphans who find themselves trapped on the tracks. How would you choose?

But some commentators posit a different dilemma in the modern popularity of the Trolley Problem, and by extension, all Double-Effect problems. Rennix and Robinson (2017, p. 1) suggest,

> But the trolley problem is not just a pointless exercise. It could also be a damaging one, because of the way in which it gets students to start thinking about moral questions. The first limitation of the trolley problem is that it places us in a situation of forced decision-making, where all the future outcomes of your choices are completely certain, and all of them are bad.

They (ibid.) continue,

> Unless you are a very particular kind of strict utilitarian, who truly believes that killing one innocent person is “good” if five other people get to live, the trolley problem is not a “moral quandary” that asks you to choose between one option that is, say, good but difficult, and another option that is, say, bad but easy, thus testing the strength of your willingness to do the right thing in adverse circumstances. Rather, you are in a situation where any choice you make will result in people’s deaths: any decision-making pathways that would allow you to reduce the likelihood of people being hurt (can you shout to the workers to move? can you throw yourself down onto the track to slow the trolley’s progress?) have been presumptively closed off. The thought experiment is designed to place us into a situation that has already unfolded. We are helpless victims of our conditions, who face a binary choice with two horrendous outcomes. Our choice does not occur, as human moral choices actually do, as part of a chain of decision-making. Literally everything has been decided for us by an unseen external force, except who will die, which is conveniently left up to us.

Mimetic anxiety — that pulls the Bifurcated Self in "opposite" directions, forcing the subject to shift between two idealised versions of Self, each of them less and less an accurate representation of the individual — could be considered as the ambivalence of a Double-Effect problem enforced upon the self by a synetic demand that is emergent from a mix of social representations and interobjectivity. Here, Rennix and Robinson's critique would need to be appended — Double-Effect problems force individuals to freeze, denude their faculties to predict and enact change, and ultimately engender anxiety. Just as in the Trolley Problem where participants are forced into the consequences of others' failings — that maintenance was never

properly performed, that profit margins were prioritised over safety protocols, that orphans should never have been allowed to play on the tracks of a busy street — the choice of either Self in the Bifurcated Self is already problematic. This is because each Self is an incomplete reflection of an original coherent Self.

As seen with Asch (1961), the Bifurcated Self prefigures an overdeveloped awareness of mimetic crisis, and along with that presents a so-far unrecognised danger for teaching environments and learning environments; the danger of forcing the sacrificial mechanism to appear when it is not needed, and turn that mechanism inward and trigger it. Mimetic anxiety is thus the nightmare conditions under which Asch's conformity has become the norm, authority has become interdividuated, and Skinner's Reinforcement is imposed but where the Stimulus is indistinguishable from the background and the Behaviour unknowable.

The Trap of Mimetic Anxiety

It is in no way surprising then, given the shift from the ostensibly dyadic Freud-Lacan to the triadic structures of Bandura with observational learning and Girard with Mimetic Desire, that the novel concept of Mimetic Anxiety returns to a triadic structure of its own. Following on from groundbreaking research into learned helplessness in the early 1960s, Seligman followed up initial studies with an experiment into whether laboratory-induced learned helplessness could be extended from rats and dogs to humans (Miller and Seligman, 1975). The foundational experiments have, like those of Pavlov, or Skinner, now garnered significant attention and have entered the popular imagination. Seligman and Overmier divided subjects (immature dogs) into two experimental groups; those conditioned with inescapable shocks and those able to avoid shocks through instrumentality. When both experimental groups and a control group were placed

in an escapable system of shocks, the former group -- those subjects conditioned with inescapable shocks -- were unable to action escape avoidance. Overmier and Seligman (1967, p. 9) state as much at the outset of their paper, "Effects of Inescapable Shock upon Subsequent Escape and Avoidance Responding,"

> Exposure of dogs to inescapable shocks under a variety of conditions reliably interfered with subsequent instrumental escape-avoidance responding in a new situation. Use of a higher level of shock during instrumental avoidance training did not attenuate interference; this was taken as evidence against an explanation based upon adaptation to shock. Ss curarized during their exposure to inescapable shocks also showed proactive interference with escape-avoidance responding, indicating that interference is not due to acquisition, during the period of exposure to inescapable shocks, of inappropriate, competing instrumental responses. Magnitude of interference was found to dissipate rapidly in time, leaving an apparently normal S after only 48 hr.

In other words, the test subjects that were originally shock and had no means of escaping the shock treatment, would find themselves unable to escape new situations where escape was possible. This phenomenon would go on to become known as "learned helplessness." In humans it would be a pervasive sense of dread and ill-fatedness, one where those subject to the mental phenomenon would succumb to escape-avoidance in the same way as the test subjects. Overmier and Seligman (1967, p. 14) even predict extensibility to humans, citing,

> The effects of inescapable shocks upon subsequent instrumental escape-avoidance responding dissipate rapidly, leaving an apparently normal S after only 48 hr. This result is compatible with the observations by McAllister and McAllister (1962, 1963) that a delay between exposure to inescapable shocks and instrumental avoidance training facilitates the subsequent acquisition of the avoidance response. The length of the delay seems now to be in question, however.
>
> In addition, neither the magnitude of the interference phenomenon nor the time course of the recovery from the effects of in- escapable shocks was different for Ss whose inescapable shocks were signaled or unsignaled or were paralyzed or not paralyzed.

By 1975, Miller and Seligman (1975, pp. 231–232) would already produce a convincing study of learned helplessness in humans,

> Overmier and Seligman (1967) and Seligman and Maier (1967) used the term *learned helplessness* to describe the interference with escape/ avoidance learning produced in dogs by prior exposure to uncontrollable electric shock. A number of studies have demonstrated that learned helplessness can be produced in a variety of situations, with different types of uncontrollable, aversive events, and in a wide variety of species (see Seligman, 1975b for a comprehensive review of these studies). Seligman, Maier, and Solomon (1971) argued that the main behavioral symptoms of learned helplessness—deficits in response initiation and in associating reinforcement with responding—result from learning that reinforcement and responding are independent. Such learning is said to lower performance by reducing the incentive for instrumental responding, which results in lowered response initiation. In addition, learning that reinforcement and responding are independent interferes with learning that responses later control reinforcement.
>
> Two research strategies have been used to study helplessness in humans. One strategy uses the learned helplessness paradigm to replicate the animal findings in man. Of the seven studies of this type, three have convincingly demonstrated learned helplessness in man (Hiroto, 1974; Hiroto & Seligman, 1975; Racinskas, Note 1), two yielded mixed results (Roth, 1973; Roth & Bootzin, 1974), and two seemed to produce learned helplessness, although they involve methodological departures from the paradigm, thus making interpretation difficult (Fosco & Geer, 1971; Thornton & Jacobs, 1971).
>
> Seligman (1972, 1973, 1975a, 1975b) and Seligman, Klein, and Miller (in press) have claimed that learned helplessness is a laboratory model for naturally occurring depression in man, and the second research strategy concerns testing this claim. Studies of this type have looked for the behavioral symptoms of learned helplessness in depressed subjects (Miller & Seligman, 1973; Miller, Seligman, & Kurlander, Note 2).

Seligman and his co-researchers' understanding of learned helplessness as a laboratory-induced phenomenon which is itself in a mimetic relationship with more generalised anxiety in broader sociocultural interaction certainly conforms with the broader effects predicted by mimetic anxiety. Like mimetic anxiety, learned helplessness seems to reduce all problems to

those of a single kind, Double-Effect. It is not that no path to action is perceived, it is more correctly to the point that cognitive deficits ensuing from learned helplessness/mimetic anxiety ensure the misapprehension that no path to action among those recognised as available, would produce any clear arresting effect to the danger of the present moment. Thus, if no path to action can conceivably (a false conception in the subject arising from learned helplessness) produce safety, then no path to action need be pursued. In "Learned Helplessness: Theory and Evidence," Maier and Seligman (1976, p. 19) consider cognitive, emotional, and motivational, stating of the former,

> We have argued that a major consequence of experience with uncontrollable events is *motivational;* uncontrollable events undermine the motivation to initiate voluntary responses to control future events. Experience with uncontrollable events may also have a second consequence that is cognitive; experience with uncontrollability may produce a difficulty in learning that responses have succeeded, even when responding is actually successful. Uncontrollability may retard the perception of control.
>
> This phenomenon seems to appear in helpless dogs, rats, and men. Occasionally, a naive dog sits and takes shock on the first three or four trials in the shuttle box, and then on the next trial jumps the barrier and escapes shock successfully for the first time. Once a *naive* dog makes one response that produces shock termination, it learns rapidly. On all further trials, the subject responds vigorously and goes on to learn to avoid shock altogether. But dogs that first received inescapable shock were different in this respect also. About one third of them go through a similar pattern —sitting through shock on the first three or four trials and then escaping successfully on the next. These dogs, however, then revert to taking the shock, and they fail to escape on future trials. It appears as if one success is just not enough to make a dog that has experienced inescapable shock learn that his responding now produces shock termination.

And stating of the median (ibid.),

> Our first hint that uncontrollable aversive events had emotional as well as motivational and cognitive consequences came when we found that the motivational effects dissipated in time under some circumstances.

> Overmier and Seligman (1967) found that after one session of inescapable shock in the hammock, dogs were helpless in the shuttle box 24 hours later. If, however, the dogs were not tested in 24 hours, but at 48, 72, or 168 hours after inescapable shock, they were normal. This is the only 'circumstance we know under which helplessness dissipates in time. If multiple sessions of inescapable shock are given to the dog in the hammock, he will fail to escape a week later in the shuttle box (Seligman & Groves, 1970). Further, if the dog is reared from birth in laboratory cages, having minimal experience with control over events, small amounts of inescapable shock produce nontransient helplessness (Seligman & Groves, 1970). Finally, no time course has been observed in rats; following one session of inescapable shock, rats fail to escape 5 minutes, 1 hour, 24 hours, and 168 hours later. It must be borne in mind however, that under one circumstance—a single session of inescapable shock in dogs of unknown past history— helplessness dissipates in time, and such a time course hints of a transient emotional disturbance.

While stating of the latter (ibid.),

> Since dogs exposed to inescapable shock seem to be physically capable of jumping the barrier, the behavioral deficit must have a psychological base. Occasionally, they jump the barrier between trials. Further, if a dog has been sitting and taking shock after shock on the left side of the box, and the door on the right side is opened at the end of the session, he will often come bounding across to escape from the box altogether.
>
> The learned helplessness effect in the dog occurs in a variety of situations and is easily produced. Within limits, it does not depend on the use of any particular shock parameters. We have varied the frequency, intensity, duration, and temporal pattern of shocks, and still produced the effect. Furthermore, it does not matter if the inescapable shock is or is not preceded by a signal. Finally, it does not matter what apparatus the inescapable shocks are given in or where the escape/avoidance training takes place. The shuttle box and hammock are interchangeable. If the dog is given inescapable shock in the shuttle box and then required to press panels with its head to escape in the hammock, he is still helpless. Further, after uncontrollable shock, dogs are not only debilitated at fleeing from the shock itself (escape), but they also seem to be unable to prevent or "avoid" shock. Overmier (1968) gave dogs inescapable shock in the hammock and then tested them in a shuttle box. If the dog jumped after the signal went on, but before the shock came on, he could avoid the shock. But no escape was allowed, for if the dog failed to jump in the signal-shock interval, the barrier was closed and inescapable shock occurred. The helpless dogs failed to avoid, just as they had failed to

> escape. So, dogs previously exposed to inescapable shocks failed to cope adaptively with signals for shock as well as with shock.

This leads Maier and Seligman (1976, p. 29) to,

> The basic facts about learned helplessness effects in the laboratory have now been arrayed before the reader.What must an adequate theory of helplessness accomplish? It must account for the three facets of the effects of uncontrollable aversive events: motivational, cognitive, and emotional. It must be testable; there should be experiments that can be performed which would confirm it if it is true, or disconfirm it if it is false. Finally, it must be applicable outside the laboratory—it must be: useful in explaining any helplessness effects found in the real world. This final requirement is beyond the scope of this article, but the interested reader should see Seligman (1975).
>
> …
>
> When an organism is faced with an outcome that is independent of his responses, he sometimes learns that the outcome is independent of his responses.
>
> …
>
> The basic triadic design employed in all the helplessness studies reviewed above is, of course, directly relevant to the premise that men and animals learn about, and form expectations concerning, independence between outcome and responses. So, for example, in the Seligman and Maier (1967) study only the yoked dogs later failed to escape shock, while the dogs who could escape by panel pressing and the dogs who were not shocked did not fail to respond later. Clearly something different happened to the dogs that received shock independently of their responses. We believe they learned that responding was futile and therefore expected future responding to shock to be futile. We have gone to pains to give an *objective* definition of *uncontrollability* and *response-outcome independence.* This is because the theory is basically a three-step affair.
>
> Information about contingency → Cognitive representation of contingency (learning, expectation, perception, belief) → Behavior

To unpack. A foundational cognitive deficit seems to be even successful action taken towards the extinction of learned helplessness cannot extinguish learned helplessness and will thus do nothing to promote or ensure the assertion of remedial action.

What would result in a learning environment is necessarily the synetic demand enshrining mimetic anxiety, only to present as a kind of paralysis of decision. The function of the synetic demand in this regard is, again, already prefigured in learned helplessness, appearing as a thirdness similar to that appearing in Bandura, and in the work of Seligman and his fellow researchers. All of which leads Seligman (1968, p. 407) to thirdness where they suggest (emphasis placed for this dissertation),

> Traditional learning theory has emphasized that only two relationships produce learning: explicit contiguity between events (acquisition) and explicit separation of two events (extinction). The central hypodissertation of the theory proposed by Seligman and Maier (1967) and by Maier, Seligman, and Solomon (1968) to account for their learned helplessness results is that learning is also produced by **a third relationship**, independence between events. A testable consequence of this theory is that such learning will retard the association of two events when pairing begins. The learning of independence is conceived by Seligman and Maier to be an active form of learning, which can proactively interfere with associations.
>
> This hypodissertation was confirmed in the main experiment. Experience with CS1 and shock, randomly interspersed, somewhat retarded the acquisition of a subsequent CS-shock association.

What is Mimetic Anxiety?

The structure of thirdness appearing in the paralytic experience of learned helplessness points to the final structure of mimetic anxiety and why it might lead to deleterious or even detrimental effect in relation to learning. Consider the following. By its structure mimetic anxiety suggestions the intermediation of a third component, one similar in function to the Model in mimetic desire. However, the "Model" in the case of mimetic anxiety is not a subject, rather it is already interdividuated between human and the non-human interobjective. Thus the "Model" in the case of mimetic anxiety is a synetic demand made upon the subject, one that requires of the

Subject their knowledge or ability to "operate" the interface of the world and social organisation, or else risk exclusive from social representation. But this anxiety, as Freud suggests, is not "of the moment," rather it is anticipatory, and it intensifies its effects by engendering bifurcation of the subject, where incomplete and un-complete-able objectives of mastery and awareness of mastery are sifted out from each other. Each time the subject attempts mastery, they realise that that mastery would be impossible without prior awareness of what that mastery constitutes, forcing the the subject back into attempting understanding/awareness, only to again find that understanding would not be forthcoming until mastery is achieved, again forcing the subject into the opposite pole of the Bifurcated Self. An infernal loop, no doubt, and one that exists in anticipation of learning yet unperformed. A loop that predicts learned helplessness unless it can be brought to extinction.

In summary, this chapter formulated the entirely novel concept of mimetic anxiety by attempting to unify the Freudian and Lacanian conceptualisations of anxiety. This unification could not be achieved satisfactorily and therefore the inclusion of the concept of mimesis, first in its essential sense as described by Auerbach and next in a technically abstracted sense as used by Girard in his concept of mimetic desire.

CHAPTER 4: LEARNING THEORIES, MOTIVATION, AND THE EXTINCTION OF MIMETIC ANXIETY

Learning Theories

Pavlov and Classical Conditioning

In comments to the Petrograd Philosophical Society, made in 1916 and seeing publication a year after in the *Journal of Psychology*, Pavlov (1955) would outline work done since the 1890s. After being established for nearly a century and a half in the literature, Pavlov's experiments have become well known almost to the point of truism. Dogs salivate in response to steak; the steak can thus be classified as an unconditioned stimulus (one emplaced by "Nature" over billions of generations of evolution). When a neutral stimulus -- the sound of a bell being rung -- is associated with the presentation of the unconditioned stimulus, the dog's psyche moves to establish a relationship between the two stimuli. Sustained repetition of that association leads to the psychical relationship becoming concretized to a point where the formally neutral stimulus -- the bell -- might be presented in isolation and produce a similar response of salivation. Under such conditions where the formally neutral stimulus is able to elicit a physiological response, the term conditioned stimulus is now applied, instead of "neutral stimulus".

However prominent Pavlov's groundbreaking work has become over time, many of the more subtle intricacies have been failed to be absorbed. It is in his 1916/1917 comments that Pavlov addresses these lesser known intricacies. Pavlov (1955, p. 208) states,

> Finally, all the phenomena with which we were concerned appeared to us in a new light… What is that which the physiologists term psychical stimulation of the salivary gland? We, naturally, put ourselves the question: is it not a form of nervous activity… not a reflex? And what does this reflex of the physiologist represent? It consists of three chief

> elements. In the first place, there is an indispensable external agent producing the stimulation. In the second place, there is a definite nervous path by means of which the external impulse makes itself felt in the effector organ. This is the so-called reflex arc, a chain composed of an afferent nerve, a central part and a centrifugal or efferent nerve. And finally, in the third place, the law-governed, but not accidental or capricious, nature of the reaction.

Pavlov thus identifies the salivation response as a reflex and notes it as comprising three parts; an external stimulus, a nervous path from sensory organ to central nervous system (most prominently, the brain), and finally a generalized law abstracted from the repeated practice of association. However, Pavlov (1955) warns of a fourth and until that point unidentified element in the relationship. They (ibid.) write,

> But the "psychical" excitation has an additional feature… Let us suppose that the attendant enters for the first time the chamber in which the dog is kept and brings in the food. The food begins to act the moment it is shown to the dog. And if the same attendant brings in the food several days in succession the upshot will be that the moment he opens the door and puts his head in, the action begins. Thus, a new stimulating agent has appeared. If this is continued long enough, then the sound of the attendant's steps alone is sufficient to evoke a secretion of saliva. Consequently, stimuli that did not exist before have now developed. The difference appears to be considerable and essential: while in the physiological stimulation the stimuli are constant, here they are variable.

In this way associated neutral stimuli can become formalized as a conditioned stimuli. However, it should be noted that while unconditioned responses are fixed in their respective natures, conditioned stimuli can allow for variance; the attendant's footsteps in the passage, the sound of a bell, the attendant's head poking through a doorway, perhaps even the gentle susurrus of fan-blades starting into motion. This describes the entirety of the system of classical conditioning.

There are however, at least two conceptual difficulties that must be surmounted when considering Pavlovian classical conditioning as a tool for overcoming mimetic anxiety, and only one of these difficulties arises from the propensity of conditioned stimuli for variance.

The first of these barriers is similar in scope to the problem of synthetic diamonds. Which is to say, there is a contrapuntal tension that develops between a phenomenological expression of a system and an ontological expression of that same system. Consider synthetic diamonds, commonly labeled LGD or Lab Grown Diamonds. Whether HPHT (High Pressure, High Temperature) diamonds or CVD (Chemical Vapour Deposition) diamonds, both are phenomenologically indistinguishable from "real" diamonds that have been mined from the earth and produced through volcanic or tectonic or other geological pressures. Ontologically however, synthetic diamonds present a problem as much for the industry of securing wealth in physical assets that saw a rebirth in northern Cape and that today exists in global capitals like Amsterdam, London or New York, as for the prospective groom who wants to dazzle is bride-to-be. The ontological difficulty here being that the synthetic diamonds are not real -- dropping quotation marks -- and that diamonds that are not real reflect poorly on both the storage of wealth in assets and the ritualistic intentions of courtship requiring geological expression. Similarly, despite Pavlov's groundbreaking research, an epistemologically clear definition that distinguishes between unconditioned and conditioned response is never offered. Like the "real" diamond created by geological pressures, a diamond which is phenomonlogically indistinguishable from an synthetic diamond, the unconditioned response is imprinted through evolution but phenomenologically indistinguishable from a conditioned response which simply accelerates evolution and localizes the effect to a single individual. While an ontological distinction might be

granted, essentially the stimulus is no different between the conditioned or the unconditioned type. The problem with this kind of reducibility is twofold; learning can no more explain the agrarian revolution (more so the industrial revolution) than it can explain why school-going learners are not able to master concepts at a single and uniform pace. If learning is no more than a conditioned reflex, students should be able to respond to learned concepts in the same way across even cultural boundaries. And if learning is no more than a conditioned response, then a constant succession of selective pressures since the start of the Holocene would ostensibly refute wide-scale social reorganisation like the agrarian revolution. This problem is further compounded by Pavlov's own difficulty in recognising the phenomonological reducibility of the unconditioned to the conditioned and the conditioned to the unconditioned. The difficulty of recognition makes for a separation of schoolgoing learning from earlier systems of technological innovation. This in turn intensifies mimetic anxiety by subordinating the learner to historical (and antecedent prehistorical) forces rather than preparing the learner for a role in which they would contribute to broader historical change and command such forces of historical change.

A second conceptual barrier that needs to be crossed when considering the viability Pavlov's theoretical model in assuaging mimetic anxiety arises from the notion of variance. Put succinctly, what exactly fails to become a possible variant stimulus that might ultimately constitute a conditioned stimulus? What could conceivably be left out? The conceptual barrier that must be addressed with the emergence of variance is the notion of differentiation. What is signal, and what is noise? With this task the more subtle issue of a power dynamic again rears its head. Who decides what is signal and what is noise? Is that the learner themselves or a collective of learners, a teacher in a supervisory capacity, or an administrator appointed by bureaucrats? To

return to the first level of difficulty with this conceptual barrier -- that variance in conditioned stimuli might preclude any clear identification of the stimulus itself -- it should be considered that such conditions would only serve to exacerbate the effects of mimetic anxiety. Variance in conditioned stimuli would necessarily but the activity of learning at odds with the mode of transmission of content needed to be learnt. How would they learn if students are unable to understand what triggers learning? Under such conditions the stipulations of mastery remain unclear creating greater pressure on the demands of measurement of that mastery, causing the Bifurcated Self to grow ever more bifurcated in a virtuous cycle. This problem is only deepened by extension to the question of who would decide. Under conditions of external definition -- externalised from the student rather than teacher -- mimetic anxiety would increase in relation to the amount of control lost at being able to measure mastery. Under conditions of internal definition, added burden would be placed on the student to create such measures for themselves.

What might be required instead, is the protraction of behaviourist principles into the arena of voluntary behaviour and beyond involuntary reflexes where Pavlov exits. It is exactly where B. F. Skinner, building on the work of Edward Thorndike, would enter. For Skinner, behaviour would take on a broader significance of being the only certain way to understand human or non-human minds, since any thought without the outward expression of action is not only non-measurable but also irrelevant to scientific inquiry.

Skinner and Operant Conditioning

Skinner thought that the classical conditioning theory was oversimplified to explain something as nuanced as human behavior. Operant conditioning is distinct from classical

conditioning, which involves associating biologically relevant occurrences with stimuli to elicit automatic and reflexive behaviours. Operant conditioning, in contrast, is a learning process in which behaviours are changed by associating stimuli with rewards or punishments. It involves conditioning operant—behaviours that have an impact on one's environment—to occur or not occur based on the behaviour's effects on the environment. In classical conditioning, a reflex is spontaneously triggered by something in the environment, and the organism is trained to respond to a different stimulus. It seems clear that operant conditioning is a second sort of associative learning. Through operant conditioning, organisms discover how to connect a behavior with its result. A positive outcome increases the likelihood that the action will be repeated in the future. His theory that consequences lead to learning is based on Edward Thorndike's law of effect, which was first put forward in psychology. The law of effect states that activities that result in pleasing outcomes for the organism are more likely to be repeated, whereas behaviours that result in unfavourable outcomes are less likely to be repeated (Thorndike, 1911). In other words, an organism is more likely to repeat a behavior if it produces the intended results. An organism will be less likely to repeat an action if it does not produce the desired results.

Developmental psychologists were able to research the effects of positive and negative reinforcement because of Skinner's work. Skinner discovered that behavior was influenced by the environment, and that behavior would change if the environment were altered. Skinner put a hungry rat into a box with a lever to demonstrate how reinforcement functions in a controlled setting. A food pellet would fall into the box when the rat scurried around inside it and inadvertently pressed the lever. Skinner frequently employed a strategy known as shaping in his operant conditioning trials. In shaping, we reward successive approximations of a desired

behavior rather than just the target behavior itself. For example, parents can divide a task into more manageable, smaller steps.

According to Skinner's theory of reinforcement, a person's behavior can be modified through the use of rewards and punishments. This approach primarily offers two interventions that are mostly utilized to alter, modify, and state each individual's conduct. It supports the growth and improvement of a single person's behavior. Reinforcements come in two different varieties. Both of these types of reinforcement are good and negative. If there is a system of rewards, a single individual's response or behavior is strengthened through positive reinforcement. Negative reinforcement generally involves getting rid of an unpleasant condition that is then typically followed by a reaction. Here the process of elimination and reduction of the reward stimuli takes place. In certain ways, it reinforces a person's conduct by assisting in the removal of a negative experience. It sometimes depends on the outcomes or consequences of human action, as well as on the outcomes or consequences of action in the future, just like the positive condition of reinforcement. To aid in the growth and improvement of the behavior, the unfavourable stimulus is eliminated. According to Skinner, punishment has no lasting impact on the victim. Self-realization or comprehension of the right course of action is the main goal of punishment. In this regard, employing negative reinforcement techniques is also a great idea, particularly when trying to get rid of a stimulus by withholding praise or incentives.

Piaget and Phases of Cognitive Development

According to the Swiss psychologist Piaget's Theory of Cognitive Development, children's intellect evolves as they mature. Children's cognitive growth includes more than just

learning new things; children also need to create or refine a mental model of the world around them.

According to Piaget, equilibration is a continuous process that modifies and changes mental structures and forms the cornerstone of cognitive growth. An individual tends to experience more equilibration as they go from one major developmental stage to the next. A biological urge to achieve an optimal equilibrium state (or adaptation) between cognitive structures and the environment is known as equilibration. The key element and driving force behind cognitive development is equilibration. It orchestrates the other three components' operations (biological maturation, experience with the physical environment, experience with the social environment) and ensures that the internal mental architecture and the surrounding environment are consistent.

Assimilation and accommodation are two processes that make up the process of equilibration. Assimilation is the process of integrating new information into an existing cognitive framework. We change reality's character to match our cognitive framework when we interpret, construe, and frame it. The term "accommodation" describes modifying internal structures to maintain consistency with the outside world. We accommodate when we change our theories to account for reality or when we adapt our structures to take into account fresh facts. The processes of assimilation and accommodation work in tandem. Structures are adapted as reality is absorbed.

According to Piaget, children's cognitive development followed a predetermined path. A level or stage can be regarded of as the pattern of operations that youngsters are capable of performing. How children see the world defines each level or stage. Each of the four stages that

Piaget identified for children's cognitive development represents a different method of thinking about and comprehending the environment. These were identified as (4) formal operational thinking, (5) concrete operational thinking, (6) preoperational thinking, and (7) sensorimotor intelligence.

Each child goes through the phases in the same order, and biological maturation and interactions with the environment are what determine how children develop. Each stage of development involves a particular sort of intelligence, with the child's thinking being qualitatively distinct from the others at each stage. Although no stage may be skipped, individual variances in a child's rate of development mean that some youngsters may never reach the later phases. Despite the fact that descriptions of the phases sometimes contain an indication of the age at which the average child would reach each stage, Piaget did not assert that a particular stage was attained at a specific age.

The child focuses on physical sensations and learns to coordinate his body throughout the sensory motor stage, which lasts from birth to two years. The baby is living in the present at this time. It lacks a sense of item permanence since it does not yet have a mental image of the world stored in its memory. Knowing that an object still exists, even if it is hidden, is the primary accomplishment during this stage. It necessitates the capacity to create a mental schema—a representation—of the item. By the time this stage is over, children will have demonstrated via play that they can use one object to stand in for another (symbolic function) . They begin to utilize language after they realize that words may be used to describe both things and emotions.

One of Piaget's phases of intellectual development is the pre-operational stage, which lasts from two to seven years. Because the child is not yet using operations, their thinking is

impacted by how things appear than by logical reasoning. A child is unable to preserve, which indicates that the child is unaware that quantity always remains constant regardless of appearance. The child is also egocentric; assuming that everyone else sees the world the same way they do. Children have started to separate their thoughts from the physical world by the age of two. have not yet exhibited logical thought qualities, though. Still based on egocentric, subjective situational judgments, and intuitive thinking.

By the start of the concrete operational stage, the child is able to employ operations (a set of logical rules) to conserve quantities, and has become more de-centring and is doing better on activities requiring inclusion. Children still struggle with abstract thought. Children can think rationally much more successfully if they can use actual (concrete) items or drawings of them, which is why the stage is called concrete. Since it signals the onset of logical or operational thought, Piaget saw the concrete stage as a crucial turning point in the child's cognitive development.

Around age 11, the formal operational time starts. Adolescents who pass through this stage develop higher-order thinking skills, the capability to integrate and classify items in increasingly complex ways, and the ability to think abstractly. Adolescents are capable of using logic to reason about both the present and the potential future. This enables them to engage in scientific reasoning as well as understand politics, ethics, and science fiction. Adolescents are capable of handling abstract concepts and thinking through hypothetical issues.

Although research suggests that cognitive development can be accelerated, Piaget claimed that it cannot be taught. This notion has effects on how we teach. Although some

academics have demonstrated how aspects of Piaget's theory might be applied to teaching and learning, Piaget (1951) did not explicitly link his theory to education.

Piaget has had a significant impact on how educational policy and instructional methods are developed. Even though Piaget's work was not really intended for education, the Plowden Committee, which looked into educational shortcomings in the 1960s, decided to include many of his concepts in its final report, which was released in 1967. Three recommendations related to Piaget are made in the report: First, children should receive individualized care and be made aware that they require special treatment. Second, only subjects that children can understand should be taught to them. Third, because children develop at different rates, the instructor must be aware of each student's developmental stage in order to adapt the lesson plan to meet their specific needs. Individual learning, flexibility in the curriculum, the importance of play in children's learning, the use of the environment, learning by discovery, and the importance of evaluating children's progress are recurring themes in the report. Teachers should not assume that only what can be measured is valuable.

The reform of the primary school curriculum was perceived as being centered on discovery learning, which is the belief that children learn best by doing and actively discovering. When teachers are aware of the levels at which their students are functioning, it will be to their advantage. It ought not to be expected of every student in a class to perform at the same level. Teachers can encourage children to grow cognitively by understanding how the brain works, keeping them engaged, introducing contrasts, and encouraging socialization.

Vygotsky and the Social Developmental Model of Learning

Disagreeing with the fundamental premises of Piaget's theory, Lev Vygotsky paved the way for a social developmental model of learning, by suggesting that fixed stages of development were not necessary for the activity. Rather than being tied to Piaget's more rigidly defined four-stage model -- one that Piaget himself would over time argue as being more and more fluidly defined -- Vygotsky's model emphasised the act of modeling in learners (although not to the degree that Bandura's theories later would), the role of the more knowledgeable other, the zone of proximal development, and would pave with way for the concept of scaffolding (despite Vygotsky himself never using this term). Moreover, by basing his model on four elementary mental functions -- attention, sensation, perception and memory -- and grounding these in a context of social and, primarily, linguistic interaction and cooperation with more knowledgeable others, Vygotsky was able to effectively advocate for the idea that learning could precede development. It was this latter insight that allowed for the falsifiable prediction -- falsifiable, in the same sense as Popper's use -- that children would be able to learn skills that transcend their natural maturity. Vygotsky's model should be more fully explained, before examining the interaction between the model and the concept of mimetic anxiety. To effect a conscise summary of Vygotsky's subtle and complex model, a reductionist approach is arguably the best suited. Vygotsky's model will thus be summarized under two concept areas; the social nature and origin of mind, and, the zone of proximal development.

Vygotsky (1997) suggests adaptation of the child to the environment in which that child must later live, as the ultimate aim of education. Vygotsky (1997) then considers how all animals are impelled by instincts of feeding, protection, aggression and reproduction, and that the communal and cooperative nature of such activity in humans as led to the economy. Vygotsky

follows the same path of reasoning as Engels (who is quoted), suggesting that social change should be sought in people's minds and consequently economics rather than philosophy is a surer means of analysis. Education, Vygotsky (1997) concludes is the process of adaptation to the more socioeconomic milieu into which the child finds themselves inserted. Even the more permanent modes of historical development, like the legal statutes and moral precepts are grounded in the more transitory operations of economics, Vygotsky argues. Hence for Vygotsky the environment into which the child must fit, is an impermanent economic one, encumbered by constraints and opportunities stemming from a Marxist-Engelsian defined socius.

Vygotsky (1997, p. 148) suggests,

> In fact, human labor, i.e., the struggle for existence, assumes, by necessity, forms of the social struggle and, accordingly, places whole masses of people under the same conditions, forcing them to develop identical forms of behavior. These identical forms of behavior are made up of all those widespread religious beliefs, ceremonies, and customs within which a given society lives. Thus, whether we like it or not, education is, either consciously or unconsciously, always guided along class lines.

Which ultimately leads to the conclusion (Vygotsky, 1997, ibid),

> Everything we teach the child must be adapted to those special forms of behavior, language, customs, morals and manners, and habits which the child perceives.

These are the theoretical grounds in which Vygotsky prepares what is arguably his primary contribution to eductional theory, his concept of the zone of proximal development. To begin, Vygotsky (1978) argues that defining the zone of proximal development as a concept is complicated by two, somewhat contradictory issues; these being, the need to establish the general relation between learning and development and charting the specific features of the this

relationship when children transition to school-going age. The tension between these two issues, Vygotsky (1978, p. 85) argues, naturally leads to a common-sense testing practice that, Vygotsky (ibid.) again argues, is inefficient to the point of ultimately not only be incorrect but also of obfuscating the truth. This testing methodology is to submit the child to a battery of tests in which performance is rated against expected developmental level. The standard practice is to only accept "pure" data where the child has performed all testing and answered by themselves alone. Should children participate as a group and work together towards a solution, or should a teacher or other supervisory figure intervene and provide an instructive path that would ultimately lead to the test-taking student to an answer, such results are usually, from a common-sense intuition, deemed compromised and not accurately reflecting a test-taking student's individual aptitude.

Consequently such results are discarded on the basis that they are "compromised" in some sense. Vygotsky's (ibid.) assertion is that discarding such results stems from, and perpetuates, a deep misinterpretation of the data; that providing a solution through either cooperation or assistance, while at odds with our deep-rooted industrialist- and economic-driven ideation to deem individualistic acquisitiveness as both meritorious and meritocratic, in fact points to the surprising insight that learning can exceed preordered, predefined levels of development and can in fact be bolstered by participation, cooperation and guidance. For Vygotsky the very data we discard from our common-sense understanding -- a common-sense understanding Vygotsky might argue away as widely-accepted, un-interrogated bias -- points to a revolutionary insight that participation, cooperation and guidance in learning has the effect of a force multiplier. Force multiplier is a term borrowed from military science to indicate an

increased likelihood of success in achieving pre-stated objectives upon the introduction of numerical superiority (more persons), improved intelligence (guidance) or technology, or even psychological adaption (through perpetual optimism). Vygotsky therefore focuses on the interactions of other learners and guides -- more knowledgeable others -- with the child involved in the learning and it is this that Vygotsky uses as the basis for developing his notion of the zone of proximal development.

Vygotsky (1978, p. 119) defines the zone of proximal development as,

> what we call the zone of proximal development… is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers

Further this leads to (Vygotsky, 1978, p. 121),

> The actual developmental level characterizes mental development retrospectively, while the zone of proximal development characterizes mental development prospectively.

Which in turn leads to (Vygotsky, 1978, p. 127),

> …human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them… Children can imitate a variety of actions that go well beyond the limits of their own capabilities. Using imitation, children are capable of doing much more in collective activity or under the guidance of adults. This fact, which seems to be of little significance in itself, is of fundamental importance in that it demands a radical alteration of the entire doctrine concerning the relation between learning and development in children.

At this point in his argument, Vygotsky (1978, p. 122) reconsiders the role and value of measuring performance capacity of individual children as a function of predefined developmental stages. They (ibid.) suggest,

> …learning which is oriented toward developmental levels that have already been reached is ineffective from the viewpoint of a child's overall development. It does not aim for a new stage of the developmental process but rather lags behind this process. Thus, the notion of a zone of proximal-development enables us to propound a new formula, namely that the only "good learning" is that which is in advance of development

Or restating it more succinctly, testing that measures performance against predefined development stages looks to a historical definition of learning, and is thus ineffective. True learning should, and does, prompt the child towards unimagined (unimagined by testing rather than expectations of teachers) potential. However this kind of learning can only be activated through either cooperation with other learners or through guidance from teachers.

All of which leads Vygotsky (1978, p. 140) to the conclusion,

> …that an essential feature of learning is that it creates the zone of proximal development; that is, learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers. Once these processes are internalized, they become part of the child's independent developmental achievement… To summarize, the most essential feature of our hypodissertation is the notion that developmental processes do not coincide with learning processes. Rather, the developmental process lags behind the learning process; this sequence then results in zones of proximal development.

Vygotsky's key insight of reversing the subordination of learning to development -- a subordination arguably introduced by Piaget -- his grounding of learning in the socius, his concept of the zone of proximal development, and his notion that learning can exceed predefined developmental stages all point to a set of basic tools that if used appropriately, are able to break the problem of mimetic anxiety. However, at least one philosophical -- or perhaps in Vygotsky's case, ideological -- must be confronted. The subordination of development to learning makes learning teleological. Teleological in the sense of an end, that an objective must be fulfilled. This

objective would naturally be the a demand on learning that it pull children through developmental phases. Despite the incredible forward progress and great momentum of his theory, Vygotsky still does not offer an abstracted, "pure" kind of mastery (pure in the sense of pure mathematics as opposed to applied mathematics) for which learning is essential in unlocking. This lack of a "pure" learning is a means for perpetuating the complex of mimetic anxiety. The schismatic demand of a bifurcated self would still exist, in fact, such a demand might might not only more readily be called into being, but might arguably do more damage, as an additional mastery of developmental mastery is called for.

Gagné: Blending Behaviourism and Cognitivism

Gagné's instructional design model focuses on learning outcomes and how to set up certain instructional events to attain those results. It is based on the information processing model of the mental events that occur when humans are exposed to various stimuli. Educational activities during a lesson are referred to as instructional events. An effective lesson design depends on choosing the appropriate events and organizing them in the proper order and manner. A lesson design is a schedule that outlines the different instructional events, their sequence, and the activities that will occur at each one. The objectives and the learners are two key considerations when creating a lesson plan. Gagné is regarded as one of the leading proponents of the systematic approach to instructional design, and his theory has given teachers many insightful suggestions. Gagné's instructional design model focuses on learning outcomes and how to set up particular instructional events to attain those results. It is based on the information processing model of the mental events that occur when presented with various stimuli. What Gagné refers to as conditions of learning are crucial to his theories on instruction: internal

circumstances deal with the learner's past knowledge, while external conditions address the stimuli that are provided to the learner.

According to this notion, there are various kinds or stages of learning. These divisions are important since each category necessitates a different approach to instruction. Gagné identifies linguistic knowledge, intellectual skills, cognitive strategies, physical skills, and attitudes as the five main areas of learning. For each form of learning, certain internal and external variables are required. Gagné argues that, stimulus identification, response generation, process following, use of terminology, discriminations, idea creation, rule application, and problem solving can be arranged into a hierarchy. The hierarchy's main purpose is to show what needs to be done before moving on to the next level of learning. By performing a task analysis on a learning or training task, prerequisites are found. The sequencing of instruction is supported by learning hierarchies.

Eight Conditions of Learning

From the simplest to the most sophisticated, Gagné lists eight conditions for learning, sometimes known as learning types or varieties. Although Gagné refers to these conditions as learning types, they are more concerned with the observable performance and behavior that they produce. In these learning circumstances, the fundamental behaviorist viewpoint was married with cognitive theory to create a hierarchical model of various learning styles.

Signal learning: Involuntary learning occurs when a person develops a conditioned response to a certain signal. This is the most basic type of learning, and it essentially entails the classical conditioning that Pavlov, a behavioral researcher, initially defined. The animal or person learns a conditioned response to a signal in this sort of learning. For instance, when there is a red light on the road, traffic stops. Stimulus-response learning: The person reacts to

particular stimuli, and the right response is rewarded. This is also referred to as operant conditioning, which was created by Skinner in the beginning. Getting a reaction to stimuli is the main goal of stimulus-response learning. As an illustration, a plant that is placed in a dark room with no light perishes while one that is placed in sunlight thrives. Chaining refers to the linking of two or more previously mastered stimulus-response relationships. The subjects learn to link two or more previously learned stimulus-response linkages into a connected sequence in this more advanced kind of learning. It is the method by which the most complicated psychomotor abilities are used. For instance, a young child could initially picture a doll as a baby. She gives the doll a makeover, cooks for the doll, and then gives it food. Verbal association: Verbal chains, such as when a child recognizes an object and refers to it by its correct name (such as the red ball) or when it looks up the Hindi or French word for an English word. This type of chaining uses verbal connections as the ties between the elements. One of the fundamental processes in the growth of linguistic abilities is verbal association. The act of naming an object, which requires a chain of two connections, is the simplest verbal association. For instance, a child might also say Round Ball, Black and White Ball, or Ball when referring to an object. Multiple discrimination: The learner has the ability to tell between verbal and motor chains that s/he has already mastered. This entails learning how to respond appropriately (differently) to a variety of similar stimuli that differ in predictable ways. This entails learning how to distinguish between objects based on their color, shape, size, etc. Use the name or brand of the car to distinguish it from the other vehicles you see on the road. Concept learning: A frequent reaction to a certain class of stimuli; when learning a concept, the learner reacts to stimuli by recognizing their abstract qualities, such as shape, color, etc. This entails learning how to consistently react to

various stimuli in a way that establishes a group or category of some sort. It serves as the foundation for the capacity to generalize, categorize, etc. When learning an idea, we interpret stimuli in terms of impersonal traits. Example: When operating a vehicle, one must engage the clutch, shift into gear, release the clutch gradually, and then press the accelerator. Rule learning is the process of connecting two or more concepts. For instance, water will boil at 100°C. Here, there is a rule that connects the ideas of temperature and boiling point. This is an extremely complex cognitive process that entails being able to acquire connections between ideas and use those connections in a variety of contexts, even ones that have never been experienced before. In order to learn a rule, we must relate two or more ideas. Example: It is a general rule that when an air-filled ball is kicked, it flies, rolls, and circles. This rule teaches terms like flying style, rolling, and rotating, among others. Problem solving: According to Gagné, this is the greatest degree of cognitive processing. It entails learning how to create a sophisticated rule, algorithm, or process with the intention of addressing a specific problem and then applying the solution to other issues with a similar structure. Example: The teacher presents a single arithmetic problem to the class and instructs them to solve all the problems from the chapter that are similar.

The learner applies the rules they have acquired to accomplish specific objectives; problem solving is the combined result of two or more Tower-order rules; as a result, it necessitates an internal event, i.e., thinking, to occur in order to solve a problem. For instance, a learner is given a challenge to demonstrate that air has pressure. He or she must become familiar with some lower-order rules in order to solve this difficulty. (i) A column of water can be supported by air (ii) The weight of air is roughly 15 pounds per square inch in all directions (iii), and (iv) Air pulls upwards as well as downwards.

There are some circumstances that exist prior to the learning event itself and that influence the likelihood that it will occur. These are, in general, prerequisites for learning, and they include the development of mental preparedness, motivation, and attentional sets. These may be regarded as the most critical elements that an instructor can affect in order to set the stage for learning. Each of them makes reference to a learner's internal state, a state that may be created by controlling the person's external environment.

Attention

In order to control his own behavior while monitoring the stimuli that make up the external conditions of learning, the child must first acquire certain stimulus-response chains. He or she must learn to preserve the internal cues that define action sequences, to discern the key components of the stimulus, to continue to focus his sense organs on the source of stimulation, and to carry out an activity that she or he has started. All of these skills seem to fit very well into the attentional sets category. According to the fundamental types of learning connections and chains, learning appropriate sorts of attentional sets appears to be understood.

Attention: At first, it's possible that the youngster wasn't taught how to focus on the stimuli that are an important component of the learning event. Response: The young infant might observe the stimuli at first but not act on it. However, since kids are typically responsive, it is typically not difficult to persuade them to participate in activities that they enjoy and can do successfully. Order: This talent merely entails being able to carry out a chain of actions by listening to instructions. Again, the learning process here closely resembles chain learning, in which reinforcement is obtained by task completion. "Exploration": The student must learn to take note of a variety of things in his surroundings. This skill, which is an attentional set,

broadens the scope of basic observation by allowing attention to be focused on several environmental characteristics simultaneously and sometimes through several senses. The acquisition of such behavior can be facilitated by reinforcement that emphasizes variety and novelty of stimulus while also encouraging the youngster to conduct deeper and more thorough explorations of his surroundings. As a prerequisite for subsequent learning, it is crucial for young children to develop these attentional sets. These extremely fundamental prelearning skills might be thought of as belonging to the larger category of cognitive strategies.

Motivation

Since the issue of human motivation is so vast and intricate, only a small amount of it can be covered here. To understand the different types of motives that exist, how they arise and grow inside the individual, and how they influence the "force" and direction of human behavior, psychologists conduct extensive research on motivation.

Motivation to go to school - With regard to the practical issue of instructing pupils, it is obvious that for them to be impacted by that instruction, they must wish to be present in that environment. The type of drive that might be referred to as a resolve to study is at the complete other end of an ordered set of motives. The general conclusion in investigations of "incidental learning" has been that learning generally occurs about as well when such a resolve is missing as when it is there. This has been demonstrated in a number of studies. It is crucial for successful learning that such a precise resolve is carefully differentiated from motivation to succeed. This is constructive motivation of a significant character if the student's "motivation to learn" refers to his resolve to be able to do something, something that can be accomplished as a result of learning.

What inspires someone to pursue learning? How can one establish the type of motivation necessary for the learner to pay attention to stimulus events only when they are relevant to the behavior change that is a sign of learning? The youngster eventually develops the desire to win other people's favor, to avoid getting it denied, and to achieve a position of social respect among his peers. In addition to this, developing a motivation for mastery entails teaching him intellectual abilities that allow him to work on his own. Accuracy and thoroughness in the tasks the youngster completes serve as reinforcement for such learning. The development of authentic self-motivation is required for motivation for achievement, in which the accomplishment of more challenging tasks serves as a source of self-satisfaction and inspires a desire for further improvement. Students that reach this level of functioning are fully prepared to function as true self-learners.

Readiness

The readiness of all the cognitive states and processes that go into a learning act is the third crucial component. Human performance limitations are frequently directly tied to growing processes. This is similar to Vygotsky's Zone of Proximal Development, which is the area between what a learner can accomplish on their own and what they can accomplish with adult supervision or in collaboration with more advanced classmates. The presence of several particularly pertinent subordinate intellectual skills is thought to indicate developmental preparedness for learning any given new intellectual talent. The person must first have acquired some other, simpler rules before engaging in problem solving to learn a new higher-order rule.

Learning specifically has the consequence of developing the unique talents required for carrying out any intellectual endeavor. There are cumulative impacts as well. When a person

learns a specific rule, he or she develops skills that can be applied to learning other higher-order rules in addition to the one they just acquired.

Factors

In schools, learning normally occurs during a sequence of activities known as teaching. But the learner needs to have been prepared for learning even before these things happen. He or she must demonstrate a preparedness for learning that has been established by a number of extra occurrences that occur at various points in time prior to the actual instructional hour. Learning readiness is primarily influenced by three factors: attentional settings, motivation, and developmental stage. An attentional set is a temporary mental state of the learner that allows him to select and recognize stimuli that are appropriate for the learning process. These phases depict times when the operations of rational cognition were developing. Numerous observational data points attest to the consistency of normal child development patterns with this concept, evidence that was gathered by Piaget and his colleagues as well as by other researchers.

It is also conceivable to consider intellectual development as being mostly due to the cumulative benefits of learning relatively particular intellectual skills, which is not inconsistent with the evidence that already exists.

The Nine Events of Instruction

According to Gagné's theory, learning requires the sequential application of nine instructional events and associated cognitive processes.

Gain Attention. When students initially enter the classroom, they may be focused on a variety of different things, therefore in order for learning to occur, their interest and attention must first be grabbed. Examples: A sudden shift in the stimulus, such as pointing or speaking

loudly. Start the lesson out with a challenging query or fascinating fact. Supplying a captivating auditory or visual stimulus. Multimedia (such as PowerPoint slides) can be used to integrate images, sound, and video depending on the audience. There is no question that curiosity stimulates pupils to study, so starting with a thought-provoking remark and a stimulus change is an excellent place to start.

Inform about Objectives. A list of learning objectives should be presented to students at the beginning of each lesson. This starts the learner's internal process of expectation and encourages them to finish the session. In our session, a direct remark like "after learning this lesson, you will be able to (find irregular nouns by name.)" might be used.

Stimulate Recall. Learning can be facilitated by asking students to reflect on what they already know, linking new information to existing knowledge, and relating it to personal experience. The following topics should be covered in an engaging discussion for 20 to 30 minutes: posing queries concerning earlier observations and encounters.

Present Materials. The learner is really given the new material at this time. The organization of the content should make sense, and various media should be used to explain and display it. The process's many steps should be outlined.

Provide Guidance. This event entails demonstrating the actions that make up correct performance as well as offering additional advice, such as the use of examples, case studies, graphical aids, and mnemonics to assist students in encoding information for long-term memory, or, to put it another way, "make the stimulus as meaningful as possible." Since this is a practical technique, students are better prepared to carry out the procedure on their own if they first watch it being done. The instructor demonstrates the tools and carries out the procedure on a dummy

while discussing each step and using the sterile approach. There are helpful recommendations and tips that can be given when executing the operation.

Elicit Performance. Learners are now the focus of the action. In this situation, the learner must practice the new behavior or skill. Eliciting performance gives students a chance to make sure they have understood something correctly, and the repetition enhances the possibility that they will remember it. Each student should become familiar with the tools, show off their skills, and carry out the steps.

Feedback. While seeing each learner complete the task, quick, one-on-one feedback, direction, and assistance may be given as well as any questions. Feedback from other students who are watching the performance is also very beneficial.

Assess. The students now display what they have learned without more instruction or hints. A single performance, however, does not guarantee that the new capability has been accurately stored; further practice is required. This will be the learner's unprompted and unguided demonstration of the entire method. Time and resources are the key problems here. They can practice the process a few times and then give a performance at the end if there is enough time or if a second session is scheduled. It is impossible to predict the intended conclusion; initially, they need supervision and assistance, but after a few attempts, they will be able to carry it out on their own.

Transfer. By offering practice and spaced reviews, we can raise the possibility that the acquired skills will be retained for a lengthy period of time once we are reasonably certain that they are reliably stored. Although repetition of acquired topics is sometimes despised by students, it is an excellent way to improve retention. Additionally, most training aims to transfer

knowledge and abilities to fresh issues and circumstances, but due to time constraints in the classroom, this is more challenging to do. The learners should repeat the process a few times to increase retention. The use of their talents while initially being monitored is considered the transfer of knowledge. Reviewing the main ideas, responding to the queries, and getting feedback from the audience can wrap up the lesson.

The theories of Gagné offer teachers a wealth of useful knowledge. By giving the lesson plans structure and a comprehensive perspective, Gagné's nine-step model is a great approach to guarantee an efficient and organized learning program. It is important to remember that each learning objective must determine the precise format of these events; it cannot be chosen in advance for all courses. While our intention is frequently to assist them understand, the performance that is most frequently expected of students is to remember. By giving the objectives of the lesson plans greater structure, we will be able to accomplish this goal.

Motivation Theory

Anderman and Gray (2015) identify at least three major theories of motivation; Achievement-Goal, Self-Determination, and Expectancy-Value. Achievement-Goal functions as a biaxial matrix, where mastery/performance is opposed with approach/avoidance. Mastery refers to the "pure" desire to learn, whereas performance refers to the desire to equal or exceed the performance of others. Approach describes the positive aspect of "wanting to" while avoidance means "not falling behind." Thus one of four conditions emerge; mastery approach in which the learner seeks to know all there is to know, do all there is to do in a given field, mastery avoidance, where the learners are driven by not wanting to fail to be competent of even the smallest part of the field of knowledge, performance avoidance, where the learner does not want

to perform more poorly than others, and performance approach, where the learner seeks to perform as well as all others. Self-Determination studies "autonomy," "competence," and "connection," to demonstrate how learners can motivate themselves to comparative success. Autonomy refers to self-direction, competence to the skills required to perform a task and connection to social connection as the basis for action and achievement. Expectancy-Value theory might be mistaken for instrumentalism, mercantilism or cost-benefit driven motivation. Expectancy references learners' beliefs about their own skills, while "Values" references attainment value (beliefs around why the task is important), intrinsic value (beliefs around how much enjoyment performing the task would generate), utility value (beliefs around how useful performing the task would be), and costs (beliefs around what resources would be spent in performing the task).

Mimetic Pride as the Possibility of Watsonian Extinction of Mimetic Anxiety

While Watson does not seek to define anxiety in the same way that both Freud and Lacan do, his and Rayner's description and use of anxiety allows for a Watsonian model of anxiety to be developed by inference. Unlike Freud or Lacan, Watsonian anxiety is not preexistent, or extant. Watsonian anxiety can be created, can be transferred, and behaves (or at least is treated) very much like a commodity. This "commodification" of anxiety allows the phenomenon to be apprehended mechanically as conforming to the ontological. In the following chapter Freud's (1981) almost-throwaway comment that economic conditions might more adequately explain the functioning of anxiety-as-signal is treated as the basis for an exploration of Austrian School economist F. A. Hayek's explanation of price-as-signal. The interpellative reading of Freud and Hayek together produces a new understanding of anxiety and its place in the ego-id-superego

system as a "complex adaptive system" which would produce Watsonian extinction through an evolutionary process. It is possible that this kind of "production" system invariably leads to something that can be thought of as mimetic pride. Rather than unconsciously position the subject as having their desire intermediated by that of the model, mimetic pride in contrast, would unconsciously position the learner as a model in mimetic relationships.

By studying motivation theories and education theories, this chapter has provided meta-taxonomy of learning theory by identifying the differences between behaviourist, cognitivist and blended learning theory.

CHAPTER 5: A CASE STUDY

For reasons discussed in the Overview, this chapter considers Whitman Cobb (2016) as the sole case study for this dissertation.

The Concept of the Flipped Classroom

As was contended earlier in Chapter 4, this dissertation holds that the educational methodology developed by Robert Gagné, which blends behaviourism and cognitivism, provides the greatest number of opportunities to overturn both classical definitions (Freudian, Lacanian, Watsonian) of anxiety and the novel concept of Mimetic Anxiety, as well as provide the greatest number of opportunities for Mimetic Pride. As such, Gagné's methodology warrants an especial place under the considerations of classroom conditions and the meta-analysis which attends this. However, an additional aspect -- historically novel in its practice and therefore not one originally considered by Gagné -- has been added into the this discussion. This historically novel practice is the concept of the flipped classroom. Consider the traditional classroom. By accepting a socially representative, broadened definition, the "classroom" does merely describe a designated room with a school building. More than that, a "classroom" is extended beyond the physical building to encompass a range of activity around teaching, learning practice and understanding. The "classroom" can thus be imagined, in one sense, as that space that is designated within the school building, one where teaching, learning and practice may take place. But it is also true that the "classroom" extends into the home where self-directed learning -- in the more traditional models, most likely this self-directed learning would take the form of homework exercises -- may take place. Thus a long-established convention around the spatialisation of the classroom begins to take place; at school, that is to say, in the school building, learning, teaching and testing is most

likely to occur, while in the home, exercise, practice and mastery is most likely to occur. The concept of the classroom does exactly what it suggests, it inverts the valencies of these spaces, asserting the space of the classroom-at-home as the space of learning, while presenting the classroom-at-school as the space of practice, experimentation and mastery.

Whitman Cobb and American Federal Government

(All Tables discussed in the following subsection have been replicated and attached in the Addendum).

Whitman Cobb (2016, p. 3) devised a study around the benefits the flipped classroom might have over the traditional learning and the online learning models, the experimental design of which they describes as,

> I designed two surveys, one to be given at the beginning of the class and one at the end (Appendices C and D, respectively). The preclass [sic] survey consists of three parts: The first asks for information regarding sex, age, academic status, and major as well as why students took the class. The second part contained a learning-style survey and the third contained a set of 10 questions drawn from the US Citizenship Test to measure student knowledge. The postclass [sic] survey asked students about their impressions of the class, how they would rate the instruction they received, and whether they would take a similar class again. Finally, the same 10 questions were given to measure any improved performance across the three sections.

The study was conducted in 2014 in an American Federal Government class, one which both majors and nonmajors in Political Science take. However, despite Whitman Cobb's (ibid.) claims that the variance in classes were assigned randomly -- i. e. whether class was traditional, flipped or online -- her own data indicate that women participants between 17 and 19 years old attended only the flipped class, while the online class was taken exclusively by women aged between 20 and 22. Women 25 and older attended either the flipped or traditional class. 100% of

participants were women, a fact that might be accounted for with the not unreasonable assumption that Whitman Cobb teaches at a women's college.

While Whitman Cobb's published findings make no mention of teaching methodology, certain reasonable inferences might be made based on the age of participants. Women 25 and older would have been born as late as 1990, but no later. Women between the ages of 17 and 19 in 2014 would have been born between the years 1995 and 1997. Women between the ages of 20 and 22 would have been born between 1992 and 1994.

This would place women of the median generation (20 to 22) at age 16 just as both the 2008 financial crisis hit, and Facebook began redefining the pragmatics of the internet. These same women would be placed at age 19 during the Arab Spring, killing of bin Laden (and the anticipated end to the War on Terror) and the Occupy Wall Street movement. Age 21, another crucial turning point and the age of legal majority for most of the United States, would have come just one year prior for the youngest of this median generation and would be marked with Obama's second term in office and arguably an age of political stability and relative prosperity after the financial collapse of 2008. Women falling into the youngest age group (17 to 19) would have seen their 16th birthday at the time of Occupy, the Arab Spring and bin Laden's death, and would, as of the time of the experiment, have seen no further significant milestones in terms of age. Women falling into the most senior age group, the youngest of them at least, would have seen the age-16 milestone at the height of MySpace, when Facebook was attempting to gain a foothold, would have celebrated their 18th birthday in the year of the financial collapse and seen their age-21 milestone at the time of Occupy, the bin Laden death and the Arab Spring. These age-markers allow for the development of certain insights. The most senior of these participants

would be able to remember a childhood that included dial-up internet, and would have become digitally literate prior to cellphones. The youngest of the participants would have grown up anticipating cellphones of their own once a certain age threshold had been crossed, and upon crossing this threshold would have discovered smartphones rather than ordinary cellular telephones. The middle demographic would arguably have identified most with the relative prosperity and political stability of the Obama era. Most importantly, screen time and online acitivies with social media need to be considered. Twenge, et al. (2022, p. 18) in a landmark study tie increased screen time and social media presence, especially in woman, to bullying, depression and self-harm.

> An important 2019 paper applied a novel analytic technique called Specification Curve Analysis (SCA) to data from three large-scale community samples to investigate the association between adolescent technology use and mental health/well-being. The paper concluded that an association exists but is tiny, with median betas between − 0.01 and − 0.04… We were able to reproduce the original results with the original configurations. When we used the revised constraints, we found several much larger relationships than previously reported. In particular: among girls, there is a consistent and substantial association between mental health and social media use (median betas from − 0.11 to − 0.24). These associations were stronger than links between mental health and binge drinking, sexual assault, obesity, and hard drug use, suggesting that these associations may have substantial practical significance as many countries are experiencing rising rates of depression, anxiety, and suicide among teenagers and young adults.

Returning to Whitman Cobb's (2016, p. 7) original study, they make the following statements under their Discussion,

> The major results of this experiment, then, appear to be twofold: There does not seem to be any major difference in student performance across the three different modalities. Flipped classes do not appear to have any effect, positive or negative, on student performance. On the other hand, student perceptions of the class are very different between traditional,

> flipped, and online students with traditional students enjoying their class time more than the other groups of students.

However, given the conclusions of Twenge, et al. (2022) where social media screen time is strongly correlated with depression, self harm and self harm ideation, a reexamination of the underlying premise must at least be undertaken. Could increased screen time be causal of, or at least strongly correalated with, a decline in performance in the 17 - 19 demographic? In other words, could the data indicate an under-performance relative to other demographic groups that might be mistaken for standard performance? To better respond to this hypodissertation, a more careful investigation of performance results needs to be undertaken. To begin, results on Whitman Cobb's (2016) Table 5 could be consulted, as these delineate the midterm average results in both coursework and seated examination, for all three of the modalities, traditional, flipped and online. Table 5 lists an examination average of 77.93, 71.9, and 76.85 respectively for traditional, flipped and online classrooms. While a class average (coursework average) for the same period is posted as 79.58, 84.29, and 72.21 respectively for the same traditional, flipped and online classrooms. Immediately the nearly 85% in coursework average results stands out as statistically significant. As does the percentage spread of nearly 7% between the flipped classroom coursework and the flipped classroom examination results. Something is definitely happening to produce this kind of variance in the statistics, but can this be explained in the theory, specifically by Gagné's methods?

To briefly recapitulate the earlier discussion around Gagné, his method comprises two systems, learning events, and learning outcomes, both of which are grounded in his eight-level hierarchy of learning. This hierarchy marries together behaviourist as well as cognitivist theories,

and posits a kind of "pure" or "absolute" learning that discriminates between eight evolutionary stages from simplest to most complex form of learning. The first level of Gagné's hierarchy is signal learning, which feeds directly into the classical conditioning of Watson. Can a certain signal repeated over time trigger an involuntary response in a learner? What this level demands is the repetition of a neutral stimulus that would eventually engender an involuntary response. The second phase considers stimulus-response and builds on Skinner's notions of operant conditioning. Can a neutral stimulus produce a voluntary response in a learner. Stage three, chaining, allows the learner to build stimulus-response relationship chains, that is link together various reinforced behaviours found at level two. Level four, verbal association, pushes the learner into processing through language, while level five, discrimination, transitions beyond behaviourism and into cognitivism, and allows for noting how similar things are different. Level six is learning through concepts, and allows for classification based on abstract ideas. Level seven, learning through rules, pushes the learner one step further into abstraction, by focusing on how the learner might be able to form and manipulate rules. The final level, problem-solving, finds a learner who has complete mastery over their learning, someone who is able to design learning by analogy or develop their own algorithms and does not rely on prior knowledge of others to provide them with a system. Because Whitman Cobb does not provide much, or in fact any, description of the classroom environment and learning and teaching methodologies, there is no need to recap Gagné's nine events of instruction (as these relate directly to learning and teaching). Similarly, there is no need to offer a recapitulation of the five learning outcomes, as these define the five different kinds of learnings that could exist. The eight-level hierarchy however might prove a useful tool for the data we have available.

Consider, Whitman Cobb's (2016, p. 12) comments on the very issue of the statistically significant difference between the traditional and flipped class's midterm examination grades,

> …the flipped class has the highest average at 84.29. Interestingly, the only statistically significant difference in all of this was in the midterm exam grade between the traditional and flipped classes.

She (ibid.) continues to suggest two possible reasons,

> One possibility for the difference in average class grade at the midterm is the impact of group work. In the flipped class, students completed some assignments collectively whereas students in the traditional and online classes completed the same assignments on their own. This could lead to two outcomes that could be causing these differences: First, students who would not have otherwise completed the assignments were able to contribute minimally to the paper and still get the group grade. Second, with students working together, the assignment could simply be legitimately better than those completed by one student who would not have the opportunity to work with others. This could also lead to the problem of too many cooks in the kitchen, but this survey design is unable to discern that.

The flipped class's unparalleled success can be explained in one of two ways. Either a kind of peer pressure forced stragglers -- students who would otherwise not have done so -- to commit and hand in assignments. Or the social environment of learning and the presence of more knowledgeable others in the group-work situation propelled more poorly-performing students to catch up to a better final grade. By this reasoning, the advances made by Vygotsky seem to have been set aside, or perhaps remain unfamiliar to the author. But the absence of Vygotsky and the dereliction of stimulating learning in the zone of proximal development points to a second reasonable conclusion, reached by inductive reasoning, that in all likelihood, the learning within the classroom environment could not have pushed past the fourth level in the hierarchy, as higher-order functions like discrimination and problem-solving could not have been engaged without the zone of proximal development being engaged. By extension then, Gagné must

remain as something of an open question; did the group-work accelerate the zone of proximal development, offset a deficit in the teaching methdology? And if group-work did function in this way, did the students unintentionally shift their own learning paradigm to access Gagné's higher order functions (levels five through eight)? This possibility must fall somewhere on a spectrum from more than likely to entirely conceivable, as the flipped class model would have placed greater demands on the instructor who would have had to amend usual expectations and fortify their teaching with innovations for instruction.

Once the full scope of the author's position has been understood and considered, a strong argument for the Rashōmon Effect coming into force, must be granted. Are the data points as they have arisen from experimentation, actually conforming to the narrative that Whitman Cobb presents? Could some of the deviatations or variant interpretations be considered in such a way that another, entirely different, entirely more plausible narrative begins to emerge? Consider Whitman Cobb's Table 12. Like the earlier table discussed, Table 5, Table 12 shows examination results and coursework results, however these results are for students exiting the course rather than for midterms. Against the 77.93 at midterm, the traditional class scored an average of 76.43 on their final examination. Also for the midterm, the final coursework average was 83.32 compared to a 79.58 on the midterm. The flipped class averaged a 71.9 on their midterm exam and a 84.29 of their midterm coursework, which was match by a 71.21 and 83.25 on their final exam and final coursework. For the online class these same scores were an unchanged 76.85 on the examination and an unchanged 72.21 on the coursework.

As already indicated, Whitman Cobb is dismissive of the value of the flipped classroom, not that the traditional class out-performed the flipped class at course-exit. However Whitman

Cobb fails to note the relatively steady performance -- the exact same results posted in the online class, for both the midterms and at course-exit does seem to suggest automated grading that would necessarily lack the subjectivity and awareness of an instructor -- of the flipped classroom. One possible interpretation to append to these data is the one authored by Whitman Cobb, that the flipped classroom model does not make much difference to the learning. However another interpretation, and one that Whitman Cobb's own interpretation prejudices, if not outright represses, is the recognition that the flipped classroom model has steadily produced results in similar range, and has allowed students to reach the higher end of their potential earlier on the course timeline.

The failure to recognise steady achievement as being of value seems indicative of a cognitive bias, one similar in structure to the Easterlin Paradox. Named for its discoverer, the Easterlin Paradox comes from the discipline of economics and from the work of Richard Easterlin (1974) who proposed the formal study of the relationship between wealth and happiness. While the mathematics of Easterlin's modelling is not germane to this discussion, it should be noted that Easterlin (1974) describes a matrix with a basic biaxial variance. That is to say, along one axis a change in wealth can either occur steadily, or it can occur suddenly, while along a second axis wealth can be accumulated individually as opposed to being accumulated at the level of society. Leaving one of four possibilities; wealth is accumulated equally throughout society, either steadily or suddenly, or wealth is accumulated by the individual, either steadily or suddenly. Easterlin (1974) finds that when wealth is accumulated at the level of society it could have a neutral or even inverse relationship with happiness. While the sudden accumulation of wealth at the individual level definitely has a direct relationship with happiness. In other words,

if we steadily, over the course of two decades or more, move from desktop PCs to laptops to cellphones to smartphones, we are less happy that if we were to suddenly gain wealth over and above the median wealth of our neighbours. The analogy to Whitman Cobb is that a steadily build of positive results seems to be disregarded in much the same way a steady build of wealth through technology seems to disregarded under the conditions of the Easterlin Paradox.

Reading Whitman Cobb's (2016) Table 2, Gender, Academic Year, and Learning Style all need to be discredited as the source of variance, in that the mode for each of these is the same, Female, Freshman and Visual. As Age has already been discussed, greater focus will append to Grade Point Average (GPA), Knowledge Pretest, and Grade Expected in the remainder of this section. Again, one metric proves significant but is ostensibly discounted by Whitman Cobb. In this case it is the GPA. Students coming into the traditional classroom are displaced by as much as 1 GPA point (4.0 to 3.0). GPA is traditionally calculated by assigning a value to a student's letter score -- A is worth 4, B, 3, and so on -- then adding then averaging those values for the number of courses the student is enrolled in. Getting all As across seven courses would thus render a GPA of 4.0. One B and six As would drop the GPA to 3.8, a not insignificant drop. The difference between a 4.0 GPA and a GPA of 3.0 is thus effectively the difference between an A-average student and a B-average student. Consequently, the stated expectations of students exit-grade should be treated differently based on their GPAs. For an A-average student to anticipate exiting the class with an A, this statement must be taken with a degree of confidence. However for a B-average student to make the same claim, that statement would read as something closer to presumptive rather than an expectation. With foreknowledge of the not insubstantial difference in average GPA between the traditional and the flipped classrooms, the final grades now begin to

take on a different character. The data can now be read as a group with a lower average grade outperformed themselves to remain competitive throughout the course, and reached that higher performance goal much earlier in the course, at the midterms. This new interpretation is only strengthened by the fact that the flipped classroom students underperformed when compared with the traditional classroom student group on the Knowledge Pretest, scoring an average of 7.1 versus the traditional classroom student group's average of 7.5. In fact the flipped classroom student group demonstrated the poorest pre-knowledge of all student groups being tested.

To explain the underperforming flipped classroom student group keeping pace with the A-average high-performance traditional classroom student group, a reason might be found in traditional motivation theory. Achievement-Goal theory, Expectancy-Value theory and Self-Determination theory might either individually, or in a mix, explain how the weaker group was able to pace the stronger. As with the Easterlin Paradox, Achievement-Goal theory operates the premise of biaxial matrix; an approach-avoidance axis is opposed with a mastery-performance axis. Mastery attempts full an complete understanding of a subject area, while performance measures competence in relation to other learners. Approach is the positive aspect, while avoidance is the negative. Mastery-approach therefore seeks to master all the knowledge of a field, while master-avoidance would seek to bypass not knowing any one aspect of knowledge in a given field. Similarly, performance-avoidance seeks to demonstrate that the student is equivalently as capable as other students, while performance-approach seeks to demonstrate the individual student is smarter than other students.

Expectancy Value, Anxiety-as-Signal, and Watsonian Commodity Extinction

Could the analogy of anxiety-as-commodity in Watson be explain with greater fluency by literally considering the formal economics of markets? To better build the analogy, it seems at least plausible to consider enriching the formulation with a deepened understanding of the refined inner workings of markets. In this phase, the dissertation will undertake to examine the literal mechanism of commodities and signals in order to establish this greater fluency. Specifically, the work of F. A. Hayek will be considered as Hayek suggests an Uncannily similar theory to Freud; not anxiety-as-signal, but price-as-signal. Boettke (2018) defines the scope of Hayek's work as,

> A fundamental theme in Hayek's thought, I have argued, is the "coordination problem"—the problem of how "the spontaneous interaction of a number of people, each possessing only bits of knowledge, brings about a state of affairs...which could be brought about by deliberate direction only by somebody who possessed the combined knowledge of all those individuals"

And Boettke (2018, p. 67) goes on to specify this problem in the following way:

> In "Economics and Knowledge," Hayek ([1937] 1948) articulated a number of ideas that would become major themes in his economic thought, as well as his broader social theory. He argued that economic analysis has empirical relevance and conveys understanding about the real world only insofar as it contains explicit assumptions or propositions about how knowledge is acquired, communicated, and used by individuals within the model. In doing so, Hayek discussed the limits of formal equilibrium analysis and criticized the preoccupation with equilibrium analysis for distracting economists from the fundamental problems of economics. At the core of Hayek's criticism was the issue of the role of assumptions and propositions about knowledge in formal economic theory, especially as applied to equilibrium analysis. We will not make much progress, Hayek argued, if in our analysis, we continually "fall in effect back on the assumption that everybody knows everything and so evade the solution to the problem" ([1937] 1948, 51). We must, instead of assuming, explain how, and by what process, economic actors will acquire the necessary knowledge to coordinate their plans with one

> another to realize the mutual benefits of social cooperation under the division of labor.
>
> …
>
> To address this problem, Hayek set about examining the concept of equilibrium and reframing it on more consistently subjectivist footing in terms of the subjective knowledge or "data" held by individual actors, the plans and actions based upon this data, and the objective facts external to the individual. In fact, as Hayek emphasized, all claims about equilibrium necessarily entail claims about the knowledge of those individuals' plans and actions—namely, that the individuals have correct foresight or expectations about the objective facts relevant to their situation. For Hayek, then, equilibrium refers to the mutual compatibility of plans between individuals and their external circumstances through time, such that the subjective data corresponds with external, objective facts ([1937] 1948, 44–5). In other words, "equilibrium" in a Hayekian sense can be thought of as intertemporal plan coordination, where individuals are able to successfully achieve their ends while dovetailing their plans and actions with those of others (also on this point, see Vaughn 1999).
>
> Though often critical of the equilibrium construct, Hayek nevertheless considered the apparent tendency toward equilibrium of the market process as the foundation for—and most important problem of—economic theorizing. The proposition that such a tendency exists basically means "that, under certain conditions, the knowledge and intentions of the different members of society are supposed to come more and more into agreement" or, "that the expectations of the people and particularly of the entrepreneurs will become more and more correct"

A model -- in the sense of a formulation -- begins to emerge. Consider that Boettke identifies in Hayek a tension between subjective knowledge of individuals, which Hayek labelled data, and a regime of externalised, objective facts. Coordination is the action of structuring thousands -- hundreds of thousands, billions -- of data points of subjective knowledge in such a way as to allow for the emergence of "artificial," externalised knowledge that is objective. And further, that this process of coordination is repeated time and again, so that after each iteration, an "equilibrium" is reached where the resources of society are distributed more fairly based on need and capacity for use. While this might seem revolutionary to economics, it is nothing new

to psychology; this ground has already been well-trod by Freud who even in his final formulation of anxiety struggles with the internal subjective expression of the phenomenon, and the pervasive, societal articulation of the same phenomenon. Consider *Civilization and its Discontents*, already discussed in the scope of this dissertation. Freud's gambit was to, after identifying the presence of anxiety across society arising from the repression of animalistic impulses to carnage and libido, collapse this analysis back into the scope of the individual. Without Freud's psychoanalytic concerns, Hayek (1996, p. 19) in his original essay, "The Use of Knowledge in Society," contends with the same personal-interpersonal dynamic, by considering,

> In ordinary language we describe by the word "planning" the complex of interrelated decisions about the allocation of our available resources. All economic activity is in this sense planning; and in any society in which many people collaborate, this planning, whoever does it, will in some measure have to be based on knowledge which, in the first instance, is not given to the planner but to somebody else, which somehow will have to be conveyed to the planner. The various ways in which the knowledge on which people base their plans is communicated to them is the crucial problem for any theory explaining the economic process, and the problem of what is the best way of utilizing knowledge initially dispersed among all the people is at least one of the main problems of economic policy-or of designing an efficient economic system.
>
> The answer to this question is closely connected with that other question which arises here, that of who is to do the planning. It is about this question that all the dispute about "economic planning" centers. This is not a dispute about whether planning is to be done or not. It is a dispute as to whether planning is to be done centrally, by one authority for the whole economic system, or is to be divided among many individuals. Planning in the specific sense in which the term is used in contemporary controversy necessarily means central planning-direction of the whole economic system according to one unified plan. Competition, on the other hand, means decentralized planning by many separate persons. The halfway house between the two, about which many people talk but which few like when they see it, is the delegation of planning to organized industries, or, in other words, monopolies.

In considering the role of planning in society, that is, the role of information distribution for the purpose of action, Hayek finds a complexity that arguably eludes Freud (but not Lacan's rereading of Freud). By what mechanism, Hayek ponders, can coordination be actuated and equilibrium achieved? Hayek posits that the answer must lie in one of three ways; either by central planning, by individual action, or by a midway, through the exercise of elites. For an economics that must also answer to the pressures of a political economy where a certain kind of liberty has become valued above all else, Hayek finds the best answer is the decentralised approach where individual liberty is protected. But what if individual liberty is a priority for the decision ahead? Within the field of psychoanalysis and more broadly, the discipline of psychology, individual liberty does not occupy the same level of priorty as it would in the political economy. We notice the availability of that third option emerge when both Bandura and Girard consider the possibility of a thirdness.

By voicing the option of the monopoly as the mechanism for shaping a path-to-action, Hayek read paralogically creates that same opportunity in Expectation-Value theory. Consider Whitman Cobb's pre-class test score distribution -- where the flipped class averaged a 7.1 (statistically the lowest, but within a margin of error), sat at the median range of GPA, 3.0–3.5, while simultaneously expecting an A. Does a mix of Achievement-Goal and Expectancy-Value theories of motivation begin to explain this? Consider the following hypodissertation. Group-work activates the Zone of Proximal Development, which in turn, allows learners to formulate their objectives not as mastery-approach, but as performance-avoidance. Through interaction with other student classroom groups outside of the structured learning environment, upper-GPA scoring flipped classroom learners recognise that they are still at a deficit to the lower-end

average GPA of the traditional classroom. As a consequence, failure and underperformance become exteranlised as costs. Attainment value and utility value begin to surpass intrinsic value, and mimetically, the higher-performing students within the flipped classroom cohort, begin to take on the role of a Hayekian monopoly. But how does the emergence of such a monopoly construct a path-to-action that overcomes mimetic paralysis and inaction? Hayek's fractionation between the centralised and decentralised might prove prudent here, and at this point a return to Hayek might prove instructive. At least insofar as the clearer delineation between centralisation and decentralisation might go some way to explaining how coordination can be achieved. It should be recalled that coordination in the educational-psychological sense refers directly to how anxiety might be forestalled.

This forestalling of anxiety becomes more than apparent given the flipped classroom student group's performance remaining on par with the much higher performing (in terms of GPA) traditional classroom student group. The central question then becomes the need to explain why it is the flipped classroom student group does not fall into paralysis, into mimetic anxiety, and is still able compete with the more dominant traditional classroom student group. In other words, rather than falling into the same pattern of thinking that Whitman Cobb does, and dismiss the results of the study as articulating not much difference between traditional and flipped classroom teaching methods, the very fact of comparatively negligible difference in final results should is what needs to be explained. Not her findings, but Whitman Cobb's interpretation needs to be reversed and radically reframed.

Here again, Hayek (1996, p.28) might prove instructive,

> Fundamentally, in a system in which the knowledge of the relevant facts is dispersed among many people, prices can act to co-ordinate the separate actions of different people in the same way as subjective values help the individual to co-ordinate the parts of his plan. It is worth contemplating for a moment a very simple and commonplace instance of the action of the price system to see what precisely it accomplishes. Assume that somewhere in the world a new opportunity for the use of some raw material, say, tin, has arisen, or that one of the sources of supply of tin has been eliminated. It does not matter for our purpose-and it is significant that it does not matter-which of these two causes has made, tin more scarce. All that the users of tin need to know is that some of the tin they used to consume is now more profitably employed elsewhere and that, in consequence, they must economize tin. There is no need for the great majority of them even to know where the more urgent need has arisen, or in favor of what other needs they ought to husband the supply. If only some of them know directly of the new demand, and switch resources over to it, and if the people who are aware of the new gap thus created in turn fill it from still other sources, the effect will rapidly spread throughout the whole economic system and influence not only all the uses of tin but also those of its substitutes and the substitutes of these substitutes, the supply of all the things made of tin, and their substitutes, and so on; and all his without the great majority of those instrumental in bringing about these substitutions knowing anything at all about the original cause of these changes. The whole acts as one market, not because any of its members survey the whole field, but because their limited individual fields of vision sufficiently overlap so that through many intermediaries the relevant information is communicated to all. The mere fact that there is one price for any commodity-or rather that local prices are connected in a manner determined by the cost of transport, etc.-brings about the solution which (it is just conceptually possible) might have been arrived at by one single mind possessing all the information which is in fact dispersed among all the people involved in the process.

Reasonably then, Hayek (1996) states, "We must look at the price system as such a mechanism for communicating information if we want to understand its real function-a function which, of course, it fulfils less perfectly as prices grow more rigid," before concluding (Hayek, 1996, p. 23),

> The price system is just one of those formations which man has learned to use (though he is still very far from having learned to make the best

> use of it) after he had stumbled upon it without under- standing it. Through it not only a division of labor but also a co-ordinated utilization of resources based on an equally divided knowledge has become possible. The people who like to deride any suggestion that this may be so usually distort the argument by insinuating that it asserts that by some miracle just that sort of system has spontaneously grown up which is best suited to modern civilization. It is the other way round: man has been able to develop that division of labor on which our civilization is based because he happened to stumble upon a method which made it possible. Had he not done so, he might still have developed some other, altogether different, type of civilization, something like the "state" of the termite ants, or some other altogether unimaginable type. All that we can say is that nobody has yet succeeded in designing an alternative system in which certain features of the existing one can be preserved which are dear even to those who most violently assail it-such as particularly the extent to which the individual can choose his pursuits and consequently freely use his own knowledge and skill.

In this way, the use of knowledge in society comes into sharper focus, and with these passages, the full scope of Hayek's formulation of coordination and equilibrium and price-as-signal can be understood. Consider the following example. You have a problem, and a so does another economic actor, for the sake of example, assume a restauranteur. Your problem is similar to the macroeconomic problem of Japan; you are unable to feed yourself in the same way that Japan lacks raw materials and must important these as the basis of its economy. The only option available to you is to purchase food with earned money, relying on the economy to supply the goods and services you need. Similarly, the Restauranteur needs to feed her family and is reliant on you spending your income on feeding yourself, translating your income into her income, which she might than be able to translate into food to feed her family. Each evening the Restauranteur prepares for you your favourite meal, and each evening you pay her a fixed price. To prepare this meal for you, the Restauranteur sources ingredients from a wide variety of suppliers, coffee from Latin America, mint from Indonesia, beef from Scotland, crab from Viet

Nam, spices from Egypt, et cetera, et cetera. The price is determined in part by the comparative success of the Restauranteur's business, which regulates the relationships she can form to in-source ingredients at a fixed, and even discounted price. The world of pricing is four-dimensional and beyond your understanding. How Indonesians determine a fair price of mint or Colombians, the price of coffee, or the Scots, the price of beef is not a system that you can understand. But, surprisingly to you, neither is this a world that the Restauranteur can understand. Floods, assassinations, droughts and hurricanes are all pressures that go into creating the prices, but, like you, the Restauranteur has no control, and no understanding of these. Instead, all she knows is what is a fair price for the ingredients. Similarly, it is the price that allows you to make a decision as to whether or not you can commit that share of your personal resources to feeding yourself for a single meal. If those unknown pressures (unknown to you, unknown to the Restauranteur; unknowable to an individual, but not purely unknowable) were in some way to shift and cause the price of ingredients to rise 600% it would not require you, or the Restauranteur, to perform incredible labour to investigate those pressures. You would not need to study for four years to understand the geopolitical relationship between the Philippines and China and how that would influence the prices of river crab in Viet Nam, or how NAFTA would drive up prices of Colombian coffee beans when compared with the price of Mexican coffee beans. Price-as-signal means that you would simply need to decide if you a prepared to pay R700 for a meal that just a few weeks ago you were paying R100 for. If your decision is a refusal, this would indicate to the Restauranteur that the prices are too high, and despite whatever flooding or storms or war or election, the demand for resources would fall and signal to the original sellers of

those resources that mis-priced and the prices themselves would need to be adjusted -- downwards this time -- in order to find a proper equilibrium.

Consider how this might, if it would, apply to Freud and anxiety-as-signal. In fact, it is Freud (1981, p. 177) himself who suggests, that anxiety-as-signal might find its parallel in economics, writing, "that we have here a second possibility-that anxiety is not only being signalled as an affect but is also being freshly created out of the economic conditions of the situation." Which Freud (ibid.) contextualises as,

> The statement I have just made, to the effect that the ego has been prepared to expect castration by having undergone constantly repeated object-losses, places the question of anxiety in a new light. We have hitherto regarded it as an affective signal of danger; but now, since the danger is so often one of castration, it appears to us as a reaction to a loss, a separation.

It takes comparatively little imagination here to interpret Freud, when read in context of Hayek, as performing a kind of search for Hayekian coordination, however, by something of an inverted objective. Hayek suggests price-as-signal functions always to maximise the emergent properties of a given system. In other words, for Hayek the movement is always anticipatory, creative, constitutive; moving from what Hayek determines as subjective (the personal, the specific) data to objective (dispersed, diffuse, pervasive) information. Hayek of course attempts to outline how price-as-signal performs to coordinate and transmit information throughout society. Freud however, answering to an analytical frame, epistemically pursues the reverse objective, but attempting to explain how it is that movement from the diffuse, the pervasive can be traced back to the specific of subjective data. It would be recalled that Freud actually follows a similar train of investigation to Hayek in *Civilization and its Discontents* where he, Freud, recognises that the subjective transitions to the objective because repression of animalistic

impulses of aggression and desire affect each individual in society by a logic of uniformity. Here however, Freud presents the reverse, considering how the objective might be traced back to the individual (or subjective, in Hayek's terminology). Pervasive anxiety, Freud suggests, might find its root in the specific fear of object-loss, itself a signifier for the more specific object-loss of castration. But what what line of reasoning does Freud arrive at this conclusion? To begin, Freud (1981, p. 191) considers the interaction between the ego, the id, anxiety (or as Freud refers to it, a "signal of unpleasure") and the Eros, or pleasure principle, by suggesting,

> We are very apt to think of the ego as powerless against the id; but when it is opposed to an instinctual process in the id it has only to give a 'signal of unpleasure' in order to attain its object with the aid of that almost omnipotent institution, the pleasure principle. To take this situation by itself for a moment, we can illustrate it by an example from another field. Let us imagine a country in which a certain small faction objects to a proposed measure the passage of which would have the support of the masses. This minority obtains command of the press and by its help manipulates the supreme arbiter, 'public opinion', and so succeeds in preventing the measure from being passed.

Here Freud describes what seems an unfairly balanced situation; one where the nominally under-powered ego is able to resist the libidinal impulses of the id. A very unusual and counterintuitive situation. But such a situation would be able to emerge, Freud contends, simply through the "release" of a "signal of unpleasure," or through anxiety. It is in this way that the comparatively overmatched ego is able to leverage the resources of the pleasure principle in order to countermand the id. But this ushers in a series of problems, as Freud (1981, p. 179) himself recognises,

> But this explanation opens up fresh problems. Where does the energy come from which is employed for giving the signal of unpleasure? Here we may be assisted by the idea that a defence against an unwelcome internal process will be modelled upon the defence adopted against an external stimulus, that the ego wards off internal and external dangers

> alike along identical lines. In the case of external danger the organism has recourse to attempts at flight. The first thing it does is to withdraw cathexis from the perception of the dangerous object; later on it discovers that it is a better plan to perform muscular movements of such a sort as will render perception of the dangerous object impossible even in the absence of any refusal to perceive it-that it is a better plan, that is, to remove itself from the sphere of danger. Repression is an equivalent of this attempt at flight. The ego withdraws its (preconscious) cathexis from the instinctual representative that is to be repressed and uses that cathexis for the purpose of releasing unpleasure (anxiety). The problem of how anxiety arises in connection with repression may be no simple one; but we may legitimately hold firmly to the idea that the ego is the actual seat of anxiety and give up our earlier view that the cathectic energy of the repressed impulse is automatically turned into anxiety. If I expressed myself earlier in the latter sense, I was giving a phenomenological description and not a metapsycho logical account of what was occurring.

For Freud the existence of an threatening idea arising from interiority can already be predicted in that this threatening idea would necessarily be modelled on the way in which physical danger is dealt with -- i. e. by repulsion or flight. Here again, repression equates to flight and takes on an Uncannily familiar form; that of a kind of psychic version of flight itself. Just as humans run from the physical dangers of lions, and tigers, and bears, so too do they shrink from dangerous thoughts. This is similar to Hayek's refusal to pay too high a price, signalling to sellers that their commodities are overpriced and a further adjustment must be undertaken before equilibrium can be met. Freud (1981, p. 191) understands the mechanism of refusal the signal -- whether price-as-signal or anxiety-as-signal -- stating,

> …On the other hand one cannot get rid of a father; he can appear whenever he chooses. But if he is replaced by an animal, all one has to do is to avoid the sight of it-that is, its presence-in order to be free from danger and anxiety, 'Little Hans', therefore, imposed a restriction upon his ego. He produced the inhibition of not leaving the house, so as not to come across any horses. The young Russian had an even easier time of it, for it was hardly a privation for him not to look at a particular picture-book any more. If his naughty sister had not kept on showing him the

> book with the picture of the wolf standing upright in it, he would have been able to feel safe from his fear.

Again, context takes primacy and to fully understand how the animal stands in for an anxiety around the father, Fred's (ibid.) more fully developed context must be understood where he writes,

> This time we will not lose sight of the part played by anxiety. We have said that as soon as the ego recognizes the danger of castration it gives the signal of anxiety and inhibits through the pleasure-unpleasure agency (in a way which we cannot as yet understand) the impending cathectic process in the id. At the same time the phobia is formed. And now the castration anxiety is directed to a different object and expressed in a distorted form, so that the patient is afraid, not of being castrated by his father, but of being bitten by a horse or devoured by a wolf.

And (ibid.),

> …This substitutive formation has two obvious advantages. In the first place it avoids a conflict due to ambivalence (for the father was a loved object, too), and in the second place it enables the ego to cease generating anxiety. For the anxiety belonging to a phobia is conditional; it only this happened after the genital organization had been reached, emerges when the object of it is perceived-and rightly so, since it is only then that the danger-situation is present. There is no need to be afraid of being castrated by a father who is not there.

When Freud contends that we cannot understand the mechanism, it is the equivalent of Hayek suggesting that the economy itself cannot by understood, only its outcomes can be interpreted. As Kauffman (2010) reemphasises, systems which are not rule-bound and where nothing can be known -- i. e. no information can be transferred -- prior to a calculation being computed do exist and are known as "complex adaptive systems." Think of the difference between a mathematical system in which the only computation is addition of the inputs, and an evolutionary system where tigers are introduced into the Brazilian rainforest. In the first system we can know in advance that the output would exceed the magnitude of any individual input, but

not the total of all inputs. This information can be obtained beforehand because the system is reductionist and strongly rule-bound. However, despite the relative similarity of tropical climate, the Brazilian rainforest is not the same environment as the Indian jungle. The myriad different organisms, plant-life and microclimates would all have unknowable effects on the tiger as a singular organism. The precise outcome would be incalculable in advance of introducing actual tigers, and repeating the input -- introducing tigers again at some later time -- would not necessarily repeat the outcomes of the original inputs. Complex adaptive systems literally embody the old Roman saying of never being able to step into the same river twice, because neither you nor the river would be the same.

Reading Freud within the context of Hayek -- at Freud's own suggestion that economics would play some role in understanding the principle of anxiety-as-signal -- is at some very basic level as interpellative as it is paralogical; a new conceptual identity is created through this action. Freud unwittingly gestures at the notion of the complex adaptive system, which, like the weather, or economics, or evolutionary systems, functions by a very different mechanism to the reductionism of physics. Simply put, emergence and complexity cannot be deduced from the movement of ever-increasingly smaller and more elemental particles. Within some systems -- biology, the psyche, economics -- the ontological asserts itself over and above the epistemological. The structural similarity between Freud and Hayek demands a revisiting of the Watsonian formulation of anxiety, what this dissertation has thus far been referring to as "commodity anxiety." Unlike Freud or Lacan, Watson does not seek to formally define anxiety. However, as has already been demonstrated earlier in this dissertation, a particularly Watsonian definition of anxiety can be inferred from the way in which Rayner and Watson note the

traumatic/fear-effect responses arising from their sole test subject Little Albert. It would not be unfair, based on the reading of Freud and Hayek, to extend the notion of anxiety-as-signal specifically within a complex adaptive system to Watson's treatment of anxiety. Much more to the point, Freud (1981, p. 208) can be returned to in his words on the generation of anxiety,

> It might be said that symptoms are created so as to avoid the generating of anxiety. But this does not go deep enough. It would be truer to say that symptoms are created so as to avoid a danger-situation whose presence has been signalled by the generation of anxiety.

And (ibid.) (emphasis place for this dissertation),

> In the cases that we have discussed, the danger concerned was the danger of castration or of something traceable back to castration. If anxiety is a reaction of the ego to danger, we shall be tempted to regard the traumatic neuroses, which so often follow upon a narrow escape from death, as a direct result of a fear of death (or fear **for** life) and to dismiss from our minds the question of castration and the dependent relationships of the ego.

Anxiety should be treated no differently than refusal to pay for unwarranted increases at one's favourite restaurant. It is simply a signal directed inwards rather than outwards, ordered around the objective of equilibrium, where individual, subjective data can be coordinated with wide-scale pervasive, diffuse, objective information that would allow for action that impacts all of society. As per Watson's intimations, anxiety in this view of Freud-Hayek, is no less something artificial, and something that can be created -- manufactured, even, one might say -- and "shipped" to where it might be required or used, or useful. Not unlike Fermat's infamous Last Theorem, Watson hints at a solution -- extinction -- for the anxiety induced in Little Albert, but in the 1920 article never references the methods they and Rayner might have conceived for this action. Little Albert had been removed from the testing environment long before the

experiment was to be concluded and long before extinction measures were scheduled to be actioned. Given the what has been uncovered with the heterologous Freud, a final comparison between Freudian and Lacanian anxiety can be attempted. At its most simple, Freudian anxiety situates the psychic phenomenon at the level or the self, or the self in relation to an abstracted notion of society that can only be interpreted through the formal relations of economic interaction, while Lacanian anxiety seeks to obliterate any reference to formal disciplinary structures (like those of economics) within its definition of anxiety and produce relations that Humean (in that they replicate Hume's Fork) in structure between psyche's that are themselves abstracted rather than individuistic.

By extension then, the data made available by Whitman Cobb's study -- and taking the full range of data at face value, rather than eliding or misrepresenting or misunderstanding some data -- seems to indicate the creation of anxiety that does not result in learned helplessness. As discussed earlier, expectancy-value theory seems to be an adequate lens for explaining how a student group with the lowest pre-class test score (indicating the lowest general knowledge about the subject before tuition begins), the mid-range GPA (although still significantly lower than the top-performing student group; 3.0 versus 4.0) and an age deficit, would rise to be on par with the grades of the top-performing student group. Even, the midterm coursework grading calculation, significantly exceed that top-performing group. Based on the scant data and Whitman Cobb's misinterpretation and misunderstanding of that data, it cannot be ascertained to a certainty that the flipped classroom is the mechanism that propelled the under-performing student group towards unpredicted success. However, what can be said is that the economic imperatives of the expectancy-value theory of motivation seem to suggest the emergence of a Freudian-Hayekian

complex adaptive system as a response to a kind of anxiety, one that results in unpredicted and unparalleled performance.

This chapter attempted to refine the Freud definition of anxiety one final time by considering the inclusion of heterologous elements, particularly the discipline of economics (as suggested by Freud himself), which in turn formed the basis for an exploration of the flipped classroom as a means for the extinction of anxiety.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

The final chapter organises some thoughts on the four formulations of anxiety that have been identified over the course of this dissertation, draws some conclusions, and offers -- to the extent that dissertation may -- some recommendations for practice, and for further research. However, this chapter begins with summaries of the chapters thus far.

A Breakdown of Chapters in this Dissertation

The remaining chapters conform to the following sequence and consider the following concepts, issues and topics.

Chapter 1: Overview and Introduction

Chapter 1 discusses the multi-layered problem statement for this dissertation. Reduced to its most efficient form, the problem statement would be as follows.

Chapter 2: A Working Model of Anxiety

Chapter 2 describes formulation of anxiety from three psychoanalytic sources. Here, the primary founder of the psychoanalytic method, Sigmund Freud, is considered in the first instance. Freud offers not one, but at least three formulations of anxiety, and reverses position, and re-reverses position many times over his significant career. Even the title of Freud's (1981) final essay on the matter -- "Inhibitions, Symptoms and Anxiety," published in 1926, but drafted one year earlier in 1925 -- speaks to a kind of trepidation around giving a definitive answer as to what constitutes anxiety. It is in this essay that the popular notion of object-loss is developed, however this notion must also be contrasted with earlier notions, developed in *Civilization and its Discontents* (Freud, 2002) that remain somewhat undecided as to whether anxiety affects society at large, or whether it is personal to every individual within that society.

The Freudian definition of anxiety is contrasted with two other formulations. The first of these is the formulation of postmodern psychoanalyst Jacques Lacan. After a brief discussion around the precepts of postmodernism and why Lacanian thought might be classified as such, Lacan's (2014) *Seminar X: Anxiety,* a transcription of the tenth annual seminar given in Lacan's famous series, this one given 1962–1963, is discussed in detail. Again, a relatively famous, or perhaps in Lacan's case, infamous, formulation comes to the fore; Lacan describes anxiety as the lack of a lack, an over proximity of the desire of the Other. By using the study of linguistics to manifest deeper insights in Freud's own work, particularly "The Uncanny," Lacan is able to demonstrate anxiety as an apparent inversion of Freud's ostensibly simpler meaning. Rather than being without object, anxiety consistently references an object and that object is the Self. The loss of the object of desire as described in the later stages of Freud's career, does not reference any-object-whatever, and does not stand in for a fear of castration, Lacan argues, but rather refers directly to the Self being uncertain as to the value it holds in the perception of the Other. The nebulous terminology of "apparent" and "ostensibly" needs to be used as this is a delicate area psychoanalytic theory.

Unlike Jung who outright disagreed with Freud forcing a notorious parting of ways, Lacan leverages the postmodern tradition of thought to find greater nuance within Freud. The more pointed nature of identifying this kind of nuance lies in Freud himself, as author, perhaps not being open to finding this nuance in his own work.

In the final phase of Chapter 2, a sole experiment of J. B. Watson is considered; the equally infamous Little Albert experiment. Lacan always famously declared that the middle of the 20th century required a return to the original psychoanalysis of Freud, feeling that the field of

psychology had drifted too far from its foundations. More so than the parting of ways with Jung, a schism that evolved in the field of psychology was the split between classical, theoretical psychoanalysis and the school of thought that would come to be known as experimental psychology.

Traditional psychology, the psychology of Freud and Jung and Melanie Klein focuses on developing models of mind, of describing the inner life of lived experience and of refocusing in the therapeutic aspects of these models. While experimental psychology is necessarily more descriptivist than classical psychology, the more important distinction is between the theoretical and the measurable, and the internalised and the observable. For experimentalist psychologists like Watson and B. F. Skinner, the idea that states of mind, or feelings or affectations could be studied was borderline, if not outright, unscientific, as only the measurable and the observable could form the basis of a falsifiable hypodissertation. Watson thus, becomes one of the reasons that Lacan calls for a return to Freud, as they do, in the middle of the 20th century. While it is true that Watson in no way offers a definition of anxiety in his Little Albert paper, it is also true that they and their coauthor Rayner discuss fear and anxiety as if these terms are commonly understood.

In this section of Chapter 2 therefore, by necessity, a definition of anxiety is inferred based on the way in which the concept is treated by the coauthors. It is in this common-sense approach to anxiety that a unique understanding of the phenomenon can be apprehended -- anxiety as a commodity. Moreover, given the nature of behaviourism as a sub-discipline of psychology, Watson is also unique in introducing the idea of extinction (an idea common to behaviourism) to the phenomenon of anxiety. Unlike the ideas of Freud and Lacan which seem to

link anxiety to some kind of interiority, developed through some manner of internal process, whether that process is individual or social in nature, and in that way affix anxiety as some kind of perpetual condition -- in other words, distinct from a kind of fatalistic formulation of anxiety -- Watson presents the phenomenon as something that can be ended.

Chapter 3: Mimetic Anxiety

Chapter 3 explores a single idea in Lacan's procedure of finding a more nuanced interpretation latent within Freud. This can perhaps best be expressed by the question, "How is what we mean to ourselves individually intermediated, or dis-intermediated, by what we mean for each other?"

This third chapter, in other words, looks for a means to reconcile the Freudian formulation of anxiety with the more nuanced Lacanian formulation that Lacan himself claims is latent within Freud. To attempt an answer, the work of the interdisciplinary thinker René Girard features prominently. Girard is responsible for the formulation of the concept of mimetic rivalry, which stems from his earlier concept of mimetic desire. Prior Girard however, there is a restatement of the problem of reconciling Freud with Lacan, followed by a discussion of Auerbach's definition of what mimesis means within the tradition of literary aesthetics. Girard's concept is almost elegant in its simplicity; we are not alone in our formulation of desire, there is always an Other involved.

But Girard would seem to pounce from nowhere, an unexpected idea that is simply too far afield to even seem germane to the discussion. Therefore Girard appears only after an important observation has been made, that in order to fully resolve the ostensible juncture between Freud and Lacan (and Lacan's reading of Freud), a third, unseen term must somehow be

involved. Shortly hereafter in the chapter it will be surmised that that third term is in fact the Model and that Girardian Mimetic Desire and Mimetic Rivalry bears deeper investigation. However, for the moment, this third term remains unknown, and its very presence exists merely as a hypothetical object in the broader theory. Consequently, to move out of this trap of its own making, this dissertation then moves to the discipline of educational theory to consider the work of Albert Bandura, who is considered for a variety of mimesis specific to learning. Bandura is credited for having developed the Social Cognitive theory of learning which suggests that learning can arise from observation alone. Core to Bandura's model is the so-called Bobo Beatdown experiment in which children where made to watch adult stooges express frustration by beating and scolding a toy clown (the Bobo doll) for ten minutes. Thereafter the experimental subjects would be exposed to frustration of their own; after being led to a playroom, a different stooge would then confiscate only the toys the experimental subjects were playing with. After which, the experimental subjects would be left alone with the Bobo doll. Would the vent their aggravation in the same way as the adult stooges? Bandura found that children who witnessed the behaviour often copied it, boys were three times more likely to copy the behaviour as compared with girls, and boys were twice as likely to copy the behaviour if the stooge was male rather than female. It was these Bobo experiments that formed the basis for Bandura's more involved Social Cognitive theory. Social Cognitive theory suggests that learning can take place through mere observation and that learning is never a solitary process. Rather than simply render a two-way relationship between learner and learner support material, Social Cognitive theory refocuses on the importance of observational learning. It is in this way that Social Cognitive theory establishes a triadic relationship one between learner, Model and environment. It is also

by this mechanism that the argument is able to shift from dyadic structures (two-part) to triadic (three part). It should be noted that it is this very shift towards the triadic that allows Girardian mimetic theory to firmly take root. The difference between Freudian loss-anxiety and Lacanian doubt-anxiety (Freudian anxiety is defined by object loss, while Lacanian anxiety is generative of doubt, so the two adjectives reference a definition and an association rather than referencing two of the same functions) is slight, at least linguistically, however significant. This difference should be processed through the simple recognition that there are not two terms involved in this relationship -- Freud's formulation and Lacan's formulation -- however there are three; Freud's model, Lacan's model and Freud's "fame," his cultural significance within the field of psychoanalysis, that pushes Lacan to reinterpretation rather than the task of outright developing an entirely new model without any reference to Freud. It is the recognition of this triadic structure that paves the way for Girard to properly enter the discussion, and after consideration of Girard to return to Freud and Lacan before finally reconciling Freud with Lacan.

In Girardian parlance, this Other is termed the Model and it is the fate of the Subject to have their Desire intervened by the Model, albeit that this process is unknowable to either Subject or Model. This is mimetic desire and it is the first phase of lasting conflict that will either end in the annihilation of everything there is, or the Lie of the First Murder. As the Subject becomes a better expressor of the values and ambitions of the Model, the Subject ironically becomes a model to the Model. It is at this point competition for resources ensues and Mimetic Rivalry begins. Girard's belief is that anthropologically, human sacrifice (not always in the sense of blood-letting, but also in the sense of the "sacrifice" being self-aware and engaging in acts of altruism and super-erogation) holds the key to resolving such internecine tensions. Even if this

kind of resolution is based on a lie and simply forestalls these tensions from flaring only for the time being. The application of Girard's paradigm to the interpretation of Asch's conformity experiments, and along with a consideration of Moscovici's notion of Social Representation theory, the novel concept of Mimetic Anxiety is developed by noting a synetic, rather than synthetic, demand placed on the Subject as a result of social representations. In the closing stages of this chapter the implications of Mimetic Anxiety are considered. Chief among these, a discussion of Miller & Seligman's notion of learned helplessness eventually leads to a system where a Bifurcated Self is trapped within a system of Disaffection. A Bifurcated Self arises where identity is linked to activity in a system of multiple activities. The result here is that activity is never completed and inevitably becomes corrosive of identity, which in turn becomes polarised with each pole moving further from a standard meridian of identity. This polarisation triggers Miller & Seligman's learned helplessness, which in turn ends in an emotional state of disengaged-ness that can best be described as disaffection. Disaffection is the best term to describe this concept since the state which ensues allows for learning to only take place as a consequence of extrinsic motivation which is necessarily lacking, and the Subject then identifies learning as the exclusive purview of authorities which have an overall disempowering effect.

Chapter 4: Learning Theories, Motivation, and the Extinction of Mimetic Anxiety

Just as Chapter 3 begins with an attempt to reconcile Freud with Lacan, one that produces far-reaching implications, so too Chapter 4 begins relatively innocuously with a consolidation of the four definitions of anxiety thus far. Here, this dissertation begins by considering Freud's formulation of anxiety and its relation to loss, Lacan's and its relation to doubt, Watson's and its relation to processes of commodification and market forces of annihilation, and the novel

concept of mimetic anxiety. A working formula is derived that unifies these four into a single system.

Thereafter, Chapter 4 begins by exploring four educational theories; those of Pavlov, Skinner, Piaget and Vygotsky. Although relevant to behaviourism, Watson is not considered here, since they were already discussed earlier. These theories largely divided into two schools of thought; behaviourism, which holds that learning is simply induction of an appropriate behaviour to the correct stimulus, and cognitvism, which insists upon the development of interior metnal models before learning can take place. After being described, each theory is then in turn considered against the fourfold model of anxiety developed earlier, the classical models of Freud, Lacan and Watson, and the novel concept of mimetic anxiety. A path to extinction is considered by found to be lacking in the case of each individual theory.

With Pavlov, and important point to note is that there is no clear distinction made between conditioned and unconditioned stimuli. Consider the fact that dogs are merely wolves husbanded over thousands of generations, and what might seem as an unconditioned response is revealed to be no more than the kind of conditioning that takes place slowly over thousands if not tens of thousands of years. Similarly in Skinner the difficulty to discern the true nature of the stimuli leads to indeterminacy between signal and noise. As a group then, behaviourism finds difficulty in reaching Watsonian extinction of anxiety since the signal-to-noise problem makes action uncertain and outcome unclear. Cognitvists similarly run into a problem of anxiety extinction being complicated by the teleologial nature of cognitivist theory. Rather than simply anticipate open-ended learning, cognitivism reasserts learning as a kind of mastery of the knowledge output of previous generations.

However a notable exclusion from these limitations seems to be the learning theory developed by Robert Gagné in his *Conditions of Learning*. Gagné's theory is unique in that it is the only system to connect behaviourism and cognitivism. It posits five different kinds of learning and suggests that each of these require their own kind of instruction. Gagné's meta-model, his Hierarchy of Learning defines the theoretical framework under which all learning can take place; it transitions the learner through phases of mastery of sensorimotor skills all the way through to problem-solving. Problem-solving here is an abstract notion in which the learner confronts an entirely new kind of problem, one never seen before, and must produce a solution based on the imaginative and creative application of former knowledge. In addition to considering Gagné's five learning outcomes and his meta-model of the Hierarchy of Learning, this chapter considers Gagné's nine events of instruction, which break down lessons into defined phases to ensure a smooth transition from behaviourist mastery to cognitive mastery. Gagné's focus on developing learning from the perspective of both student and instructor (his preferred term for educator) opens a philosophical door to an entirely different area of learning, that of motivation.

Thus, before rounding out the chapter three theories of motivation are considered; achievement goal theory, expectancy value theory, and self-determination theory. Achievement goal theory develops a biaxial matrix along the axes of performance-mastery and approach-avoidance. The latter axis offers a positive-negative variance, such that approach would result in a positive desire to learn, while avoidance would result in a negative motivation manifesting as fear of failure. These two states are further colourised by motivation to master all skills and knowledge of a given field, or motivation to perform in comparison to other learners. This thus

renders four positions; desire to master all knowledge and skills (mastery-approach), fear of not being able to master all knowledge and skills (master-avoidance), desire to perform as well as others (performance-approach). Expectancy value theory marries together structures of personal confidence in one's skill, with three kinds of values, and a measure of cost-benefit analysis. The personal confidence is the belief one has in their own skills in particular areas, and how those skills would be augmented, diminished or remain unchanged in the future. The four kinds of values are; intrinsic value which deals with the enjoyment of the task, attainment value which centres around the importance of the task, and beliefs around the usefulness of the task which is considered "utility value." The cost-benefit analysis measures what must be given up to ensure that the task is completed. Such an analysis is often referred to as the fourth value of "cost." Self-determination rests on three primary factors; autonomy which recognises that individuals want control of their own actions and do not want to be forced into action, competence which recognises that individuals want to have, or attain, the necessary skills for performing the tasks that autonomy obligates the individual to, and connection which ensure the individual and the performance of their task is valued enough by the society to prevent ostracism and embrace interdependence and belonging. Once theories of motivation have been concluded, discussion moves on to how the deleterious effects of anxiety can be combatted by a concept that could be termed Mimetic Pride. Rather than becoming available -- unknowingly -- as a Subject and seeking a Model elsewhere, Mimetic Pride explores the methods by which the Subject themselves -- again, unknowingly -- is able to present themselves as Model to others. By reversing what is the usual psychological sequence of Mimetic Desire, a map of extinction for Mimetic Anxiety is created. In closing this chapter, the threat posed by interdividuality to

Mimetic Pride is considered. Interdividuality, discussed in more detail under Chapter 3's consideration of Girard and Mimetic Anxiety is the primary mechanism that derives from Mimetic Rivalry; as Mimetic Rivalry accelerates, a uniformity begins to emerge between the Model as individual and the Model as representative of a collective, in this case society. It is in this way that the Girardian triadic structure smoothes out the knotted irregularities between Freud, Lacan and the Lacanian rereading of Freud. This emergent uniformity is recognised in Girard and referred to as "interdividuality," the moment when an individual is no longer entirely themselves without belonging to a collective. Girard distinguishes interdividuality clearly from deindividuation where an individual may be swept up in "mob" psychology our caught in a kind of mass hysteria. The differentiating factor between these two modes is that with interdividuality the individual Subject is still recognised, still prized above all, but in no way is able to form a unique identity. The threat interdividuality poses to Mimetic Pride is thus undermined by consumerism itself and in this way provides a path to Watsonian extinction of anxiety.

Chapter 5: The Case Study

The final chapter, Chapter 5, presents the meta-analysis of a single case study of the flipped classroom to locate the entire discussion of this dissertation within the practice of a classroom. Although the dissertation being presented is, by design, theoretical rather than experimental and based on uniquely generated data and the interpretation thereof, a case study is warranted because it is the most expeditious method for demonstrating, not only the connection between psychoanalytic theory, psychological theory and educational theory, but also the connection between these three modalities in practice in a real classroom. The choice of experiment was more or less random, using a single search term on Science Direct. The reason

for the randomness was so as to not skewer in favor of the original directly discussing anxiety or Freudian, Lacanian, theories of the same, or behaviourist or cognitivist educational theory. The single search term used to find the study was "flipped classroom." The flipped classroom is a novel concept popularised in teaching since 2007. In practice, the flipped classroom does exactly what the name proposes; it reverses the polarity of the classroom. Metaphorically classrooms are not only the physical space inside the school building, but proverbially extend across multiple spaces. It is this very extensibility that Bergman and Sams, the originators of the concept, exploit. They noted that despite the classroom being extended from the school-space into the home-space -- with practices like homework and assignments for long-term assessment -- that there was a significant difference in character between the classroom-at-school and the classroom-at-home. This difference could best be described through differentiation of activity; while teaching/lecturing occurred in the classroom-at-school, mastery, primarily in the form of homework, occurred in the classroom-at-home. Flipping inverts this activity pattern. Bergman and Sams (2012, p. 14) rationalise this when explaining the origins of the concept,

> In our combined total of 37 years of teaching, we have been frustrated with students not being able to translate content from our lectures into useful information that would allow them to complete their homework. Then, one day, Aaron had an insight that would change our world. It was one simple observation: “The time when students really need me physically present is when they get stuck and need my individual help. They don’t need me there in the room with them to yak at them and give them content; they can receive content on their own.”
>
> He then asked this question: “What if we prerecorded *all* of our lectures, students viewed the video as ‘homework,’ and then we used the entire class period to help students with the concepts they don’t understand?”
>
> Thus, our flipped classroom was born. We made a commitment during the 2007–08 school year to prerecord all of our chemistry and Advanced

> Placement (AP) chemistry lectures. To make things easier on us, one of us would do Unit 1 of chemistry and the other Unit 1 of AP chemistry.

Bergman and Sams (2012) further state the benefit that might want to cause other teachers to flip; "Flipping the classroom establishes a framework that ensures students receive a personalized education tailored to their individual needs."

The final study settled on was Whitman Cobb (2016). Whitman Cobb is not a professional educational psychologist or educational theorist, however they are, as of their publication, a professional educator. As of the publication of their study they were an assistant professor of political science at Cameron University, a mid-level college in Lawton, Oklahoma in the United States of America. They were merely intrigued by the notion of the flipped classroom and sought to conduct the relatively informal study, simply to explore whether or not the methodology would be useful or merely appropriate to the teaching of political science at college level. In 2014, the year of the study, Whitman Cobb arranged with the college to teach three separate classes of American Federal Government, a mandatory course in the political science stream. Whitman Cobb then ensured that each class would either conform to the traditional classroom approach to teaching, the flipped classroom, or online teaching, and that each cohort would remain in that teaching modality for the entire semester (which represented the full term of the course).

After Whitman Cobb's study is described and her findings are discussed, the concept of the Rashōmon Effect is returned to. The Rashōmon Effect is a concept derived from literary theory, specifically arising from the 1950 movie *Rashōmon*, in which a magistrate attempts to discover the true sequences of events that led to the death of a samurai, but must confront the core conflict of the film, that the only witnesses available for interrogation are in some way

connected to malfeasance during the presumed crime. This exposes the central conceit of the film and the definition of the Rashōmon Effect; that despite the facts themselves not being in dispute, each witness proves unreliable in that self-interest, ego and social standing all colourise individual testimony. Since the 1990s, the Rashōmon Effect has entered into the literature around objectivity in experimentation and research, which the personal bias of the researcher may fail to recognise and realise the full interpretive scope of the data by applying a limiting or inaccurate narrative. In other words, what might initially appear as a natural conclusion, turns out to be significantly incorrect. The Rashōmon Effect was initially discussed in Chapter 3 in order to assist in formulating the definition of Mimetic Anxiety. However, despite playing a role in the theoretical discussion of conceptualisation, the Rashōmon Effect is reintroduced here in Chapter 5 to assay Whitman Cobb's interpretation of the findings of her study. Whitman Cobb's interpretation is called into question around a number of specific findings.

At the outset, Whitman Cobb is revealed to fall into error in explicitly the way educational theorist Lev Vygotsky warns. Whitman Cobb dismisses her findings that the flipped classroom student group perform at roughly the same level that traditional classroom student group do, by stating that there is very little difference between the two teaching styles. They write the negligible difference off to the presence of group-work in the flipped classroom, and its absence in the traditional classroom. Whitman Cobb argues that results arising from group-work should be set aside since they are artificial, in that better students in the group forced poorer students to produce work these poorer students otherwise would not have. Relying on the Rashōmon Effect to explain variance in interpretation, this dissertation infers by deductive reasoning that Whitman Cobb must either be unaware of Vygotsky's methodology or in some

way reluctant to follow through on its use. As discussed in the prior chapter, one of the fundamentals of Vygotsky's model is the recognition of the misidentification of testing. For Vygotsky, solo-testing becomes counterproductive in that it sets up a punitive paradigm that diminishes learning. Learning however is augmented with the role of the more knowledgeable other, when a student's individual learning is accelerated by assistance from other students, older peers or teachers who assist by solving some part of the problem. In dismissing her findings from the flipped classroom based solely on the presence of the group-work module, Whitman Cobb shuts down any chance of an emergence of the Zone of Proximal Development. For Vygotsky the Zone of Proximal Development is that phase of learning which allows for learners exceeding the expectations of mastery for their level of maturation. The Zone of Proximal Development emerges only once learners have been "assisted" either by other learners or older peers, or by having their own solutions "facilitated" by instructors.

At a most basic level discrepancies that appear between Whitman Cobb's comments and her actual findings need to be explained. For example, Whitman Cobb ignores any discussion of age variance. Along with her own division of three classroom student group modalities -- traditional classroom, flipped classroom, and online classroom -- Whitman Cobb's own data also establishes a variance in age groups; ages 17–19, 20–22, and 25+. The youngest cohort of these three, ages 17–19, was represented only in the flipped classroom student group. Along with this variance of age, there is further differentiation with respect to knowledge base. As part of a pre-class test, incoming students were tested for their general knowledge on the subject of the American Federal government. The flipped classroom student group scored the lowest average of the three student groups. Whitman Cobb however, disregards positive steps made by the flipped

classroom student group to perform on par with the traditional classroom student group (in both the midterm examinations and on the final examination), not recognising this student group's under-performance on the pre-class test as a deficit that needs to be overcome. To explain such discrepancies, Twenge et al. is employed to note a link between age and depression, bullying and self-harm, by way of screen time spent on social media. By rerunning a landmark experiment on the association between social media and screen time, Twenge et al. find that what was assumed to be a negligible relationship between social media and psychologically deleterious effects actually holds as statistically significant once certain undue assumptions in the former experiment have been fully interrogated and reversed once found unnecessary. Pervasive anxiety in the same sense that both Freud and Lacan construct term goes some way to explain the apparent deficit in examination scores between the traditional classroom student group and the flipped classroom student group.

Discussion then pivots directly to Gagné's theory of instruction. As noted in the prior chapter, Gagné's model essentially comprises three elements; the learning hierarchy or eight conditions of learning, the five learning outcomes which describe five different kinds of learning, and the nine events of instruction which provide practical steps for classroom instruction. Based on the findings published, Whitman Cobb's study, by necessity, precludes any consideration of the nine events of instruction with regard to her data. This is because they offer no data as to how they flipped the classroom, as to which lectures were prerecorded or which learner support materials were published and circulated prior to classroom practice. Similarly, any kind of discussion of the five learning outcomes must be set aside as there is only one of the five kinds of learning/teaching that takes places within the confines of a university classroom, and the

remaining four in Gagné's map of the five learning outcomes must thus be set aside. Instead, Gagné's hierarchy of learning is very strongly focused on, is applied to the data presented by Whitman Cobb. Following on from Whitman Cobb's discarding of Vygotsky, it is inferred, again by deductive logic, that the assistant professor necessarily shuts down any chance of working the upper four levels of Gagné's hierarchy.

As will be recalled from the discussion in Chapter 4, Gagné is unique in educational theory in that successfully marries together both behaviourism and cognitivism. This adaptive application of prior educational theories is best demonstrated by Gagné's eight-level hierarchy, of which the lower three levels clearly denote behaviourist theory while the three upper levels equally clearly denote cognitivist theory, and the two levels appearing in the middle of the hierarchy, levels four and five, denote the transition between the two theoretical modes. But discarding Vygotsky's Zone of Proximal Development, Whitman Cobb effectively closes the door on the upper levels of Gagné's hierarchy, particularly the uppermost level, which is problem-solving. For Gagné, this highest level was the pinnacle of learning in that here the learner was of sufficient mastery to be able to solve problems that were never-before-seen and to use their knowledge to develop testing methodologies to "interrogate" the problem in such a way as to produce the right answer. An opportunity to consider the imbrication of Gagné's model with the flipped classroom can therefore only be theorised.

After Gagné, discussion turns to motivation theory, specifically to Achievement-Goal theory, Self-Determination theory and Expectancy-Value theory. Age variance in Whitman Cobb's experimental design is noted, moreover, relative youth in the flipped classroom student group (the inclusion of a cohort of students aged 17–19 with the 25+ cohort in the flipped

classroom versus the traditional classroom including only students aged 25+) as a possible drawback to explain the difference between traditional classroom and flipped classroom student group performances. In contention with Whitman Cobb's claim that variance in examination result is negligible, her own data show a statistically significant variance between the midterm coursework result of the traditional and flipped classroom student groups, favoring the flipped classroom student group by nearly 7%. An explanation for this discrepancy is attempted by two methods; first, these data are considered as a potential expression of Achievement-Goal theory, where the flipped classroom might have created selective pressures for performance-avoidance, second, Self-Determination theory is considered for a potential role in selecting for autonomy as a driver of motivation. Thereafter, heavy emphasis is placed on Expectancy-Value theory as the market-oriented nature of the theory (the WIIFM or What's-In-It-For-Me) provides a stable segue to Watsonian commodity-anxiety. To better understand the nature of this shift from what could be described as a market-oriented nature to Expectancy-Value theory of motivation to the extinction of anxiety by a Watsonian model that could be understood as commodity-anxiety, Freud's notion of anxiety-as-signal is explored more deeply.

Coda: Recommendations for Further Study

In conclusion, a number of recommendations are made for further study.

An Uncertain Anxiety (A Brief Recap of Four Kinds of Anxiety)

Freud (1981), never defines anxiety perfectly and to his lasting satisfaction. As a concept, anxiety emerges very early on in thought, and continues to appear until almost the very end. Even his final formulation of the concept, written in 1925, feels bedraggled by this unsureness. "Inhibition, Symptom, and Anxiety," the title reads, almost as if Freud is still uncertain. While

this essay does produce a new formulation of the concept of anxiety, it also moves to reinterpret the older models, reincorporating them, reintegrating them, indicating where "mistakes" were likely to have been made, and argue for why such misinterpretations would have been likely in the first place. "Inhibition, Symptom, and Anxiety," reads with a profound sense of attachment to Freud's own past. The crucial question however, and one that once again references to the Rashōmon Effect, is why. Or more precisely, how do we interpret Freud's attachment to his older formulations of anxiety? How do we explain his refusal to simple disregard them in favour of newer, more robust theories? An unbiased interpretation, on that is actually objective, would seek to remove the narrativisation from the hypothesis statement. "How do we interpret Freud's attachment…" To be entirely objective, we do not perform such an interpretation. Simply because the object in question -- Freud's attachment -- does not exist. As it is the hypothesis engenders a cognitive bias; that Freud's attachment is a result volition, that Freud -- either knowingly or unknowingly, that is not at stake here -- performs the action of attaching himself to the older forms of anxiety. Yet there is no evidence that this is the case, that there is willful and directed action on the part of Freud. It is a cognitive bias to perceive as human agency, that which might be otherwise happenstance or random chance. What appears as attachment on the part of Freud might not be the result of a decision or the exercise of free will, but might actually stem from abreaction to something interior to the notion of anxiety itself. Something recognised by Freud and not by us, something about the character and nature of anxiety itself; that perhaps anxiety itself is indeterminate. In other words what reads as uncertainty is not indecision on the part of Freud, but indeterminacy inherent to anxiety itself.

Derivation and Derivative Modelling

Lacan (2014) certainly adopted this assumption axiomatically -- that Freud already traced a path we ourselves are yet to recognise as being a path -- and moved with confidence to employ mathematics and linguistics in a postmodern application to reinterpret Freud far less literally. But Lacan also introduces something new entirely; the idea of derivative models of anxiety. By producing a "standalone" understanding of Freud -- one that can be divorced from the longitudinal, decades-long, essayistic definition that Freud himself keeps working on over the course of his professional lifetime -- Lacan introduces a "pull-quote," "soundbite" style of definition. These kinds of definition of anxiety function at two-levels; there is the "big idea" something catchy that is easily repeatable, easily transmissible, but also one that alludes to a deeper level. So for Freudian anxiety there is the reduction "object-loss anxiety," a kind of anxiety that conspires around separation from an object, one that can never be returned to the subject experiencing the loss and therefore experiencing the anxiety. An alternate formulation of this kind of anxiety -- anxiety arising when the subject is separated from the object of desire. Lacan's formulation of course completely inverts this proposition, or at least, seems to invert it. Rather than separation, Lacan rereads Freud through "The Uncanny," and the Wolfman -- just as Freud themselves rereads the Wolfman and Little Hans to produce the final model of anxiety in which separation is a signifier for fear of castration, itself a signifier for fear death, and which allows for anxiety to function as a signal -- to produce overabundance of nearness to the object of desire, in other words, the *lack* of a lack of desire. By these kinds of formulations, Watson's (1920) original work of 1920 was examined to infer a derivative model of anxiety, one which was termed "commodity anxiety." In distinction to Freudian and Lacanian definitions which scan as rooted in the human condition themselves, Watson's is a more "common-sense," "everyday"

understanding of anxiety. For Watson, anxiety does not arise from repression of animalistic, baser urges for food, shelter and procreation -- as in Freud -- rather it can be created (or rather induced) just like a product can be created on an assembly line, anxiety can be distributed from a central source like a product can be distributed from a factory, and ultimately, anxiety can be extinguished like a predicted can be destroyed and recycled.

Meta-modelling

Like Joseph Campbell's monomyth which seeks to produce a structuralist template for storytelling that produced psychological comfort with all persons, regardless of culture, a meta-model of anxiety was developed as a result of a more studied analysis of Lacan's derivation of Freud. The theme of thirdness, apparent in Bandura as much in Seligman, led to the identification of mimesis as a driver, necessitating the interdisciplinary work of René Girard on mimetic desire, mimetic rivalry, interdividuality and interdividuation be integrated. Girard in turn, read alongside Latour's (1996) interobjectivity and Moscovici's social representations, formed the basis for observing how a synetic demand made by a technological environment resulted in ostracism being turned inwards resulted in a bifurcated subjectivity that was anticipatory of learned helplessness.

The Heterologous Freud

Far from repacking Freud's storied struggle for a conclusive definition of anxiety as more germane to a postmodern condition, Lacan's reinterpretation, it could be argued does much to rob Freud's search for definition of a timeless and an elegance. Freudian anxiety is at its best at its most diffuse, most broadly-defined. Ultimately, Freudian anxiety seems to function with least utility when its complexity is reduced and seems to function at greatest efficacy when it shrinks

from insularity and is imbricated with other disciplines, as seen with Hayek and economics in Chapter 5. Lacan seems given to a category error in attempting to describe a "definitive" Freudian anxiety rather than attempting to leverage the inherent heterologous nature of Freud's search for definition. Reading Freud in the context of Hayek produced such theoretical depth, consider what committing to the theme of uncertainty and reading Freud in the context of Heisenberg or Pauli might produce?

Influence on Learning and Teaching

Ultimately Freudian anxiety seems too insular and self-referential for the the digitally driven world. Consider Flynn (2013) -- who lent his name to the Flynn Effect where IQ scores decrease each decade an individual lives -- who describes a possible genetic basis for each generation growing more adapted to abstraction reasoning and thus increased IQ. Such a condition increases reliance on interface systems and search protocols, shifting knowledge production away from "storage of knowledge" (mastery) and towards "location of knowledge" (search). Under these conditions Freud would stand as theoretical commentary rather than a demand for interpretative praxis as dialogically connected with that theoretical structure. This shift is already apparent in Twenge, et al.

Recommendations

To the extent that a Master's dissertation may be permitted to, the following recommendations arise from the foregoing work.

Practice

Two recommendations concern Gagné and the Flipped Classroom. Gagné marries together behaviourism and cognitivism, two major branches in learning theory. One key element

in Gagné that would come to the fore on implementation is the heterologous nature of learning itself. Unlike Pavlov or Skinner or Watson or Piaget or Vygotsky who seek to define a singular, unitary "learning," Gagné recognises that learning itself is heterogenous, describing eight different kinds of learning. The Flipped Classroom seems to suggest, from Whitman Cobb's analysis, variability to the nature of anxiety itself. What seems to be generalised pervasive anxiety seems to over time be turned into Watsonian commodity-anxiety, and later -- through expectancy-value motivation that seems to be "baked in" the Flipped Classroom -- this Watsonian commodity anxiety is brought to extinction. Both of these areas should be researched in considerably greater depth.

Research

The connection of mimetic anxiety to Asch's conformity and to Bandura's self-efficacy needs to researched in much greater depth. Mimesis suggests historical interpretations to inaccurate or misdirected. The inversion of interdividuality to mimetic pride, where subjects seek subjectivity by becoming the model should be researched in greater depth.

Summary

This chapter has offered an overall summary of the major project of the dissertation after providing chapter summaries of each foregoing chapter.

ADDENDUM

Tables from Whitman Cobb (Chapter 5)

Table 2. Preclass survey results by modality

Question	Traditional	Flipped	Online
Age	25+	17–19; 25+	20–22
Gender	Female	Female	Female
Academic Year	Freshman	Freshman	Freshman
GPA	3.6–4.0	3.0–3.5	2.1–2.9
Grade Expected	A	A	A
Learning Style	Visual	Visual	Visual
Knowledge Pretest (Average)	7.5	7.1	7.2

Table 5. Midterm averages

Modality	Average midterm exam (*SD*)	Average midterm class (*SD*)
Traditional	77.93 (11.262)	79.58 (11.046)
Flipped	71.9 (18.544)	84.29 (12.355)
Online	76.85 (12.765)	72.21 (11.344)

Table 12. Final exam and final class grade comparisons

Modality	Average final exam (*SD*)	Average final class (*SD*)
Traditional	76.43 (13.658)	83.32 (9.502)
Flipped	71.21 (10.284)	83.25 (7.349)
Online	76.85 (27.004)	72.21 (11.979)

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