THE CURIOUS CASE OF JEROME BRUNER: AN INQUIRY INTO NARRATIVE, SCIENCE AND MEANING

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This thesis is for my parents, Beverly and Terry, and their cat, Bernie.

ABSTRACT

Jerome Bruner (1915-2016) is rightly considered a central figure in the history of American psychology. Bruner is mostly known for his important contributions in bringing about the cognitive revolution of the 1950s. However, Bruner's later work on narrative psychology provides many insights which can be of great value to modern psychologists. In particular, his critique of the cognitive revolution, his writings on the implications of a culture-centered psychology and his theory of the two modes of understanding, when taken together, illuminate some fundamental issues of psychology and provide a critical lens through which to view them. I argue that from reading Bruner we can better understand the trajectory of some of the enduring problems in the recent history of American psychology and also discover new ways of approaching the humanistic topics to which modern psychology has not done justice.

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"He was no longer a brother-man, opening the chambers or the dungeons of our common nature by the key of holy sympathy, which gave him a right to share in all its secrets; he was now a cold observer, looking on mankind as the subject of his experiment, and, at length, converting man and woman to be his puppets, and pulling the wires that moved them to such degrees of crime as were demanded for his study."

—Nathaniel Hawthorne, *Ethan Brand*, 1851

"Now they all believe, even to the point of despair, in that which is. But since they cannot get hold of it, they look for reasons why it is being withheld from them. 'It must be an illusion, a deception which prevents us from perceiving that which is: where is the deceiver to be found?' — 'We've got it,' they cry in delight, 'it is the senses! These senses, *which are so immoral as well*, it is they which deceive us about the *real* world. Moral: escape from sense-deception, from becoming, from history, from falsehood — history is nothing but belief in the senses, belief in falsehood. Moral: denial of all that believes in the senses, of all the rest of mankind: all of that is mere 'people'. Be a philosopher, be a mummy, represent monotono-theism by a gravedigger-mimicry! — And away, above all, with the *body*, that pitiable *idée fixe* of the senses!"

—Friedrich Nietzsche, *Twilight of the Idols*, 1889, p. 35

"When human beings are viewed as defective cerebral mechanisms, incapable of higher levels of purposefulness and awareness, it will naturally be assumed that they are not only *difficult* to interpret but in some sense *beneath* interpretation, since their behaviour and expression must lack the intentionality and meaningfulness of normal human activity"

— Louis Sass, *Madness and Modernism*, 1992, p. 5

CHAPTER ONE

Jerome Bruner in Context

1. Introduction

The discipline of Psychology is currently facing various important criticisms: the replication crisis (Anderson, C., Attwood, A., Attridge, P., Baranski, E. 2015), the generalizability crisis (Yarkoni 2019), the discipline's neglect of lived experience (Schiff 2017), the widespread conceptual confusion about the self (Barresi & Martin 2010), the need for more rigorous theorizing (Teo 2020), problematic neoliberal values (Sugarman 2015), and so on. These criticisms concern the methodological, philosophical, and cultural aspects of psychology as a research tradition; aspects which, I think it is fair to say, tend to not be the direct objects of investigation for most psychologists, who have been trained to contribute to well established research areas — i.e., to conduct their own research into social psychology, experimental psychology, or cognitive psychology, in a way that is congruent with what became before. The ideal here is to expand our collection of facts about how the mind works, disprove old theories, test new ideas, and generally add to the scientific understanding of ourselves.

Turning a critical eye on the methods, philosophy and culture of psychology is not a recent phenomenon, however. This thesis explores the investigations — and implications — of work by one such critical psychologist: Jerome Bruner. The trajectory taken by Bruner's work throughout his career is interesting in its own right, which is something I hope to convey in my first chapter. But I believe the lasting insight of Bruner's philosophy of psychology rests in his

work on meaning and narrative. In one sense, it tackles the most basic question a psychologist can ask: "How do we construct meaning out of our experiences?" Which is also the most difficult and elusive question a psychologist can ask — perhaps something better left for poets. But Bruner stuck with this question, in one form or another, throughout his career.

More broadly, this thesis deals with the problem of meaning in psychology through consideration of Bruner's work. When it comes to psychologists who have reflected on their own discipline in a critical, artful, and productive manner, I believe Jerome Bruner is one of the most important in recent memory. In particular, I advocate for expanding his work into a humanistic narrative approach to psychology which can offset the growing trends of reductionism and mechanization in the study of mental life; one which does not shy away from concepts such as intentionality, folk psychology, and meaning.

The relevance of Bruner's work for the current moment can be seen in this passage from the preface to *Acts of Meaning* (1990), which deals with interpretative psychology. Bruner explains what drove him, as a leading proponent of the cognitive revolution, to advocate for the necessity of understanding narrative in psychology:

> "I have written it [Acts of Meaning] at a time when psychology, the science of mind as William James once called it, has become fragmented as never before in its history. It has lost its center and risks losing the cohesion needed to assure the internal exchange that might justify a division of labor between its parts. And the parts, each with its own organizational identity, its own theoretical apparatus, and often its own journals, have become specialities whose products become less and less exportable. Too often they seal themselves within their own rhetoric and within their own parish of authorities. This self-sealing risks making each part (and the aggregate that increasingly constitutes psychology's patchquilt whole) ever more remote from other inquiries dedicated to the understanding of mind and the human condition — inquiries in the humanities or in the other social sciences." (Bruner p. ix)

There are many psychologists today making similar criticisms and advocating for some sort of unifying framework or theory that can remedy the fragmentation that Bruner describes. Of particular relevance are works in narrative psychology (Schiff 2017; Freeman 2016), cultural psychology (Henrich, Heine & Norenzayan 2010) and the psychological humanities (Teo 2017), all of which argue for a more inclusive psychology that speaks across disciplinary boundaries, goes beyond strict positivism, embraces qualitative methods, and directly explores the topic of subjectivity. This thesis is written in the spirit of contributing to these ideas and critiques. Specifically, I do this by providing an account of Jerome Bruner's insights into the problem of meaning in psychology and how his ideas can be expanded on to help make sense of some contemporary conflicts about what psychology is — and ought — to be about.

Tracing some common threads throughout Bruner's career gives a historically situated account of the issues while setting the stage for his later turn to more theoretical matters. The latter, I will argue, offers many rich insights for contemporary discussions of psychology that can be used to great advantage. At present, Bruner is more of a footnote than a key player in contemporary critiques of psychology. I hope to change that. We can use Bruner not only to better understand how some of the problems of psychology as a discipline arose and have escalated in recent years, but also to provide context with respect to the recent history of American psychology itself, via the work of one of its most important figures.

1.1 Some Background into Bruner's Early Research

Jerome Bruner's hope for the cognitive revolution was, put simply, that using the computer metaphor of the mind would help us learn more about human beings' internal life: the world of intentionality, drama, and passion. As we will see, this hope did not come to fruition and instead the computer metaphor of the mind may have led us astray with respect to how we construct meaning out of experience.

Bruner was always interested in how we determine what counts as meaningful. Before publishing the two books that directly examined the topic by way of his 'interpretative' psychology (*Acts of Meaning* (1990) and *Actual Minds, Possible Worlds* (1986)) Bruner explored this issue via a more traditional branch of experimental psychology. Humanistic topics such as value and meaning were common threads throughout his career and he investigated them in his early work on perception — this was later referred to as the "New Look" — and with his book on concept attainment; the latter being one of the works that launched the so-called "cognitive revolution".

In his early work on perception, Bruner attempted to study the subjective world of values by way of how we perceive mundane objects in the environment. He postulated a theory of perception that claimed, as its fundamental principle, that the perceptual system was calibrated toward percepts representing our needs and expectations — that is, percepts are determined by our value systems. In his work on concept attainment, Bruner designed a study which made the subjects active participants, as opposed to passive recipients, by allowing them to use whatever strategies they preferred when solving the problems given to them. It was an attempt to bring back the mental realm into experimental psychology in way that was scientifically respectable.

These were Bruner's first attempts at answering the kinds of questions that obsessed him throughout his life —questions of how we construct a world full of meaning and value — in a scientific manner, and they provide the necessary context for understanding his later turn to narrative psychology and eventual dissatisfaction with mainstream psychology as a whole.

1.2. Bruner Looking at Values in Perception

Prior to his role in the cognitive revolution, Bruner's dissatisfaction with the mainstream psychology of the time was visible in his work on perception. A series of papers co-authored by Bruner eventually led to what was called the "New Look": an early constructivist perspective on the study of perception, concerned with the processes by which human beings select what they pay attention to. It was a way out of the dominant views of the time — what Bruner (1992) considered as either "antimentalist behaviourism" or "magical-realist psychoanalysis" (p. 780). He thought that both sets of views treated people as passive observers of a phenomenon and he wanted to focus on how people constructed their worlds for themselves, without being committed either to behaviourism's rejection of introspection, or the psychoanalytic worship of it.

The paper that kickstarted this program was called, quite appropriately, *Value and Need as Organizing Factors in Perception* (1947). It was a study on how children perceive the size of coins. In it, a sample of Boston schoolchildren were tasked with matching a patch of light to the sizes of various coins. Technically, this was standard psychophysics, but Bruner (1983) later noted that what made it revolutionary (and hugely popular in the media) was the "Dickensian quality" (p. 69) of the findings: poorer children tended to overestimate the size of the more valuable coins compared to children from more affluent areas, who were able to perceive such

coins quite accurately. It was this finding which made the paper exciting in experimental psychology, as perception was seen as inextricable from the social and economic realities of the subjects.

Bruner and Goodman (1947) postulated that perception consisted of two factors: the behavioral and the autochthonous. The influence of social norms on perception — assuming that poor kids will have a different relationship to money than rich kids — is an instance of the behavioral determinants of perception. The autochthonous factors in perception, in contrast, are the normal stuff of experimental psychology; they are studied by determining thresholds for hearing a certain tone amongst other tones, for instance. Experimental psychology at the time tended to focus almost exclusively on the autochthonous factors of perception, and Bruner and Goodman (1947) thought that "[s]uch psychology, practiced as it were in vitro, has fallen short of clarifying the nature of Perception in everyday life much as did the old nerve-muscle psychophysiology fall short of explaining behavior in everyday life" (p. 33).

Bruner continued researching issues in perception with the psychologist Leo Postman from the late 1940s to the early 1950s. Together, as Bruner (1983) would later put it, they "kept on attacking the bastions of psychophysics" (p. 75) and this research made them more widely cited in the American psychological literature than Sigmund Freud — at least for a few years. The "bastions of psychophysics" he was referring to were embodied by his mentor at Harvard, the influential psychologist Edwin Boring. For Boring, psychology was all about how the senses create representations of the stimuli coming in from the external world. That was psychology's starting point. This lent itself to classic stimulus-response experiments which allowed scientists to study perception objectively and was consistent with the behaviourist view that there was no need to postulate any mental entities or constructs in the process. Bruner differed in that, for him,

mental representations were shaped by internal processes as well as external stimuli, and the subject is always an active agent in constructing the representations of whatever the external world provides. Bruner (1983), along with a group of Harvard graduate students, was engaged in a critique of Boring's ideas. They took the position that psychology should start with the experience of people perceiving meaningful things in the environment and should not concern itself solely with the structure of the senses by reference to physiology, or the measurements of the thresholds involved in perceiving very specific laboratory stimuli.

Bruner was also influenced by the work of British psychologists, Donald Broadbent and Richard Gregory, who initiated a paradigm shift in how the sciences of information processing were applied to the mind. Bruner claims that it was their ideas which became orthodoxy within the American study of memory and perception in the 1960s. Interestingly, Gardner (1985) notes that Donald Broadbent was the first modern psychologist to represent cognitive processes with a flow chart and his model included the concept of a "selective filter" that analyzed messages and determined which were able to pass to the "limited capacity channel" (p. 91) and enter conscious awareness. The practice of using flowcharts to represent cognitive processes is now commonplace in psychology, but at the time it was an innovative way to visualize all the temporal sequences involved in models of thought processes. Indeed, "[o]ne could now examine the temporal dimensions of diverse psychological processes, and avid experimenters lost little time in pursuing just that course" (p. 93). Again, positing various thresholds for when information enters into consciousness was not an innovation in and of itself, but the notion that information can be scanned for messages in order to fulfill certain requirements of the selective

filter was an innovative way to conceptualize the sequential nature of mental information processing[1].

Of particular importance here is that the Broadbent model provided Bruner with a way of getting around the problem of what he termed the "Judas Eye": the phenomenon whereby people seem to process information without having to direct their attention towards it. For instance, Postman, Bruner, and McGinnies (1948) studied "perceptual defense" in a word association study, finding that subjects could be divided into those who were responding to words "vigilantly" or "defensively". It seemed like there was an unconscious decision being made prior to the subject's conscious apprehension of certain words, which seemed to "protect" the subject from words that may have had harmful associations for them. In the 1940s this was a radical and strange conclusion to draw in experimental psychology: it seemed to hint at the mysterious unconscious — a topic exclusively dealt with in psychoanalytic circles and avoided like the plague by experimental psychologists. But, as Bruner (1983) later notes with regards to his work on perceptual defense, "[s]tatistically speaking, we could not dismiss the possibility that some 'meaning' was getting through before the subject could 'see' what was before him" (p. 81). Broadbent and Gregory's ideas about the selective filtering provided a scientific — i.e., an information theoretic, or even mathematical — explanation for an important and troubling element of Bruner's research findings. Adopting a model of information processing deals with the problem of the "Judas Eye" while avoiding the need to make any reference to the

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[1] However, there was an inherent limitation in this. A common thread throughout information processing models is that they are 'content blind': once the information passes the selective filter, all information is processed in the same way. In other words, all stimuli are equal. This is a consequence of borrowing ideas from computational models, in that you can specify which information gets included or excluded, but all information must be processed in the same manner when it gets processed. When it comes to human thought processes, however, this turns out to be an untenable assumption.

unconscious in psychoanalytic terms — which was the only other option available to explain such findings at the time.

That being said, Bruner did have reservations about adopting metaphors from other disciplines. At the time, he was more focused on exploring the problems of filtering by considering neurophysiology directly, not via information theoretic models. Bruner (1983) states, "I think I am suspicious of 'formal' models of human behaviour — theories couched exclusively in mathematical terms or in abstract 'flow diagrams'", adding that, "Their precision exacts a very high price in the abandonment of imagination — eventually, no doubt, well worth paying. But not now!" (p. 99) However, with Broadbent's ideas of the selective filter, he found support for his work on how values contribute to perception: the selective filter could be understood as having expectations for the values or meanings that stimuli require in order to enter into one's conscious awareness — at least with regard to the speed of their recognition by the subject.[2]

New research would be conducted that would render many aspects of the computational models inadequate for application to human psychological processes, but the models gained in popularity regardless. For example, Postman, Bruner, and McGinnies (1948) found that the amount of time it takes subjects to recognize a word was dependent on where the word ranked in their value system (as measured by the Allport-Vernon Study of Values questionnaire). The authors mention E.G Boring's views with regards to "organismic or adjustive determinants in perception" (p. 142), which refers to the position that an organism must perceive the environment for "survival and welfare" (p. 142). Such a stance, Postman et al. (1948) contend, results in the study of perception focusing strictly on the biological needs of the organism. However, the authors believe that the organism's personality and value systems must be included

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[2] Although, as noted above, this is in direct contradiction to the assumption of computational models that they are content blind and process all information in the same way.

in the discussion and so they studied how the value systems of the individual organism determine what is perceived. This is a way to account for individual variation in responses of the same stimuli and also bring the mentalistic realm into perception. The authors found that, "[t]he great majority of subjects, then, conform to a general pattern. *The higher the value represented by a word, the more rapidly is it likely to be recognized*" (p. 148). Findings like these created tensions for the computational models of the time, as they took considerations like value and personality in perception seriously. However, it would take a few more decades before the framing of all cognitive processes in terms of formal models and language would be questioned and criticized.

The conclusions reached by Bruner and colleagues might seem obvious to a student of psychology today, but they were innovative at the time. Importantly for this thesis, these studies provide the necessary background into how Bruner was able to incorporate what were seen as non-experimental topics, like value and meaning, into experimental psychology at a time when such concepts were generally limited to psychoanalysis. It was an early constructivist take on perception which was backed up by empirical research and pushed back on E.G. Boring's established philosophy of psychology. With new ideas coming out of information theory, Bruner gained support for the idea that the psychological subject was not simply a passive observer and responder to whatever stimuli psychologists presented; instead, subjects are directed towards objects in the environment in ways that are "filtered" through the subject's values and expectations. From this, we can see how Jerome Bruner was already interested in how people in everyday life construct meaning from their environment. It was a promising step towards reintroducing the mind back into psychological science, at a time when mentalistic concepts were still stained by the legacy of introspection.

1.3.Bruner and the Cognitive Revolution

Along with his work on perception, Bruner also studied concept attainment in a novel way. This again had an impact on how broader psychological science was practiced — in fact, arguably a much more significant impact than his work on perception. Bruner saw that the framework for studying thought processes did not capture the ways that we tend to solve everyday problems — thinking that incorporates our idiosyncrasies, habits, and values. Instead, science tended to focus on the solutions that would be arrived at by logical thought processes; that is, it focused on the end points of logical reasoning, and evaluated thought processes by how well they measured up to their logical conclusions. Bruner (1983) states, "[w]e could *evaluate* it [human reasoning] by comparing the *results* of human intuitive reasoning with what one obtained by using formal logic or mathematics. But that did not explain *how* people came to their correct solutions, unless (like the nineteenth-century logician George Boole) you believed that the laws of logic *were* the laws of thought" (p. 112). This critique would form the basis of his work on concept attainment, which in turn, helped usher in the cognitive revolution.

In the research for what became the book, *A Study of Thinking* (1956), Bruner and his colleagues studied how people categorized objects by placing them into particular classes. Subjects would be tasked with determining which of a series of cards belonged to the same class. To achieve this, subjects needed to employ their own strategies for discovering the nature of the attributes that defined the class (e.g., whether the class was defined by all cards having red squares or all cards having red circles). Subjects would make a guess as to whether or not a card belonged to this unknown class, and the experimenters would tell them if they were correct. In this way, Bruner and his colleagues could study the "rules" that underpinned the different

strategies the participants were using, and in turn, understand their thought processes in a more meaningful way than by focusing exclusively on the end results. For instance, subjects could use a simple algorithm, such as "conservative focusing". This is when you keep picking cards until you are told one of them is in the correct class. You then focus on that card, varying one attribute at a time, until you discover which attribute defines it as belonging to the designated class. This approach allowed participants to use whatever strategies they wished — in keeping with the researchers' intention to "ask very qualitative questions in a quite quantifiable way" (Bruner, 1983, p. 113). This was a small step toward enabling participants to be more active and creative during experiments than was typically allowed in American experimental psychology.

When it was published, Bruner's book was celebrated for its innovation in giving a logical and mathematical account of thought processes. The eminent physicist Robert Oppenheimer (1958) wrote in his review of the book: "*A Study of Thinking* has in many ways the flavor of the opening of a new science" adding that "[a]lthough there is little in the findings here reported that shocks or transcends common-sense, these findings are cast with the precision and objectivity which is indeed the mark of a science finding its bearings" (p. 481). Attesting to the philosophical significance of the work, he concluded: "That man must act in order to know, that he must thereby reject other actions of which he is capable, and lose other knowledge of what is knowable in the world, will not solve the old philosophical questions; but it will alter, deepen, and illuminate them" (p. 490).

In recalling the motivation behind the book, Bruner (1983) states, "We were trying to break out of the anti-intellectual corset by having recourse as much to rigorous logic as to psychology. Ours was in some way more a logician's, than a psychologist's, approach" (p. 127). This "logician's approach" to thought processes was praised as revolutionary at the time for a

psychologist and it cemented the book's reputation as a classic. However, the mathematical language the researchers adopted did not limit its applicability to the more humanistic topics that occupied Bruner throughout his career.

For instance, the introduction to the book is rather more philosophical than psychological: it ranges from discussing categorization in the broadest sense (as the way we reduce complexity of the environment to a manageable amount) to the finer details of specific types of categorization. Bruner and colleagues (1956) make claims which foreshadow Bruner's later critical philosophy, stating that, "Our intellectual history is marked by a heritage of naïve realism" (p. 7) in the sense that western culture has assumed that truth was simply "out-there" to be discovered and it was the job of the scientist to discover it. Indeed, the authors state, "The objective of the voyage was to discover the islands of truth. The truths existed in nature. Contemporary science has been hard put to shake the yoke of this dogma" (p. 7).

It is worth quoting in full a small section on culture, because it provides interesting conceptual links between Bruner's early experimental career and his later work on narrative: "The categories in terms of which man sorts out and responds to the world around him reflect deeply the culture into which he is born. The language, the way of life, the religion and science of a people: all of these mold the way in which a man experiences the events out of which his own history is fashioned" (p. 10). Here, in a book which helped launch the cognitive revolution, we see an acknowledgement of how culture shapes cognition. Looking back from this present moment, it is ironic: the cognitive revolution kept cognition and culture separate, in that culture was something produced by the mind — not as a force constructing the mind in any way. The separation of culture and cognition would become cemented in cognitive psychology, and later, evolutionary psychology. So much so, that culture itself can be considered a product of evolved

brain modules, as Tooby and Cosmides (1992) state, "culture is the manufactured product of evolved psychological mechanisms situated in individuals living in groups" (p. 24). In keeping with the cognitive revolution's metaphor of the brain as a computer, the notion that the brain's evolved mechanisms create culture becomes natural, because in this metaphor, the "software" (culture) logically cannot construct the "hardware" (the brain). The line of causality can only flow one in direction, unless the logic of the metaphor falls apart. Although this way of thinking about culture and cognition has become mainstream since the cognitive revolution, in one of its founding texts, we see Jerome Bruner express skepticism about reducing such important issues by clinging too strongly to a particular metaphor or model. As Bruner (1956) notes, the categories that structure much of people's lives, such as "witches and nonwitches among the Navaho; the manner in which kin are categorized in societies with and without primogeniture rules…the categorization of certain acts as friendly and others hostile: all of these are projections of deep cultural trends into the experience of individuals" (p. 11). At the time of the cognitive revolution and thereafter, before certain metaphors and models became dogmatic among psychologists, there was indeed conceptual innovation.

In his history of the cognitive revolution, Howard Gardner (1985) claims that most psychological research could be categorized as either belonging to the "molar" or "molecular" levels of analysis. Molecular approaches involve small-scale units of analysis, as used in traditional psychophysics and the information-processing psychology of the time: "bits, individual percepts, single associations examined in brief periods of time" (p. 96). Molar approaches use larger-scale units such as "schemas, frames, or strategies" (p. 97). Of relevance here is Gardner's take on the computer metaphor of the brain. He notes that, as a metaphor, it offers a unique approach to conceptualizing the mental world. It allows researchers to focus on

both levels of analysis using the same model: "the most molecular level (individual bits, symbols, 'on-off' circuits) or the most high-level programming concepts (goals, means, and routines)" (p. 97). In a way, it could be seen as a unifying metaphor for studying mental activity. Gardner claims that this was true in the case of Bruner's research on concept attainment. Bruner's work included the molecular level in terms of controlling the number of bits of information in each stimulus (e.g., the colors and shapes of playing cards) while also considering the overall strategies subjects used to categorize them — the "high-level" processes of goals and intentional states. Gardner claims that this was the most cutting-edge and revolutionary aspect of Bruner's book and indeed the metaphor of the time did allow psychologists to reintroduce some mentalistic concepts back into the scientific conversation.

That being said, this metaphor eventually began to limit the conversation about the mind in the aftermath of the cognitive revolution. The model of the computer accounts for the logical problem-solving capacities of the mind but, as we have seen with Bruner's (1947/1948/1956) experimental work, many important aspects of thought are not strictly logical: they are shaped by the culture, values, and subjectivity of the individual. The computer analogy highlighted similarities between the brain and computing processes, but it also exposed some important differences at the same time. As Gardner notes (1985), the image of the mind emerging in the aftermath of the cognitive revolution was more nuanced: "Human thought emerges as messy, intuitive, subject to subjective representations — not as pure and immaculate calculation" (p. 111). Gardner termed this the "computational paradox", whereby the more psychologists learn about how the mind works like a computer the more they learn how it does not. For Bruner, both considerations are important. As mentioned earlier, Bruner's contribution to the cognitive revolution was largely through his work on concept attainment, which assumed problem solving

strategies were algorithmic in nature. But it also acknowledged the subjectivity of the problem solver in choosing which algorithms to employ, when to employ them, and how to employ them. In this sense, we can trace Gardner's computational paradox to the beginnings of Bruner's experimental career on perception and thought processes.

The cognitive revolution faced this paradox because the model of the computer could not capture many essential aspects of human psychology — particularly, culture and values. There is no clear way to conceptualize the interaction between culture and the mind in terms of orderly, input-output computational language. The major accomplishment of the cognitive evolution, according to Gardner, was the way that mental representations took over the field and became a necessary condition for any scientific description of a psychological process. As Gardner (1985) notes, "much of the best work in cognitive science has been carried out as if only the level of mental representation existed…the brilliant work of Chomsky and his followers makes no reference to, and could be maintained irrespective of, the actual conditions in the brain and in the surrounding culture" (p. 391). This disconnect between models and "actual conditions" would become more and more apparent, as cognitive science would come to disregard lived experience altogether.

This is an important point, because the use of mental representations in theorizing necessarily puts the emphasis on processes "in the head" and ignores the environment. This was detrimental to understanding meaning and culture because it ignores the embeddedness of the individual in wider social practices and material culture. This is perhaps the fundamental problem of the computational model: it cannot help but be atomistic and disembodied, and so the language of computation cannot account for the complex social aspect of our thought processes. This is evident in the case of meaning-making, and its shared nature. As Brian Schiff (2017)

states, "Meaning emerges from the interaction in which multiple persons make present life experience, together, regardless of whose experience it was/is/will be. Speakers take up roles or positions in storytelling to produce a negotiated account" (p. 93). One reason that algorithmic processes cannot account for this process of meaning-making is that there is no clear input and output: the line between the information that a person receives and that which they produce is blurred as it is co-constructed in the process of everyday interactions. The cognitive revolution did not provide a vocabulary for exploring this aspect of human psychology because it is not consistent with the computational model. As Gardner (1985) notes, it was possible to create theories of language acquisition and problem-solving processes that dealt solely with representations in the brain, but which relied on a computational language that could not be used to describe many other important aspects of psychology. Bruner would later directly address this problem, but at the time of the cognitive revolution, it was not clear how severe the problem would become for psychology as a whole.

1.4. Turning to a Different Kind of Psychology

Decades after the cognitive revolution transformed the way psychologists conceptualized mental life, Jerome Bruner would write the books *Actual Minds, Possible Worlds* (1986) and *Acts of Meaning* (1990). Both are small and compact but, taken together, they propose a broad and sweeping change to his discipline — a paradigm shift away from the cognitivist, "variable-centred approach" (as Brian Schiff (2017) terms it) towards a more humanistic, narrative psychology. These books are perhaps the result of the kind of existential crisis that might build up over decades of working in the academic discipline of psychology as practiced at the time.

Indeed, Bruner (1983) recalls at one point during his career when "The Apollonian and the Dionysian, the logical and the intuitive, were at war…From time to time, almost as if to keep some balance between night and day, I wrote essays — about Freud, the modern novel, metaphor, mythology, painting" (p. 8). He did this while conducting his research on concept attainment discussed in the previous section. Those "Dionysian" essays were eventually published in a terrific short book called *On Knowing: Essays for the Left Hand* (1979). The book is full of interesting essays on creativity, myth, and literature, but it is not as systematic and ambitious as his later two books, so I will not be focusing on it here. However, it is worth including one passage in full. Bruner (1979) writes:

> "In periods during which man saw himself in the image of God, the creation of works *ad majorem gloriam dei* could provide a sufficient rationale for the dignity of the artist, the artisan, the creative man. But in an age whose dominant value is a pragmatic one and whose massive achievement is an intricate technological order, it is not sufficient to be merely useful. For the servant can pattern himself on the master — and so he did when God was master and Man His servant creating works in His glory — but the machine is the servant of man, and to pattern one's function on the machine provides no measure for dignity. The machine is useful, the system in terms of which the machines gain their use is efficient, but what is man?" (p. 17)

Here, we see that Bruner was deeply concerned with what the computer metaphor of the mind and the machine metaphor of the body was doing to our identity — to our humanity. It is fitting that these considerations were written in the period between helping to bring about the cognitive revolution and his later attempts to restore meaning in psychology. This passage comes from his crisis of the "Apollonian" and the "Dionysian", of being at war with himself.

Luckily for Bruner, after twenty years of grappling with his conflict of identities — being a scientist by day, an artist by night — there was a growing interest among social scientists who wished to challenge the status quo with respect to the practice and methods of social science and science more broadly. These researchers were interested in using the construction and

interpretation of meaning as a guiding principle in order to challenge the dominant ideology of scientists. Clifford Geertz is reliably cited as one of the, if not the most, important figures of this movement (starting in cultural anthropology and spreading from there) and his work tapped into Bruner's mutual interest in the relationship between culture and the mind. Indeed, Bruner (1990) saw that this shift in ideas within academia reflected his own inner conflict as a scientific psychologist with a passion for the humanities and a dissatisfaction with the increasing divisions between these different forms of knowledge production.

In *Actual Minds, Possible Worlds* (1986), Bruner describes what he takes to be two different natural kinds, two different ways of understanding reality. He calls them the logico-scientific and the narrative modes of understanding. The logico-scientific is the method of doing science which Bruner helped advance during the cognitive revolution, culminating in what became the standard research tradition of cognitive science. This is an epistemology (mostly implicit and assumed, rather than explicitly justified by psychologists) where knowledge is to be verified by way of either formal or empirical proofs. This method utilized the verificationist criterion of truth, where propositions — such as those making up a scientific theory — are meaningless unless verifiable through experimentation or observation. The narrative mode by contrast is concerned not with verifiable truth, but with meaning. This is where verification, if you can call it that, comes from a story's verisimilitude or "lifelikeness" (p.11).

Bruner was not trying to create a unifying theory of knowledge by postulating these two modes. The modes cannot be reduced to each other and they give us different means for understanding the world and work towards different ends. The first deals with formal propositions which can be tested and falsified — indeed, without the ability to empirically verify its hypotheses, it is not considered to be a science — while the second considers the everyday

world of intentionality and folk psychology. A few years after publication, Bruner was compelled to further promote the narrative mode of understanding — this time as a remedy for what he saw as psychology's refusal to question its own institutionalized research methods and philosophy stemming from the cognitive revolution.

The result was *Acts of Meaning* (1990), which is both a critique of the cognitive science Bruner helped establish and a thoughtful exploration of how meanings are constructed in an everyday sense. In defending this narrative mode of understanding, Bruner (1990) states: "folk psychology of ordinary people is not *just* a set of self-assuaging illusions, but the culture's beliefs and working hypotheses about what makes it possible and fulfilling for people to live together, even with great personal sacrifice" (p. 32). Here, we see Bruner's dissatisfaction with how psychology often writes off meaning and intentionality as either illusionary or too subjective to be taken seriously — that is, unless they are garnished in the language of information theory or computation (e.g., Dennett 2009). Bruner insists that even if the interpretations that people attribute to the events in their lives — the things that make up our folk psychology — are delusional in the logico-scientific sense, they still speak to the narratives made available by the culture and therefore hold value for the psychologist interested in the relationship between culture and mind—and, indeed, for any psychologist, as I will argue in the next chapter: the culture in which psychologists are embedded is an important and essential resource in constructing scientific knowledge.

Psychology today is even more dominated by the logico-scientific mode than it was when Bruner was writing — and has been significantly strengthened by its alliances with neuroscience and evolutionary theory — while the method of narrative understanding that Bruner championed has been mostly restricted to the humanities and the social sciences. In this sense, Bruner failed

in his attempt to unify and heal the fragmentation he saw and predicted. In fact, the kind of social constructionism championed by Clifford Geertz and his enthusiasts in the 1970s and 80s and Bruner's promotion of interpretative psychology in the 1990s, has started to carry a somewhat derogatory tone amongst scientists in the 21st century. When scientists do mention social construction, it is often to distance themselves from what they perceive to be lesser forms of research and knowledge; this is a habit which could be an outgrowth of Tooby and Cosmides (1992) diatribe against what they termed the "standard social science model" (SSSM).

For example, with respect to the growing interest in Geertz's interpretative philosophy in the social sciences, Tooby and Cosmides (1992) state: "These positions have a growing following, but less, one suspects, because they have provided new illumination than because they offer new tools to extricate scholars from the unwelcome encroachments of more scientific approaches. They also free scholars from all of the arduous tasks inherent in the attempt to produce scientifically valid knowledge" (p. 22). This is a particularly egregious claim when considering the case of Jerome Bruner. Tooby and Cosmides (1992) seem to suggest that scholars like Bruner — those interested in the narrative mode of understanding and meaning making— were doing so because they did not want to put in the hard work of producing scientifically sound knowledge. The authors are knocking down a straw man and they are also providing an illustration of a particular culture in the making: the scientism of the mainstream psychologist. In the case of Tooby and Cosmides (1992), they are arguing that valid scientific knowledge can only be produced in one way, the way of the logico-scientific mode. Indeed, the attempts of Geertz and his followers are mistakenly judged by the standards of this mode, even though they are of a different kind, with different criteria. The scientism at display here is the stubborn insistence that there is only one kind of knowing. In this context, Bruner's early

concerns that mainstream psychology would become ever more fractured and disparate from the humanities and the social sciences were somewhat prophetic, even if they did not raise enough awareness to prevent it from happening.

When recalling how the study of thinking was treated as "Too mentalistic, too subjective, too shifty" amongst American psychologists in the 1950s, Bruner (1983) recalls that: "George Miller said, laughing, at lunch: 'You're supposed to get at the mind through the eye, ear, nose and throat if you're a real psychologist.' And we recited together the stale joke about how psychology first lost its soul and then its mind" (p. 105). For Bruner, this joke would eventually ring true once again, but this time the butt of the joke would be the cognitivist movement he helped create and that — subsequently — he would be compelled to correct.

In this chapter, I have attempted to give an account of Bruner's thought in relation to the cognitive revolution and how there were tensions between the desired object of study (values, meaning, reasoning, etc.) and the models used to do so. I have tried to show that a computational vocabulary was adopted in areas such as problem solving and perception in an attempt to emphasise the mentalistic aspects of psychology which were neglected in the behaviourist tradition. However, the goals of the cognitive revolution, bringing the mind back into psychology, were at odds with the foundational metaphor it employed: the computational model of mind. In the aftermath of the cognitive revolution, the aspects of mind which Bruner had attempted to bring into psychology would be dealt with at the level of individual mental representations, which meant social and cultural considerations were absent. I have attempted to show how this was not a necessary trajectory for psychology. Rather, it was contingent on a particular way of conceptualizing human being and the mind inspired by the technology of the time. The cognitive revolution put psychology on a path away from humanistic topics like

meaning, value, and culture, because they did not fit with what became the mainstream discourse in psychological science. Jerome Bruner is an interesting case-study in this respect, as he was as close as any psychologist to this monumental shift in the history of science, while also being one of the few who would take a critical and productive position as to how it affected our understanding of human beings.

CHAPTER TWO

Applying Bruner's Psychology

2. Introduction

In *Acts of Meaning* (1990), Bruner starts his argument with the axiom that culture is fundamental to, and inescapably part of, any science of the mind. We are born and socialized into a world where the symbolic systems that we find meaningful in our environments — religious beliefs, moral convictions, social norms — are already established. Therefore, any science of the mind ought to incorporate the embeddedness of the individual in its network of values if it is to produce genuine knowledge of human psychology, as this embeddedness is inescapable. Bruner (1990) gives three reasons as to why he views culture as fundamental to any psychological inquiry: 1) participation in a culture, including a scientific culture, is a precondition for the generation of knowledge in the first place; 2) what is meaningful is often determined by agreed upon standards in the public sphere, such that meaning is a shared process: it is not just something in the heads of individuals; 3) folk psychology, which encompasses all the mentalistic terms psychology has tried to abandon since the cognitive revolution, is a reflection of the canonical stories that people in a given culture use for understanding their conduct (p. 15). These three claims are brought up at the onset of his book and are the foundations of his philosophy of psychology.

Bruner then briefly outlines two reasons why these claims are generally ignored in mainstream psychological science. He also attributes these two reasons as partially explaining why the cognitive revolution strayed from its original aim of reintroducing mentalistic concepts

into the discipline, stating that they make up the "'founding issues' of scientific psychology" (p. 15). These are: 1) taking seriously the everyday concepts about mental life elevates these subjective terms into explanatory concepts, which is traditionally the domain of cause and effect reasoning, and scientists are wary of giving noncausal explanations the same scientific status as casual ones; 2) placing culture at the centre of any psychology seems to admit to a kind of relativism because psychological "truth" then becomes a matter of perspective and thus, the discipline will be at risk of losing the scientific status it has tried so hard to achieve.

The three claims Bruner gives to justify and ground his interpretative psychology — as well as the two reasons just mentioned for skepticism towards it — are central to his argument for how to reintroduce meaning back into psychology. *Acts of Meaning* (1990) was aimed at a general audience and represents an attempt to convince mainstream psychologists that narrative analysis was essential for bringing back meaning. I think analyzing why culture should be at the center of psychology is a reasonable way to begin evaluating Bruner's insights into the current problems facing psychology and it also gives me an opportunity to extend his line of thought.

2.1. Psychological Knowledge in the Context of a Culture

Bruner (1990) claims that one cannot separate the activities and products of the scientist from the culture in which they are embedded. This is because science does not occur in a vacuum; what counts as science is agreed upon and so it is social and public; and we (scientists included) all make use of folk psychology, which provide the canonical stories we use to make sense of the behaviour we encounter (and engage in) every day of our lives. Therefore, culture is essential to understanding science — and especially— psychology. As Bruner notes, these

claims may seem mundane and obvious to students of the humanities or social sciences, but they have been strangely absent from scientific psychology. However, the influence of culture on psychology has become a more popular topic since the publication of a highly cited paper on the phenomenon of so-called "WEIRD" (western, educated, industrialized, rich, democratic) populations in the behavioural sciences. The paper demonstrates how most samples in the behavioural sciences are drawn from this very narrow slice of humanity. Henrich, Heine, and Norenzayan (2010) note: "This means that 96% of psychological samples come from countries with only 12% of the world's population" (p. 3). This led the researchers to examine the extent to which it is possible for scientists to generalize their findings across all of humanity, given the narrow range of people actually studied.

Making the matter even more complicated are the various ways in which different cultural environments can produce significant differences between populations, such as the "WEIRD" samples' vulnerability to certain perceptual illusions (which may be caused by the kinds of architecture we are exposed to while developing) or how different levels of exposure to the natural world produce different strategies for categorization (p. 4-7). This is particularly problematic when psychological research relies on evolutionary frameworks, as the results are then generalized to an entire species, not just a particular population. As Barrett and Stulp (2013) argue, even in the case of cross-cultural studies, researchers often use paradigms which rely on a deeply Western worldview, and this creates the danger of conflating the notion that "humans are a particular kind of cost-benefit analyst" with the "'proximate' causal world-views that fundamentally shape people's lives in different ways in different places (and indeed across different times)" (p. 44). This lends support to the argument that we need to place cultural considerations at the center of any psychology, because even our attempts to be truer to various

real-world behaviour may still rely on assumptions which are culturally contingent. Henrich, Heine, and Norenzayan (2010) acknowledge that there need to be stronger incentives for researchers to more thoroughly justify their generalizations and to release more detailed information about the kinds of samples they use. These are good suggestions, but I think an important limitation on our ability to generalize stems from how psychologists conceptualize their subject as a whole.

For instance, the authors of the 'WEIRD' paper distance themselves from critics of scientific psychology, specifically figures like Kenneth Gergen (1973), by cautioning that "[m]any radical versions of interpretivism and cultural relativity deny any shared commonalities in human psychologies across populations" (p. 2) and then clarify that this is not what they intend to do with their argument. However, I think the reflective stance that the authors implore current researchers to apply to their work would, in fact, benefit from the critical stance of people like Kenneth Gergen (1973), Kurt Danziger (1990), and of course, Jerome Bruner (1990).

The notion of a culturally contingent psychological science has been argued for by all three authors. In his classic paper on theories in social psychology, Kenneth Gergen (1973) claims that our leading theories are better viewed as historical artifacts, rather than objective descriptions of the world — in the sense of being akin to theories in the natural sciences. He considers that the search for universal laws of social interaction are inherently misguided because, unlike the natural sciences, the domain of human interactions is a moving target. If we view psychological theories as contingent on the time and place in which they were advanced, then it becomes easier to see the kinds of values they implicitly adopt. Indeed, Gergen (1973) notes that, "The concepts of the field are seldom value free, and most could be replaced with other concepts carrying far different valuational baggage" (p. 312).

The cultural values implicit in psychological theories are easy to detect in theories to which psychologists no longer subscribe. Everyone will notice the value judgments implicit (or not so implicit) in Freud's understanding of hysteria, or female neurosis, for example. But psychologists are less likely to acknowledge the values that guide current scientific theories, especially if they are tied to productive research programmes. Gergen (1973) notes that there has to have been a decision within the scientific community to speak and write of "self-esteem" instead of "egoism" or to choose "conformity" over "solidarity behaviour" (p. 312) as the constructs worth studying. Values are involved in the definition and choosing of constructs, as well as the kinds of research programmes that are appealing to students.

In updating Bruner's (1990) and Gergen's (1973) contention that specific cultural settings are preconditions for the generation of specific kinds of knowledge, we can turn to current examples of how cultural values guide research in modern psychology. In one textbook aimed at graduate students, *Advanced Social Psychology* (2010), Roy Baumeister, one of the most prominent American social psychologists, states in his introduction: "Showing that people do foolish, self-destructive, or irrational things, possibly for surprising, intuitively disturbing reasons, was a surer path to getting published. Teachers of social psychology have long advised students to seek findings that their grandmothers would not already know to be true" (p. 13). It is of course a value judgment that psychological research findings ought to be exciting and even shocking to the public. In extending Bruner's line of thought, we can consider these value judgements by researchers, and then students, as microcosms of the kinds of narratives made available by a culture.

A neoliberal culture which affords narratives of utility and entrepreneurship when describing the self will surely have some effect on the kinds of psychological knowledge

produced. One example is the sub-area of positive psychology. Gable and Haidt (2005) define

positive psychology as, "the study of the conditions and processes that contribute to the

flourishing or optimal functioning of people, groups, and institutions" (p. 104). The authors note

that research in the area is aware of the complexities of defining what counts as good or what

makes for a good life; however, the project is still very much limited by the conventional

philosophy of psychology it implicitly adopts. Positive psychology acknowledges that

mainstream psychology has focused on more of the "bad" than the "good" aspects of human

beings. The authors suggest three reasons for this: compassion for the downtrodden, the illness

and distress arising in post-World War Two America; and our natural fascination with danger as

opposed to safety and stability (p. 106). There is no overt recognition of cultural values here.

Following Bruner (1986), we might say that one compelling reason for psychology's historical

fascination with the "bad" over the "good" has been cultural: the darker aspects of human

psychology play into the canonical stories made available by the culture. By starting with

Bruner's axiom of culture's role in shaping the mind — and importantly, what we consider to be

knowledge of the mind — we can see that even projects seeking to transcend the conventional in

psychological science are still held captive by a philosophy of psychology that is fixated on the

"logico-scientific" (Bruner 1986) mode of understanding. As Gable and Haidt (2005) conclude,

"The recent movement in positive psychology strives toward an understanding of the *complete*

human condition" (p. 109). By this, they mean it will include all the messy complexities of life

that have been traditionally simplified or ignored in psychology. However, I believe this is not

possible if the underlying philosophy remains the same. Arguments about the true virtues and

optimal functioning of human beings is, of course, far older than psychology itself and will

require more than a change of heart amongst current researchers for any real advances to be made.

If we approach this issue with Bruner's (1986) philosophy in mind, we are confronted with the narratives in which this research topic is embedded. Of relevance to positive psychology is the notion that, since human beings are rational agents, we can apply the methods of scientific inquiry to learn facts about moral life. Jeff Sugarman (2007) considers this to be an unchecked ideology of a "highly technical and instrumental scientific view of practical rationality" (p. 177) which is dominant in psychology and makes the positive psychology movement ill-conceived from the beginning. This ideology comes from the narrative that human beings are fundamentally rational creatures, who have been given a gift which no other animal possesses by a benevolent God — or in more modern terms, an evolutionary algorithm. This narrative is tied to what Isiah Berlin (2013) has called the three assumptions characteristic of Enlightenment thinking, all of which have dominated Western thought in some form or another for over the last two hundred years. The three assumptions are that: "all questions have true answers, all true answers are in principle discoverable, and all the answers are in principle compatible, or combinable into one harmonious whole like a jigsaw puzzle" (p. 78). This metaphor is revealing, as it illustrates the idea that science can unify the various branches of human knowledge into a coherent whole. Following Bruner (1986) we can see that this a narrative of scientific progress that we have inherited, and which underlies the worldview of the modern scientist. Positive psychology applies this narrative to the area of subjective well-being, or happiness, in its search for a unifying science of the "complete human condition". This narrative about the unifying ability of a particular philosophy of science is not the only narrative at work in positive

psychology. There are also the narratives in the broader culture which influence how the concepts are defined and used.

A culture that values independence, confidence, self-branding and networking skills as ideal character traits creates an incentive for psychologists to treat and brand deviations from these ideals as problems or, at the most extreme, psychological disorders. Indeed, as Sugarman (2015) notes, a wide range of normal social discomfort and shyness has become pathologized in the form of social anxiety disorder in modern times (p. 107). The values of neoliberalism — with strict individualism at its core — are not only present in popular culture. As Bruner notes, scientists also make use of the narratives made available by a culture. Sugarman (2015) notes that positive psychology sustains neoliberal values in its implicit research principles in the sense that a person's well-being is often conceptualized in economic terms: "under the influence of positive psychology and coaching, relationships are reduced to means-ends calculations, and pursued solely for self-interest and emotional self-optimization. Acts of love, friendship, benevolence, and generosity are valued to the extent they increase individuals' social capital" (p. 111). It is not surprising that positive psychology would share elements of the individualism and obsession with the self which dominate the broader culture, given that culture provides the conceptual language that scientists employ.

It is worth noting that underneath the Enlightenment and neoliberal narratives mentioned above, there is an assumed ontology of the human organism. This is what Daniel J. Nicholson (2018) considers to be the "machine conception of the organism (MCO)" (p. 140), which derives from science's reliance on a mechanistic worldview. In this view, the human being is a mechanical object: not unlike the inanimate 'things' we make and put into the world. The person is a feat of engineering— in this case, via evolution by natural selection. The MCO is assumed in

psychological science to be an accurate conceptualization of the human being, and this has many consequences. There are far too many consequences to explore here, but the neoliberal tinge to some of positive psychology's concepts, such as optimal functioning, social capital, and productivity, rely on the MCO to some extent. This is seen in the similarities we assume human beings have with machines: they are replaceable, they are prone to error and degeneration, they are made up of parts, they have a function, they follow algorithms and rules, they are designed to function at the highest level, and so on and so forth. In this sense, neoliberal ideology at the level of a culture interacts with an ontology of the human being in ways that reinforce both, while alienating real people. This is an example of how the complex interaction between philosophies of science, culture, and economic conditions can factor into what becomes scientific knowledge.

To look at an example of the way that a culture's values interact with a more well-established area of the discipline, let us consider the construct of the "Dark Triad"; a popular topic in social and personality research (as well as in the media) over the past few years. Indeed, the Dark Triad has taken on some semblance to the construct of self-esteem in the 90s — not nearly as financially lucrative as the latter, but both have been used to explain a large variety of social phenomena. The Dark Triad consists of the three least likeable personality traits: narcissism, machiavellianism, and psychopathy. There are dozens of studies on this construct and many citations to prove its growing interest in mainstream psychology (Furnham, A., Richards, S., Paulhus, D. (2013)). But it is not only popular amongst psychologists: it has seeped into the public realm as well. For instance, an article in *Psychology Today* has reported findings that the Dark Triad correlates with poor parenting strategies (Geher 2021). *Psychology Today* also reports that levels of Dark Triad traits should be considered when choosing potential romantic partners (Whitbourne 2021), while *Forbes* reports that internet trolls are often so

vicious because they possess the Dark Triad personality (Brandon 2021). Psychologists have found that people high in the Dark Triad traits were more likely to exhibit selfish behaviour in the midst of the global coronavirus pandemic, putting the lives of others at risk (Schiffer, O'Dea & Saucier 2021). Indeed, the Dark Triad (DT) is used to explain a lot of (unsavory) human behaviour, but I argue that this has more to do with its relationship with canonical cultural narratives, than with empirical data.

As Bruner (1990) argues, narrative is "built around established or canonical expectations and the mental management of deviations from such expectations" (p. 35). That is, narratives — which include stories and myths — are used to explain and organize our mental lives around certain themes, moral principles, aesthetic values, etc., by expressing and reinforcing certain cultural norms. The Dark Triad presents the idea that there are stable traits that make up what we consider to be a bad person. The narrative behind the Dark Triad is something like this: there are things that have gone wrong in certain people, in much the same way that there can be faulty and defective parts to a machine which hinder its proper functioning, and if we learn more about those things, then we will be better able to manipulate and control the behaviour of such people, and perhaps, even replace those faulty parts. For the Dark Triad to arise in the first place, there must be such an underlying narrative, or the construct would hold no interest to psychologists or the public. This means that constructs are not neutral — they must be created from a certain perspective. I would argue that these perspectives are informed by the narratives we have available, and they have consequences.

With this particular construct, we see the dehumanizing of the subject and a further attempt for science to secularize the concept of evil. The DT construct serves to isolate the essence of evil into abstract, atomistic components, which can then be contemplated through the

eyes of scientific objectivity. This attempts to convert a perennial moral issue into a current

scientific research program. By doing so, the human being is conceptualized as a mechanical

puppet, something which is helplessly under the sway of whatever personality traits the

psychologist constructs. By isolating evil into atomistic personality traits, the DT also makes use

of the canonical narrative of the "True Self". It is a story in our culture that within each of us lies

a true or optimal version of ourselves waiting to be cultivated. It relies on the metaphor that the

self is like a static substance inside the person, as though there is a miniature version of oneself

— in some form or another — standing idly by behind one's eyes. The DT construct relies on

this, because it must abstract the problem of evil away from action and identity — or the "True

Self" — into personality traits: the perennial problem is no longer one of humanity's greatest

challenges or mysteries, but a collection of constructs testable via a paper and pencil

questionnaire.

      Theodore Dalrymple (2015) calls the canonical narrative of the true self, the "Real Me",

stating that, "The doctrine of the Real Him is a watered-down secular version of Christian

redemption, with Man in the place of God. Inside every person there is a core of goodness that is

more real, more fundamental, than any evil act he might have committed, and which it is the

purpose of punishment to bring to the surface" (p. 61). The DT relies on this kind of narrative,

because it abstracts the darkest parts of humanity into a few traits — narcissism,

machiavellianism, and psychopathy — and then performs a calculation of the badness of a

person based on their measurements. This leaves that "core of goodness" intact, as the human

being is no longer considered with agency and free will, but rather, doomed with faulty parts.

This is an inherently *Othering* process: it justifies the cultural narrative that within all of us there

is a "True Self", but that for some people, it is corrupted by the dark traits and does not see the light of day.

This allows most people to think of themselves as fundamentally good people, regardless of their actions. The horrible things people do can be attributed to the Dark Triad traits, at least to the extent that given person is supposedly in possession of them, and the remainder of the horrible things that people do can be attributed to those who are in deep, pathological possession of them. When the concept of evil is abstracted in such a way, and broken up into pieces for scientific analysis, we are given more options for dehumanizing others and excusing ourselves. As Dalrymple notes: "All good behavior is perfectly consonant with the Real Me, and is therefore not at all mysterious. On the contrary, such behavior is the expression of the natural self, which is blocked by some pathological process or other" (p. 57). In this case we see how science can reduce the moral complexities of human beings into abstract parts and legitimatize the view that certain people are more like automata — incapable of agency and therefore, unable to realize their inherent goodness — than others. It also renders the moral aspect of life, which is the source of many of our great artistic achievements, trivial. The character of the Judge, from Cormac McCarthy's *Blood Meridian* (1985), is no longer an embodiment of a particularly American spirit of violence and war, but rather, a man possessing exceptionally high levels of the DT traits. This is to say that the moral realm cannot be fully explained by science, because to do so renders the significance of the human experience absurd and trivial. It is what happens when the logico-scientific mode of understanding is used to explain something which can only be explored with the narrative mode. In the case of *Blood Meridian*, the power of the novel comes from the narratives of good and evil it weaves together: in its allusions to, and inspiration from, various novels, myths, archetypes, and Biblical stories, it is in conversation with history

and, as such, it can take on an explanatory power that the logico-scientific can never achieve. By rendering the topic of good and evil in terms of scientific variables, we are relying on a vast array of cultural narratives while at the same time we are simplifying and trivializing them. Part of the significance of narrative portrayals of evil is that many interpretations are possible, as is the case in life: the character could be an archetypal Satan figure, he could represent the evil of which we are all capable, he could be a warning about the modern excesses of greed and control over the natural world, or in the case of *Blood Meridian*'s Judge Holden, he could be, as Harold Bloom deems him, a "theoretician of war everlasting" (Bloom 2019). The point being that, with Bruner's (1986) narrative mode of knowing, we are able to foster uncertainty and ambiguity (as I will discuss more of in the next chapter), which allows us to get multiple meanings from a single text. When it comes to humanistic topics, like the nature of good and evil, the logico-scientific mode is inherently limited and reductive. While this may be useful in some ways, it means that the narrative mode must be taken seriously in order to provide a fuller account of the various phenomena that scientists are interested in explaining.

For all its progress in applying rigorous scientific methods to various topics, when it comes to aspects of the self, psychological science is often locked in an unhealthy dialectical exchange with the interests of the broader popular culture. This dialectical process is clearly what has happened with the construct of self-esteem —one of the most well studied traits in social psychology (Baumeister, 2010, p. 151). Self-esteem is a psychological construct that perfectly matches the society in which it was birthed: it is a measure of how much someone values themselves. This is a terrifically western construct that is justified by seemingly endless amounts of popular culture, which takes it as axiomatic that people ought to place a high value on themselves, regardless of anything else. As Dalrymple (2015) notes, the consequences of the

concept of self-esteem are something like this: "The Real Me may actually have no obvious connection to the Me as it acts in the world and appears to others. It is a secret and beautiful garden often accessible only by means of psychology" (p. 56). For the concept to make sense, it must rely on the cultural narrative of the "beautiful garden" of self, where clichés like "finding yourself", "stay true to yourself", and "loving yourself" are abundant. Otherwise, the concept would have no reference point — it would be completely mysterious as to what it refers to.

As Baumeister and colleagues (2003) note in their thorough review of self-esteem research: "The self-esteem movement showed that the American public was willing to listen to psychologists and to change its institutional practices on the basis of what psychology had to teach" (p. 2). This is significant, because, as the authors eventually conclude: "[the data] suggest that the benefits of high self-esteem are far fewer and weaker than proponents of self-esteem had hoped" (p. 38). Indeed, self-esteem is not a good predictor of the things psychologists originally hoped it would be: academic success, marriage satisfaction, job performance, etc. Indeed, the authors even conclude that: "Self-esteem is thus not a major predictor or cause of almost anything (again, with the possible exception of happiness)" (p. 38). This is quite damning for a psychological construct that is unrivaled in its influence on government policy, educational practice, the publishing world, and the discourse about ourselves in the broader culture. It is therefore a good example of how culture and science engage with each other to determine the trajectory of research programs in psychology — regardless of empirical support.

It is important for psychologists to acknowledge how a culture's values affect research, because, as Henrich, Heine, and Norenzayan (2010) show, scientists have a tendency — an incentive, is probably more accurate — to generalize their theories and empirical evidence further than is reasonable. The tendency for psychology to appeal to the universal aspects of the

human condition is not a problem in of itself — in fact, that is where a lot of the most interesting speculation happens — but constructs are sometimes argued to be much more universal than they may actually be. For example, Terror Management Theory (TMT) posits death anxiety as a universal human motive, secretly — or not so secretly — directing all of our behaviour. Many aspects of the human condition are explained with reference to this one theory. As Baumeister (2010) notes, "According to Terror Management Theory, sexual activity, achievement motivation, prejudice, emotion, and other phenomena studied by social psychologists are all ways of coping with the threatening idea that we will eventually die, and with the terror that this idea evokes" (p. 10). The notion that constructs created by psychologists can qualify as universal "master motives" (p. 10) is still part of psychology. References to human nature and human universals are not rare in social psychology. If we take Bruner (1990) seriously in putting culture at the centre of psychology, we must be able to overcome traditional dichotomies in our conceptualizations of nature and culture, and in particular, biology and culture. We find some insight into this problem in Bruner's critique of the scientific psychology in the first chapter of *Acts of Meaning* (1990).

Bruner argues that the appeal to a universal human nature in psychology — in this case, the kind assumed in constructs like the Dark Triad, self-esteem, and death anxiety — come from a fallacy inherited from the 19th century about the dichotomy between nature and culture. Psychology inherited the assumption, from the biological sciences, that the true causes of behaviour are to be found in the biological substrate of the person — conceptualized as a kind of machine — with culture being an overlay, or addition, to that system, but still necessarily second to the more "real" underlying circuitry of the system. However, in Bruner's interpretative psychology, it is the person's search for meaningful experience which is at the core of the "real"

causes of behaviour and such meanings are to be found in the cultural environment. This does not reject the existence of human universals but looks at such universals as a "*constraint* upon it [action] or a *condition* for" (p. 21) acting in the world. As Bruner notes, the drives of hunger and sex are certainly human universals, but actions — intentional acts — such as ritual fasting or going to the grocery store, cannot be explained by those universal drives — that is, unless we do violence to the word "explanation". As an example of seeing biological universals as "constraints" or "conditions" for action, Bruner (1990) cites George Miller's classic paper on human memory, which argued that there is a constraint on our short-term memory of seven, plus or minus two, bits of information. This is a good example of what would seem to be a biological universal, as our capacities for processing bits of information in working memory are not relative to one's culture.

Miller (1956) suggested that a limited number of "slots" are available for the immediate storage of information, with the limit being seven "bits" of information, including a wiggle room of two bits; people have trouble keeping track of more than that. Bruner (1990) argues that Miller's paper shows us that we are able to use cultural tools, such as our "coding systems like octal digits, mnemonic devices, language tricks" (p. 21) to organize "bits" of information into "chunks" and therefore, retain much more information in our short-term memory. We can use our cultural artifacts to overcome the biological constraints imposed by seemingly universal human features — in this case, the limitations of our short-term memory. Indeed, as Bruner (1990) notes, "Our knowledge, then, becomes enculturated knowledge, indefinable save in a culturally based system of notation" (p. 21). A psychology mindful of culture takes into account how various cultural toolkits are used to bypass what would seem to be biological universals — all without needing to sharpen the old dichotomy between biology and culture any further.

2.2. Laboratory Knowledge in a Culture

In expanding on Bruner's ideas, we recognize that psychology is a particularly tricky discipline to navigate. We do not see a line where "culture" ends and "science" begins, but rather, we see a dialectal exchange between the two. The methodological problem that follows is what to do about it. One way this has been dealt with has been to incorporate statistical procedures that are meant to take into account the confounds produced by cultural environments. But, as Yarkoni (2019) notes, for statistical procedures to be meaningful, verbal hypotheses must be accurately mapped onto — or translated into — quantitative expressions of that same hypothesis: they must be talking about the same thing. However, as Yarkoni (2019) has concluded in his analysis of modern psychological methods — in particular, those using linear mixed models — "Closer examination reveals that the inferential statistics reported in psychology articles typically have only a tenuous correspondence to the verbal claims they are intended to support" (p. 28). If the verbal expressions psychologists are using to frame their research questions are not being captured by their quantitative methodology, then why do they bother with that methodology at all? Well, Yarkoni (2019) notes that one reason could be that "the use of universalized testing procedures serves mainly to increase practitioners' subjective confidence in broad verbal assertions that would otherwise be difficult to defend on logical grounds" (p. 28). When we look at the problem from a historical perspective, we can see the kinds of problems that Yarkoni (2019) observes have a strong continuity with how psychological research split from the individuality of laboratory research to the collectivity inherent in statistical procedures.

According to Kurt Danziger (1990), it was Wilhelm Wundt who created the division of labour that became the experimenter-subject relationship that we still see in laboratory psychology today. For Wundt, the external conditions that the participant was subjected to in the laboratory must match the internal perceptions they will experience; in this way, proper objective science is achieved, rather than being the subjective whims of the "introspectionists". By focusing on immediate responses to stimuli — in the form of reaction times, judgments of size, and duration — Wundt was able to limit and narrow down the data to something more akin to "reflexes" as opposed to the problematic method of introspection, which he viewed as unscientific and contaminated by retrospective thinking (p. 30). In order to do this, psychologists needed specific roles to play, and so we got the roles of the "experimenter" and the "subject". This allowed psychologists to study private consciousness in a public (social) way, as what qualified as data required a communication between the experimenter and the subject. Wundt's laboratory was the start of experimental psychology, and all the variable laboratory factors that Yarkoni (2019) describes would have been present. However, Wundt's lab was collecting data with a strictly individualistic philosophy. As Danziger (1990) notes, in the period leading up to World War I, almost all studies published in experimental journals had their results "clearly attributed to individual experimental subjects" (p. 70). Problems of generalizability were certainly there but attributing individual data to whole populations was not as incentivized or encouraged at that time — that would have to wait until World War Two. The very start of psychological research did not face the problems of generalizability because of superior methods, but rather, it was not a laboratory culture that valued generalizing obscure psychological results to wider populations. This may have been because Wundt's philosophy of psychology emphasized the need for nonexperimental methods for understanding the most

important aspects of human psychology — things like cultural myths, histories, and languages — which he called Völkerpsychologie. In fact, Danziger (1990) claims that in his later years, Wundt thought that "this [Völkerpsychologie] was the more important part of psychology, which was destined to eclipse experimental psychology" (p. 37). Wundt's Völkerpsychologie would be more suited for making broad generalizations, as it was meant to compare features of different cultures, unlike his experimental work which was strictly individualistic.

Whereas Wundt's laboratory work was studying individuals and their immediate responses to various stimuli, later American psychologists who were inspired by him would diverge from this approach and start to study people in the aggregate. Public interest in large collections of data fueled American psychology's direction in the first half of the 20th century. As Danziger (1990) notes, "It was not experimental psychology but the repeated demonstration of striking regularities in social statistics that first convinced a large public that human conduct was subject to quantitative scientific laws" (p. 76). Indeed, the Zeitgeist viewed suicide, homicide, and other criminal behaviour as something under the sway of statistical laws, and so, large samples of data could be used to uncover these laws and potentially predict the kinds of people and situations involved in various crimes (p. 77). American psychologists would change the object of investigation away from the individual in the laboratory toward the collective in the form of large samples of information. When American personality psychologists borrowed the instruments and methods used in intelligence testing, they were assuming a philosophical stance that viewed personality as a collection of static traits that could be abstracted away from any situation or environment. This is another example of the ontology of the machine conception of the organism interacting with culture (Nicholson 2018). A philosophy of science which views organisms as machines is completely consistent with the belief in statistical laws which regulate

human behaviour. As the subjectivity and individuality of the person becomes irrelevant — as well as many other confounds —one can focus on the narrower variables of types of criminal behaviour and types of classifications people fit into. This philosophical assumption grounds the view that personality traits are relatively unaffected by the environment, and so, it allows researchers to use quantitative statistical methods to study personality and behaviour while ignoring the kinds of confounds that would be inherent to Wundt's laboratory setting.

The culture with an interest in large samples of information about its population was also a culture that placed intense pressure on scientists to provide quick and reliable methods for officer selection in the military (Danziger 1990). The quantitative method of aggregating scores of personality traits based on pencil and paper tests became the dominant method in American psychology because of this practical demand. In contrast, German psychologists at the time studied "character" rather than personality and considered it to be a construct that was not reducible to the sum of its parts and so they did not study personality in the quantitative manner used by the Americans. This can be seen in the qualitative work conducted in Kurt Lewin's Berlin lab, which emphasized the subjects' behaviour in the context of the laboratory — the inescapable relationship between the subject and experimenter took center stage and was not treated as a confound to be explained away (Blersch, et al. 2021).

In contrast, American researchers adopted the methods and philosophy of Francis Galton (1822-1911), who held the position that one can get meaningful information about individuals by looking at where they stand in relation to a large aggregate of individuals. This changed how psychology conceptualized its subject matter. As Danziger (1990) notes, "Individuals were now characterized not by anything actually observed to be going on in their minds or organisms [as Wundt's laboratory in the university of Leipzig did] but by their deviation from the statistical

norm established for the population with which they had been aggregated" (p. 77). Here we see the origins of the kinds of problems which Yarkoni (2019) notes plague the discipline today. The overreliance on statistical procedures has a lot to do with following a particular cultural tradition. It is a cultural tradition which is infatuated with large samples, carrying on the narrative from the first half of the 20th century that there are laws of human conduct — and most importantly, misconduct — which can be discovered using sophisticated statistics and aggregating individual scores on tests. This is not to dismiss the value and utility of such techniques, but rather to suggest that our overreliance on statistical procedures may have its cause partially rooted in the cultural narratives that have stuck with us.

As we have seen, psychology often produces knowledge which is contingent on the culture in which it was discovered. But this does not necessarily reduce the value of the knowledge: putting culture at the center of psychology does not nullify all claims to scientific knowledge, in fact, it provides an insightful perspective which deepens our knowledge of human psychology. In a similar fashion to the "WEIRD" population argument — as well as the theoretical perspectives of Danziger (1990) and Gergen (1973) — adopting Bruner's (1990) interpretative psychology enriches and clarifies what we mean by psychological knowledge and does not simply degrade it. Whether in the case of positive psychology, the Dark Triad or self-esteem, applying Bruner's perspective to these cases allows for a discussion about the relationship between culture and scientific knowledge which is currently lacking in psychological science. As we have seen, psychological theories and constructs are not merely locked in a unidirectional relationship with culture, but instead, take part in a dialectal exchange of narratives.

CHAPTER THREE

Narrative as an Organizing Principle of Experience

3. Introduction

We understand our lives through narratives. We structure our lived experiences in the form of stories. Without a sense of continuity connecting the past, present, and future, the sense of self may become fragmented. The ultimate basis of this sense of self is controversial and contested, but the idea that it has something to do with constructing a narrative out of one's memorable experiences is not. Losing this ability can result in an incoherent experience, a 'blooming, buzzing, confusion', in which the self dissipates. Louis Sass (1992) describes a schizophrenic patient who suffers from this very affliction, who states, "I feel as if I've lost the continuity linking the events in my past. Instead of a series of events linked by continuity, my past just seems like disconnected fragments. I feel like I'm in the infinite present" (p. 124). Not only does narrative competence include the ability to link events through time, but it also requires the skill of attributing a kind of "intentional causality" (Bruner 1986), where events are linked by particular themes and emotions. Sass (1992) describes a schizophrenic patient who was tasked with describing a picture of two people facing each other at a close distance, stating, "Before this picture, these two people, ah, hated each other…And then they were accidentally thrown together in some situation and just before this picture, a miraculous change took place which I can't describe. In the picture they — they feel as if they are a picture — a complete thing. And they're aware of their limits and they accept them and after the picture, they leave each other um — and the picture. [What are their limits? asks the testing psychologist.] The

boundaries of the picture" (p. 123). This account lacks attribution of intentionality on the part of the people in the picture and trades a temporal narrative structure for a spatial one. As Sass notes, "The story has a quality one might call presentism or, equally well, timelessness" (p. 123). Finally, another patient states: "While watching TV it becomes even stranger. Though I can see every scene, I don't understand the plot. Every scene jumps to the next, there is no connection. The course of time is strange, too. Time splits up and doesn't run forward anymore. There arise uncountable disparate now, now, now, all crazy and without rule or order" (p. 124). It is important to note that these are not merely stories. Indeed, Sass (1992) notes that, "experiencing the immobility of time, fragmentation of temporal continuity and flow, loss of past and future…" reflect the lived experiences of many people with schizophrenia and psychosis (p. 124). This provides some evidence that the disruption of the ability to structure experiences into narrative form can have severe consequences for one's sense of self, and therefore, narrative must play some important role in whatever it is we call the self.

Although constructing a narrative out of one's experiences seems essential for having a coherent individualized self, it is never in isolation from others and the outside world. As discussed in the previous chapter, narratives extend into the cultural environment, and this is why we are able to see meanings in the world so effortlessly — the canonical stories about human conduct are already "out there" and so they can be adopted by individuals effortlessly. This means that narratives are found in some of the most important aspects of any organized social institution: from scientific laboratories to the law courts. This chapter will access Bruner's (1986/1990) ideas on narrative — what it is, what we use it for, and why psychologists should bother thinking about it at all — and will build on his ideas in light of more recent theories on narrative and folk psychology. In particular, I will analyze Bruner's philosophy, and put it in

conversation with Ian Hacking's (1995) ideas on intentional actions. Then I will contrast Bruner's ideas on narrative with Dan Hutto's (2007) narrative practice hypothesis, and I will access where I believe Hutto's hypothesis improves on the former and where it falls short. I will then evaluate other especially relevant theories, in the context of Bruner's philosophy, concerning narrative in cognitive science, such as Dan Dennett's (1988/2009) Intentional Stance and Brian Schiff's (2017) narrative psychology.

3.1. Bruner's Two Modes of Knowing

The most important insight of Bruner's (1986/1990) philosophy of psychology is his argument for what he calls the two different modes of understanding: the logico-scientific and the narrative. These are two different perspectives on truth, two fundamentally different ways of obtaining knowledge which cannot be reduced to either one. I argue that we can better understand not only Bruner's psychology, but psychological science more generally by adopting this framework. As seen in the previous chapters of this thesis, Bruner (1986) was always interested in the intersection between the work of the artist and the scientist. Bruner's early career on perception and thought processes was concerned with the logico-scientific mode, positing a "mathematical system of description and explanation" (p. 16), which was deeply informed by information theory and the computational model of the mind. The other mode of knowing, the narrative mode, concerns itself with "the vicissitudes of human intentions" (p. 16). This framework helps one understand the epistemic tensions inherent in psychology as a discipline. It is a discipline where lawlike explanations are considered the ideal of the scientific endeavour, yet these descriptions must map into an experiencing subject. This tension is evident

in the history of psychology as a developing discipline, some of which was explored in previous chapters. However, Bruner's philosophy of these two natural kinds is essential for understanding the importance of his thought, and I will argue, also for understanding psychological science more generally.

3.2. Creating Possible Worlds

As noted above, both modes of understanding have their own perspective on truth. In particular, they differ on their criterion of truth. The logico-scientific mode makes use of the verificationist theory of truth, where for propositions and statements to be meaningful they must be verifiable with reference to empirical observation (Rorty 1979). Bruner (1986) notes that this leads to a different conception of causality from that of the narrative mode. For instance, the term "then" functions differently in each: propositions like 'If A, then B' involve universal truth conditions, in that this proposition is not only accessed with reference to empirical observation, but also by the "set of possible worlds that can be logically generated and tested against observables" (p. 13). A scientific construct in this perspective, such as self-esteem or death anxiety, is valid if it has causal power in a universal sense. That is, it is not just a construct applying to a few people in a particular time and place, and not just a consequence of language. However, when this criterion of truth is applied to human psychology, there can result much misplaced certainty. Even if self-esteem as a construct had causal connections to things like marriage quality and job satisfaction, the logico-scientific mode demands universality: it must be valid in all possible contexts to fulfill this mode's criterion of truth. This leads to misplaced certainty. It requires a world that is mechanical, where people are subject to timeless universal

laws which can be discovered and manipulated. This mode results in the MCO mentioned in the previous chapter, because to fulfill its ideals of universality and certainty, the logico-scientific must conceptualize human beings as machines, because this allows scientists to bypass all of the messy aspects of subjectivity and experience.

The narrative mode, by contrast, has its criterion of truth in verisimilitude or lifelikeness (Bruner 1990, p. 61). Causality is not understood to be something universal and certain, but rather, centered on human themes. The logico-scientific seeks abstraction to general claims, at the level of the population, while the narrative is able to capture the particulars, at the level of the individual. Bruner's (1986) theory starts with the definition that "narrative deals with the vicissitudes of intention" (p. 17). He starts with this axiom which assumes that intention is as basic a category as causality, in the sense that we see intentions — whether in the form of conversations with other people or in the flow of abstract shapes in motion — in the same sense that we see objects in motion exert causal influence on each other. Bruner cites a few studies that provoke this response in subjects by showing them simple shapes in motion, and notes that the "movements are irresistibly seen as two lovers being pursued by a large bully who, upon being thwarted, breaks up the house in which he has tried to find them" (p. 18). As Bruner notes, seeing objects as animated with intentionality is manipulated very easily: "the perception of animacy is induced by varying direction and speed of motion of an object with respect to an obstacle" (p. 18). In a similar basic sense that we see objects in terms of causality, Bruner is suggesting that we also, unavoidably, see objects as possessing conscious intentions, even if they are mere shapes on a screen.

This is an important place to start for understanding narrative, as it has its foundation in intentionality. Without attributing intentional states to others and oneself, one cannot have a

story, at least in the sense that we understand stories today. It has been argued that ancient epics, such as Homer's *Iliad* and *Odyssey*, contained protagonists who were not conscious in the same way that we understand subjectivity today, in the sense of being experiencing subjects with intentional states (Jaynes 1976). However, Bruner is arguing with the modern conception of stories in mind, and so, issues of how previous societies in history have understood narrative is not directly relevant to this argument. Bruner (1986) claims that stories construct two landscapes: action and consciousness. Action is the landscape with agents, intentional states, and situations; consciousness is the landscape of beliefs and desires, what the characters know about their situation and themselves (p. 14). This allows for the drama of the mismatch between what one believes about reality and what one learns — however painful it may be — about reality. As Bruner notes that this is how we get the kind of dramatic irony we experience in reading Sophocles' *Oedipus the King*. The climax of the play has the landscape of action and consciousness collapsing onto each other, as Oedipus suffers from the shocking knowledge of his incest and patricide. The story has a classic mismatch between the two landscapes, where the landscape of consciousness is slowly catching up to the landscape of action, and the resulting knowledge transforms them both, even though technically there is no change in the landscape of action — all the actions has already taken place. Bruner posits that these two landscapes are essential for constructing stories that we identify with. I think this is because it matches our experience of the world: the past is full of actions, and our consciousness of those actions can transform both memories and the self. I will turn to this now.

This notion of the dual landscapes applies to our relationship with our memories. Expanding on Bruner's (1986) notion of the dual landscapes of stories, we can see how this applies directly to the formation of personal identity. When it comes to the person, we are not

only informed through the prediction of future actions we will take, but more importantly, we are informed by the meanings we give to past actions. Ian Hacking (1995) provides a useful way of thinking about intentional actions. For Hacking, intentional actions are actions under a description: actions happen regardless of how they are or are not interpreted, but the description applied to an action makes it an intentional action. The important point for Bruner's dual landscapes is that for actions to be intentional, they must have a description at the ready. In the case of Oedipus, marrying his mother cannot be considered an intentional action, it is an action nonetheless, but not an intentional one. This is because at the time of that action he did not possess the knowledge that Jocasta was his mother, and so, it is logically impossible for it to have been an intentional action. The interaction between these two landscapes creates an uncertainty about the past: actions cannot be altered after they have occurred, but the consciousness of them can be altered by applying new descriptions to them. The past is not fixed, in this sense, because it is open to interpretation — to new descriptions, which when become available in the culture, can be used to create "new" possible actions and new possible worlds.

These possible worlds are not always good. Ian Hacking (1995) analyzes the concept of child abuse to explore this relationship between action and description. It is reasonable to assume that a child of the 1950s probably interpreted being beaten by his parents as punishment or discipline for doing something wrong. This would be because the narratives in the culture around physical punishment were radically different then they are now, and so, the descriptions available offered certain interpretations. A few decades later, when the child is an adult and a growing public awareness about the consequences of physical punishment arises in the culture, he can then re-describe that action as child abuse. Hacking's point is that the action does not change, but with new descriptions — new narratives about childhood and punishment arise —

one's past experience can be radically changed from normal punishment to the experience of child abuse. This shows how the kinds of descriptions that come in and out of fashion, in some sense, create new actions retroactively, and so, begin the process of "rewriting the soul" (Hacking 1995). This indeterminacy of the past makes the narrative of one's life always incomplete. It is always open to revisions and new descriptions, and the ending is never known. Hacking's example shows how this takes place in the interaction between culture and science. For instance, in the 1970s, there was a moral panic around the fear of satanic cults in the United States. It was around the same time that knowledge of multiple personality disorder as a construct was being popularized and explored by psychiatrists. Hacking provides a convincing account of how advances in the science of memory, as well as the cultures newly found moral panic concerning the recovered memories of satanic cults, allowed the multiple personality construct to "flourish".

This took the form of more people with multiple personality disorder being discovered than ever before. It provides an interesting example of how psychological constructs and culture are in conversation. The hysteria around satanic cults in the U.S during the 1970s, coupled with the newly constructed knowledge of the causal nature of multiple personality disorder (that it was caused by child abuse, something seen in many cases of multiple personalities) created a wave of people identifying as "multiples" and resulted in vast amounts of activism (as well as skepticism). Importantly, for the context of narrative identities, this offered new descriptions for past events and a new identity to organize them around. The important point here is that descriptions of actions can be applied retroactively and therefore, change the meaning of the past. As new descriptions become available, new kinds of people are created — there begins to be new ways of being in the world.

One particularly modern example of how scientific descriptions influence cultural narratives is found in Sherry Turkle's (1984) writing on the self. When discussing the computational theory of mind in the context of psychoanalytic description, Turkle transforms one of Freud's classic examples of a "slip of the tongue". Turkle states, "At the beginning of a meeting the chairman stands up and says, 'I declare this meeting closed'" (p. 226). The psychoanalytic interpretation might be that the chairman unconsciously wishes the meeting were already over, or perhaps it says something more substantial about his real feelings toward his job or his life. The meaning of the event radically changes when one applies a more current scientific description. Turkle burrows the analogy of a "computational dictionary". Information, such as the words "closed" and "open", can be stored using the same symbol, M, and a "bit" (~) represents a negation. Open and close are therefore close together in the computational dictionary because they are both represented by M, with-or-without the negation. Turkle states that if the mind is storing information like a computer, which is the orthodox belief in cognitive science, then this classic Freudian slip can simply be described as a result of a random error of adding a negation. In other words, we incorrectly applied a negation and got ~M instead of M (p. 226). This description radically changes the meaning of the chairman's utterance: no need to look into the chairman's childhood as an explanation for his unconscious apathy toward meetings. This is an action under a new description — using the vocabulary provided by cognitive science. It is not fair to say that the computational description is in our everyday folk psychology yet. The wider culture will still use the Freudian description, as it is more dominant in our everyday language practices. However, it is not impossible that the computational description does seep into our folk psychological practices and changes how we assign meaning on a daily basis.

For example, Turkle interviewed MIT students to find out how they describe themselves. The results are very interesting. One student, Arlene, states, "'There is a computational part, that's the part with the agents that somehow through their interaction have real intelligence come through. This part does my reasoning, my logic, my math homework, my ability to learn history. But then I have another system. It is built up from instincts. Evolution. My animal part. It is involved with love, feelings, relating to people. It can't control the computer part. But it lives with it. Sometimes fights with it. And this is the part that gives me the feeling of being me'" (p. 268). Here we find the "animal" part juxtaposed to the "computational" part, giving the picture of the person as a kind of cyborg. It is also an alteration of the Freudian folk psychology of the Id and super-ego. The Id is Arlene's "animal part", the part of her psyche dominated by instinct and animalistic impulse, while the "computational part" can be seen as the super-ego, the part of her psyche which "fights" with and attempts to control, the Id. This kind of description can be seen as an old Freudian description being updated by the new computational vocabulary.

Meanwhile, Amy states, "'In general I see my mind in terms of continual processing by internal programs. But the weight given to the output of these programs can be influenced by emotion. And then when they come up to consciousness, they come up to a level where there is this other kind of agent—the special agent. The one in touch with my history and with evolution'" (p. 268). Again, we see the cyborg theme appear, where the computational parts are contrasted with the human parts. Both accounts give more weight to the animal/human part in constructing their sense of self but claim to rely on their information processing parts for functioning. This is also consistent with an updated version of the Freudian description.

And finally, Mark and Eliot: "'All that there is a lot of processors—not thinking, but each *doing* its little thing…Nobody is home—just a lot of little bodies'" (p. 265). This last one is

particularly interesting, as it has uncanny parallels with how people with schizophrenia and psychosis may experience themselves. A man with schizophrenia named James, whom Sass (1992) describes, experiences his own sense of self in a similar matter to how Turkle's MIT students describe themselves. James states, "'I have no identity of my own…no self…I am only a cork floating on the ocean'" (p. 75). The belief that one does not have a self is not problematic on its own — in fact, it is central to many meditative practices — but this can become pathological in the extent to which this may dehumanize oneself and others. Sass notes that James would feel as though he and other people were machines of some sort, simply acting out the motions of being human. Sass notes, "He often perceived the actions of his wife — a vivacious and lively woman — as those of a kind of robot, an 'it' devoid of inner life. If he told his wife a joke and 'it' laughed, this showed no real feeling but only her 'conditioned' or mechanical nature" (p. 75).

Bruner (1990) notes a fear about how scientific constructs and vocabularies enter a culture. In recalling Wolfgang Kohler's William James lectures, Bruner describes Kohler's imaginary conversation about the "Nothing But" attitude of psychology, when "human nature" is reduced to mechanistic terms: "And he worries, this imaginary friend, what happens when the postman and the prime minister also come to think this way. My worry too is what happens when the sitter comes to think he looks like his portrait" (p. 31). By this he means that the products of the psychologist have real consequences on how people describe and experience themselves, as shown above. This is especially the case when the vocabulary scientists provide for the culture has deep moral connotations, such as viewing the human being as a machine, or the self as an illusion. As Bruner notes, "But even scientific psychology will fare better when it recognizes that its truths, like all truths about the human condition, are relative to the point of view that it takes

toward that condition" (p. 32). If psychology takes the point of view of the cognitive revolution, then it comes as no surprise that people will start to see the "truth" about themselves reflected in mechanistic and computational terms. However, if psychology were to do justice to the human condition, it would prioritize the narrative mode of knowing, as it has a humanistic point of view, one directed towards the experiencing subject.

We use narratives to construct possible worlds of action and consciousness — worlds of interpretation, which are fundamentally uncertain. This is what allows a "text", whether it be a novel, religious myth, or cultural practice, to be up for interpretation, and different people will have different experiences of the same text based on their own idiosyncratic interpretations. The logico-scientific mode, by contrast, "attempts to make a world that remains invariant across human intentions and human plights" (p. 50). In other words, science is about hypothesis falsification and narrative is about hypothesis generation. This framework puts psychological science in a strange place: how can worlds that are indifferent to human subjectivity have anything remotely relevant to say about human psychology? Bruner's theory is an attempt to answer this question by suggesting we see knowledge generation in two fundamentally different ways. The project should not be to just make science more narratively driven, or narrative more consistent with the principles of science. Rather, it is to recognize that many of the tensions we see in psychology are due to not understanding these two modes. Important problems like the replication crisis (Anderson, C., Attwood, A., Attridge, P., Baranski, E, 2015), and the limitations of generalizing findings across populations (Henrich, J., Heine, S. & Norenzayan, A, 2010) can be seen as outgrowths of failing to take into account Bruner's (1986) two modes of knowing. I argue that we would be better off allowing both modes institutional legitimacy and

validity as ways of better understanding the human condition, as opposed to focusing on one at the expense of the other.

3.3. Bruner and the Narrative Practice Hypothesis

One important contribution to understanding narrative in psychology comes from Dan Hutto's (2007b) narrative practice hypothesis. Hutto argues that encounters with narratives "familiarise us with the forms and norms of folk psychology" (p. 48). Folk psychology, considered at its most basic level, is the "practice of predicting, explaining and explicating actions by appeal to reasons" (p. 44). There are three important considerations that Hutto's hypothesis raises for Bruner's theory: 1) is narrative really so pervasive in our day to day sense making? 2) folk psychology may not be just a cognitive process; it may rely on embodiment more than previously thought; 3) the reliance on Theory of Mind (ToM) research for establishing folk psychology may be problematic. I will argue that the first consideration can be responded to by adopting Bruner's (1990) ideas about canonical cultural narratives, while the last two highlight some weakness in Bruner's philosophy which are in need of updating. I will take up these considerations in order.

Hutto (2007/2008) expresses skepticism about just how pervasive our folk psychological practices, particularly our use of narratives, actually are on a daily basis. Instead of understanding a person's actions by reference to how they fit into their "life story", he thinks that our day-to-day sense making is more based on "recognition-response patterns that generate 'embodied expectations'" (Hutto, 2007, p. 44). From this perspective, we only use our ability to

tell stories to make sense of behaviour in particular cases, when the actions of others, "violate norms (or appear to do so) in ways that we can only make sense of by understanding them in a wider context" (p. 45). This is perfectly consistent with Bruner's (1990) theory which claims that "human beings, in interacting with one another, form a sense of the canonical and ordinary as a background against which to interpret and give narrative meaning to breaches in and deviations from 'normal' states of the human condition. Such narrative explications have the effect of framing the idiosyncratic in a 'lifelike' fashion that can promote negotiation and avoid confrontational disruption and strife" (p. 67). Narratives are commonly used to make sense of something out of the ordinary. However, in contrast to Hutto (2007), I argue that narrative is also involved in simple ordinary encounters as well. To expand on Bruner's (1986/1990) line of thought, I argue that consciously or not, narrative is inescapably part of our day-to-day sense making. This is even the case with the "embodied response patterns" to which Hutto (2007) claims we rely on for most of our daily sense making. By adopting Bruner's philosophy, we can see that these response patterns are informed by the wider context of cultural narratives, and so, even if one is just ascribing generic beliefs to people based on their behaviour — such as 'he watched T.V because he was bored', 'she could not focus on her work because her phone was distracting her', 'he greeted someone on the street because they are friends' — we are still engaged in the narrative process. I may attribute beliefs to you in a completely reflexive manner which I do not perceive to be in narrative form per se, but the content of my attributions is relying on the wider narratives of a culture.

In this sense, Hutto (2007) neglects how narratives are extended into the environment. Without a narrative context, the simplest of actions would not make much sense. As Bruner (1990) notes "Our culturally adapted way of life depends upon shared meanings and shared

concepts and depends as well upon shared modes of discourse for negotiating differences in meaning and interpretation" (Bruner p. 13). This means there is always a give and take to our sense making: it is always in conversation with the canonical stories of the wider culture, and doing so, shapes how those stories are practiced. It is useful to consider Brian Schiff's (2017) functional approach to narrative here. On his account, we should not be overly concerned with the structure that a narrative takes, but with how it is practiced in a concrete sense: this allows one to see things as seemingly "non-narrative" as dance, gesture, hymns, and music as enacting a storytelling function. Even single words are not completely indistinguishable from narratives, in that they can be "at the cusp of narrative" (p. 78) — by that, Schiff means that single words may trigger a conversation which then becomes a story, or a chain of memories of one's past, or an inner dialogue with oneself. In this sense, non-verbal and very limited verbal expressions are enacting the function of the narrative process. In this sense, our "embodied response patterns" (Hutto 2007) are also part of the narrative process, as our embodied reactions are responding to what we consider to be canonical and ordinary. As mentioned above, what is canonical and ordinary is determined by wider cultural narratives, narratives which by helping us make sense of deviations from normalcy, inevitably inform that normalcy.

As Schiff (2017) states, "We cannot understand narrative as merely the verbal utterance or the word on a page. It isn't a text type, but an impulse to articulate meanings. The story cannot be found only in words" (p. 79). Indeed, the story is often found in the relationship between the most basic and simple interpretations we make and the wider cultural narratives available. As mentioned in the previous chapter, the world has meanings already in place, and we enact and interpret them. This is why psychological science — laboratory or not — is highly influenced by the culture in which it is practiced, as the very "forms and norms" we rely on to do any organized

social activity are informed by the narratives available in the culture. In this sense, it is narratives which shape the "situations in which the social roles and rules are well established" (Hutto, 2007, p. 45) and so, cannot be separated from our reflexive, embodied sense making. Indeed, they inform our reflexive embodied reactions just as they inform our conscious storytelling when we are searching for reasons for deviations from expectations.

The second important implication of Hutto's hypothesis is about embodiment. This perspective, along with Gallagher (2001) and Gallagher and Hutto's (2008) writing on the subject, is a response to unnecessary postulations in cognitive science which make the claim that we must create "models of mind" in order to understand other people — in particular, to understand what other people are thinking. These postulations often assume that we possess specific modules that have evolved in order to "read the minds" of others — i.e., to infer the mental states of other people based on their behaviour. I think Hutto's (2007) and Gallagher's (2001) criticism of this is fundamentally correct and important, and I will explain why I believe Bruner's (1986/1990) theory falls short in this aspect and ought to be updated along these lines.

The claim that folk psychology is fundamentally an embodied process is useful and, in my view, highlights a real problem in Bruner's (1986/1990) theory that is worth noting: he is reliant on explaining folk psychological process as a strictly cognitive process of representations "in the head". This leaves out the fact that our interpretations of behaviour and other minds are happening in an embodied subject in the world. In this sense, we act out our narratives as we construct them. As Hutto (2007) notes, "proficiency in making isolated propositional attitude ascriptions—attributing certain goals, desires, thoughts and beliefs—is not the same as *knowing how* these combine to become reasons" (p. 52-53). He claims that children engage in narrative practices in order to learn to ascribe reasons to behaviour. These practices are embodied and

situated in a particular context. It is not that a certain number of propositional statements about reasons and intentions need to be memorized in order for the child to be able to understand how to apply folk psychology to various situations, like some sort of equation for making sense of behaviour. Rather, the takeaway from Hutto's hypothesis is that the ability to attribute reasons to other people comes about via active participation, whether it's from reading a book with a parent or imaginative play with action figures. Bruner (1990) argues that there is an innateness to the child's ability to grasp meanings in its environment, which rests in what he calls "meaning readiness". This is defined as "a highly malleable yet innate representation that is triggered by the acts and expressions of others and by certain basic social contexts in which human beings interact" (p. 73). In this sense, "we come into the world already equipped with a primitive form of folk psychology" (p. 73). Bruner, like Hutto, emphasizes that these skills of folk psychology are acquired through active participation — not by mere processing of incoming information in one's environment.

However, Bruner's theory relies on a version of ToM which maintains that we all are creating and running models in our minds to predict and explain behaviour, in much the same way that a detached scientist can observe behaviour and extract some general rules about it. However, this does not seem to be what we do on a regular basis. As Gallagher and Hutto (2008) note, "This understanding [of intentionality] does not require us to postulate or infer a belief or a desire hidden away in the other person's mind. What we might reflectively or abstractly call their belief or desire is expressed directly in their actions and behaviors" (p. 20). From this perspective, we do not run models explaining behaviour in an algorithmic fashion in our minds and then attribute the result to other people. Instead, we understand intentions as embodied in the person's behaviour through things like gestures and facial expressions.

The third consideration of Bruner's theory is linked with the second, in that it involves his notion of innate meaning readiness. Bruner rests his claim of innateness on some particular empirical Theory of Mind (ToM) research — the very kind which Hutto (2007) and Gallagher and Hutto (2008) criticize so convincingly. The main study that Bruner (1990) relies on for his argument was conducted by Michael Chandler and colleagues (1989), which showed, in the context of a hide-and-seek board game, that children as young as two and three years of age can withhold important information and even mislead others with false information. This was done in the same spirit as so-called "false-belief tests", where children are tested to see whether or not they can ascribe beliefs to others that differ from their own, and that people will then act on false understanding — by using deception, for example. Bruner accepts the definition of ToM that Chandler and colleagues (1989) provide: "To hold to a 'theory of mind' is to subscribe to a special sort of explanatory framework, common to the folk psychology of most ordinary adults, according to which certain classes of behaviors are understood to be predicated upon the particular beliefs and desires subscribed to by those whose actions are in question" (p. 1263). This definition of ToM narrowly relies on the concept of belief and does not engage with reasons. In Bruner's conception of narrative folk psychology, beliefs, desires, and reasons are all important. Bruner (1990) states: "Folk psychology also posits a world outside ourselves that modifies the expression of our desires and beliefs. This world is the context in which our acts are situated, and states of the world may provide reasons for our desires and beliefs" (p. 40). The lack of precision in dealing with the concept of reasons in the ToM findings that Bruner (1990) relies on makes his claim for innate meaning readiness or as he calls it — a "biology of meaning" (p. 69) — less convincing than it otherwise may be. This is especially the case given

that narrative is the organizing principle of Bruner's folk psychology, and narrative is largely about giving reasons for behaviour.

Hutto (2007) notes that false beliefs tests often show that children under a certain age cannot attribute beliefs to things — whether it be a person or a puppet — that are different from their own. They cannot knowingly deceive others. They are therefore claimed to lack the ability to understand beliefs, and so, cannot attribute mental states to other beings in their environment. However, once they can do this, they are said to possess a ToM. Hutto argues that this stems from a confusion of belief with reasons: even if the child were to properly understand beliefs, that does not entail that they will also understand reasons. Beliefs and reasons are logically distinct. Hutto (2007b) claims that the abilities to understand beliefs and reasons get conflated because psychologists will commonly assume that children who pass false belief tests have already, to a large degree, developed a Theory of Mind (ToM) — and that these tests prove it (p. 51). Following Hutto, we can see that Bruner's argument for an innate meaning readiness capacity stems from a similar conflation of beliefs with reasons.

This assumption rests on the fact that ToM can be defined in a relatively narrow sense — such as the ability to attribute desires and beliefs to another, which can include "what she wants" and "where she thinks it is". For Bruner's innate meaning readiness to be convincing, however, it must be able to explain the role of reasons in ToM, instead of just beliefs and desires — both of which can be explained by a simple understanding of what someone 'wants'. Without this, it is unclear how children's ability to attribute beliefs to each other can help explain innate capacity for constructing meaning in the form of narratives. Given that the research on which Bruner relies ignores the essential concept of reasons, which is core to understanding narrative in folk psychology, we can remain skeptical about this aspect of Bruner's philosophy. In particular,

Bruner's (1990) claim that "one cannot interact *humanly* with others without some protolinguisitic 'theory of mind'" (p. 75) does not hold up in light of more recent criticism of ToM.

3.4. What Counts as an Explanation?

Bruner (1990) wrote *Acts of Meaning* as a response to the absence of the study of meaning in psychology. As noted in previous chapters, the cognitive revolution was meant to restore meaning to psychology as a valid category of study in scientific psychology — including humanistic topics like value, intentionality, and belief. Instead, the computational model of the mind took hold and deeply constrained the kinds of questions that could be pursued under the banner of cognitive science. The two "founding issues" (p. 15) of scientific psychology that allowed this to happen — what counts as explanatory concepts and the fear of relativism — will be discussed here. In the sciences, explanatory concepts are typically the domain of causality. In the case of psychology, if you cannot prove that a psychological construct has some sort of causal relationship to a behaviour, then it is outside the domain of the science. Even in the case of correlations, say in the case of how the Dark Triad may correlate with poor parenting strategies, we are assuming there is a causal story behind the correlation: that abnormal levels of the Dark Triad personality traits cause people to engage in poor parenting strategies. If we did not make this kind of assumption about causality, then there would be little interest amongst scientists and the public for these constructs. This is understandable in the context of American psychology's history of relying on statistical procedures to advance the scientific legitimacy of the discipline (Danziger 1990). But this reliance has made the "meaning-making process" alien

to study, as it must be judged by a different criterion all together: verisimilitude or lifelikeness. When the more subjective parts of experience, such as one's sense of self, are studied in the logico-scientific manner, they become so abstracted from the people they are supposed to be about that it can miss the entire point of the endeavour. To expand on Bruner's (1990) account of the "founding issues" (p. 15), I will consider some untenable assumptions inherent in the explanations of the logico-scientific mode.

Bruner's (1986/1990) description and criticism of dominant logico-scientific mode in psychology is consistent with what Brian Schiff (2017) has called the "variable-centred model" (p. 7). Schiff argues that psychology has been dominated by this variable-centred model for most of the experimental tradition, which he posits as the main reason for a lack of progress in understanding people in any practical or concrete way. He places both experimental and correlational research under the banner of this variable centred approach, as they both seek to abstract "parts" of individual psychologies outside of their original context into well fitted operational definitions, which can then be considered in group terms. As Schiff (2017) states, "The stock and trade of psychologists is formulating variables, measuring them, and seeing how they relate to each other statistically. If you want to know what psychologists really do, this is it" (p. 11). It is important to note that this criticism cannot be dealt with by just clarifying one's ability to make generalizations (e.g., the advice of Henrich, Heine & Norenzayan 2010) or by finding stronger correlations between one's variables of interest. It is a more fundamental problem about what counts as a valid explanation. According to Schiff, if you want to explain the self by studying how scores of self-esteem correlate with levels of job satisfaction, then you are inherently restricting your topic, as the phenomenon under study is already abstracted from its everyday context and has a tenuous connection to what you are really interested in. When

considering a construct in terms of average scores and deviations from these, using a questionnaire, one is inherently limiting its applicability to an individual life. In fact, for such research to be insightful for understanding persons, researchers must make the assumption that there is a logical connection between the group and the individual, and as Schiff (2017) notes, "contemporary psychology proceeds *as if* findings that account for averages between people actually apply to what happens inside the person" (p. 26). This is an important point, as one can have an explanation in terms of generalities, but the goal of psychology ought to be explanations in terms of the particulars. In the case of self-esteem, we may have an understanding of people in general — the abstract "person" — but no understanding of how this applies to any single person.

Schiff notes that when we abstract away "parts" of a person — in order to create psychological constructs — we tend to treat variables as if they had an agency of their own. He states, "Emotions, thoughts, and actions don't float in the air or walk down the street. They aren't capable of a relation or dialogue in a human sense. However, this is exactly how we talk about psychological processes in their variable form" (Schiff p. 13). He gives the example of a study which found correlations between "ego-resiliency" and "positive psychological functioning". The study is respectable from the perspective of standard methodology, but Schiff explains that the problem with all instances of this kind of research is that we must make the assumption that these two variables "interact" somehow in everyday life, but we have no information suggesting this. Schiff notes, "The vision is that there is some real entity called 'ego-resiliency' that acts in ways to increase another real entity called 'well-being.' They seem to interact with one another, *as if* these variables, themselves, possessed agency" (Schiff p. 28). What this interaction would look like in the case of an individual person is unknown and cannot be known with these

variable-centered methods. However, we fill in the blanks ourselves, as it is indeed easy to

imagine a person who has strong ego-resiliency and how that allows them to be more positive in

the face of challenges than another person who has weaker ego-resiliency. Schiff (2017) calls

this the "*experimental imagination*" (p. 29) where researchers fill in for a lack of actual

observation of the variables in action by making an inference as to how the relationship between

the variables *may* play out in someone's actual life — the drama of a person dealing with

financial or romantic challenges for instance, and how their resiliency pulls them through it —

this sort of thing is assumed to happen, but we never observe it.

Take the case of memory. As Barrett (2011) argues, when we present a subject a list of

words and then later ask them to consciously recall them, we are using the construct of memory

to fill in the gap of *our* knowledge. This is because we have not directly observed the processes

that are taking place in our subject. We are "explaining" the subject's behaviour in terms of a

particular metaphor which fills in for that which we did not observe. As Barrett (2011) notes,

"memory is not a 'thing' that an animal either does or doesn't have inside its head, but a property

of the whole animal-environment nexus; or, to put it another way, it is the means by which we

can coordinate our behavior in ways that make it similar to our past experiences" (p. 214). In this

sense, we are observing a behavior (a subject recalling the list of words which we previously

presented to them) and then we are explaining it with reference to the "storehouse" metaphor of

memory, which assumes that the subject is retrieving her memories from the "database" where

the "information" is "stored". This metaphor of memory is one of the lasting contributions of the

cognitive revolution, as it uses the language of information processing as discussed in previous

chapters. As Barrett notes, it seems to be the case that memory recall may be a far more

embodied and constructive process, one involving the entirety of the organism in its

environment, and the storehouse metaphor does not allow us to see this. This filling in the blanks with our "experimental imagination" (Schiff 2017) is one of the ways in which the logico-scientific mode relies on stories about how constructs causally relate to each other. Whether it is the story of ego-resiliency improving well-being, or the subject scanning and retrieving her static memories of words on a list, what counts as explanatory concepts is often abstracted away from concrete experience and observation. It is one of the ways in which the logico-scientific mode gives a mistaken sense of certainty and objectivity, as these constructs are assumed to be casually related and "real" in some sense, yet they may never be observed as such.

In the context of the cognitive revolution, Bruner (1990) attributes this misplaced "operationalism" to a post-Freudian legacy of treating what people say as merely a surface level phenomenon. Our interests then became the real underlying causes of behaviour, not what people said about them. Bruner (1990) notes, "There is a curious twist to the charge that 'what people say is not necessarily what they do.' It implies that what people *do* is more important, more 'real,' than what they *say*, or that the latter is important only for what it can reveal about the former" (p. 17). Indeed, the conversation then becomes: what is said, "is *only* about what one thinks, feels, believes, experiences. How curious that there are so few studies that go in the other direction: how does what one *does* reveal what one thinks or feels or believes?" (p. 17) Bruner argues that explanations about intentionality, when dealt with by the logico-scientific mode, do more explaining away than explaining. To further explore this, I will now consider the philosopher Daniel Dennett's (1988/2009) conception of the 'Intentional Stance' as it is highly cited and widely known, and I believe serves as a valid exemplar of the limitations of the logico-scientific mode.

For Dennett, to explain folk psychology — the phenomenon of attributing of everyday concepts like beliefs and desires to others and oneself — is to predict. As Dennett (1988) states, "What we discover is that folk psychology is best seen not as a sketch of internal processes, but as an idealized, abstract, instrumentalistic calculus of prediction" (p. 497). The Intentional Stance is a position we take in relation to other people which allows us to make sense of what other people are going to do. This means that "the designed thing is treated as an agent of sorts, with beliefs and desires and enough rationality to do what it ought to do given those beliefs and desires" (Dennett, 2009, p. 3). This is in contrast with the "physical stance", which is the common-sense cause and effect thinking we apply to objects in the world, and the "design stance", which concerns how we think about how an object which was made to function in a particular way. The intentional stance requires the assumption that people will act rationally. Without this, we would not be able to predict behaviour. This is the way the logico-scientific mode of understanding operates, as its criterion of truth requires verifiability: a theory's validity hinges on whether its predictions are verified or not. Dennett's theory provides a way to understand how we are able to predict the behaviour of other people, but it does not provide a way to better understand our meaning-making practices. This is because the ways in which we give meaning to behaviours and events rely on the narrative mode of understanding, and so, in this sense, we are more concerned with interpretation than with prediction. In Bruner's (1990) philosophy, "the relationship between action and saying (or experiencing) is, *in the ordinary conduct of life*, interpretable…there is a publicly interpretable congruence between saying, doing, and the circumstances in which the saying and doing occur" (p. 19). Approaching this from Bruner's perspective, we can see how the different modes of understanding deal with this issue: the logico-scientific mode will view an explanation in terms of prediction and

manipulation, while the narrative mode will view explanation in terms of the meanings of various interpretations. The intentional stance, in an effort to bypass the subjective, renders human beings as objects in the environment. From one perspective on knowledge, this is a valid way to explain behavior, from another, it misses the point entirely. The philosopher Paul Churchland goes even further than Dennett in rejecting the role of interpretation in understanding action. Churchland (1988) claims that folk psychology simply does not exist, stating: "I am willing to infer that folk psychology is false, and that its ontology is chimerical. Beliefs and desires are of a piece with phlogiston, caloric, and the alchemical essences" (p. 508). This is representative of how cognitive science can apply one criterion of truth above all else. It is the view that we can replace folk psychological beliefs and desires for the more accurate predictive power of computational neuroscience, for instance. Churchland criticizes Dennett for what he sees as "exempting folk psychology from the usual scientific standards" (p. 508) by giving it a functionalist account. The perspective that folk psychology needs to be rendered in mechanistic terms (in Dennett's case) or explained away (in Churchland's case) is representative of Bruner's (1990) criticism of the effects of the cognitive revolution on understanding mental life. We can apply Brian Schiff's (2017) criticism to this as well: the variable centered approach is so entrenched in cognitive science that even the topic of intentionality must be framed in terms of a relationship between variables — mental states and behaviour. This is a mistake. As Bruner (1990) points out, "Saying and doing represent a functionally inseparable unit in a culturally oriented psychology" (p. 19). That is to say, the act of interpretation is itself a path towards understanding, and therefore, explanation.

The "scientific standards" that Churchland mentions refers to how the logico-scientific mode allows one to see that world from a detached perspective. We can trace this particular kind

of skepticism about the existence of other minds and bodies to the philosophy of René Descartes (1596-1650). Descartes contributed many things to philosophy and science, and as Richard Rorty (1979) has argued, he is the father of modern epistemology as we conceive of it today. Of particular relevance to this thesis, however, is Descartes' contribution to the "scientific standards" exemplified by the perspective of Churchland, Dennett, and mainstream cognitive science generally. This chapter began with some examples of the parallels between mechanistic descriptions of human beings and descriptions made by those suffering from schizophrenia and psychosis, and it will end on a similar note, except now with regards to rationality. Both the psychologist Louis Sass (1992) and the psychiatrist Iain McGilchrist (2009) have convincingly shown many connections between what is considered "madness" and the "hyper-rationality" which defines our current scientific worldview — the very kind described by Bruner's (1986) logico-scientific mode of understanding. I believe the perspective of Dennett (1988/2009) and Churchland (1988) on folk psychology show another connection between how the use of that one mode of understanding can dehumanize and lead us to strange epistemic places. In the case of Descartes, the "scientific standards" of explanation required a detached, disembodied perspective, which is the stance which allows one to doubt the existence of one's own body and simply "act-as-if" other people possessed minds. Descartes' skepticism starts with doubting all sensory experience and accepting that the only certainty available is that there is an "I" that is experiencing this doubt. This relies on a view of rationality as a faculty which can be disconnected from the body — or at least not constrained by it — as though the mind floats free of its surroundings. However, as Lakoff and Johnson (1999) have argued, this perspective does not hold up with our current scientific understanding of thought processes in cognitive science, as our use of rationality is not only coloured by our values and expectations but is deeply shaped

by our physiology. This is in direct contradiction to the computational model that psychology has inherited from the cognitive revolution, which assumed rationality was a form of computation. As Barrett (2015/2016) has shown, this view is still held in mainstream branches of cognitive, evolutionary, and comparative psychology research programmes. Indeed, as Barrett, Pollet, and Stulp (2014) note, "hypotheses within EP [mainstream evolutionary psychology] are predicated on the assumption that the brain really is a computational device (not simply a metaphorical one), and that cognition is, quite literally, a form of information processing" (p. 2). In this respect, the cognitive revolution's reliance on the computer metaphor, along with its use of the kind of disembodied rationality expressed in Cartesian skepticism, can be seen as products of conceiving psychology strictly in terms of the logico-scientific mode of understanding.

McGilchrist (2009) notes the similarities between the perspective of disembodied rationality and the phenomenology of schizophrenia: "It entails in many cases a wholesale inability to rely on the reality of embodied existence in the 'common sense' [folk psychological] world which we share with others, and leads to a dehumanised view of others, who begin to lose their intuitively experienced identity as fellow humans and become seen as devitalized machines" (p. 332). This is the way of seeing that the logico-scientific mode provides and, as we have seen above with Churchland and Dennett, leads to claims that people are automata — in some form or another — and folk psychology is merely fiction we write to comfort ourselves. As McGilchrist (2009) notes, "All-seeing, but no longer bodily or affectively engaged with the world, Descartes experiences the world as representation" (p. 334). As mentioned in the previous chapter, conceptualizing our experience of the world in terms of representations is the orthodoxy in cognitive science, and has its roots in the cognitive revolution. This is the very position Bruner's (1986/1990) later philosophy was meant to combat: when the narrative mode of

understanding is regarded as too subjective and illusionary, the logico-scientific mode is the only valid perspective, and this leads us to calling our own selves and bodies illusionary fictions.

CONCLUSION

In this thesis, I have tried to convey the importance of some of Jerome Bruner's work in psychology. I believe Bruner is an interesting case study, in that he contemplated and contributed to many of psychology's most important issues and contradictions. In a way, he embodies psychological science's contradictions: the search for truths about the human mind which are both scientifically sound and faithful to the human experience. I have argued that Bruner's (1986) two modes of knowing, the logico-scientific and the narrative, can help us better understand this contradiction at the heart of psychology. As in Bruner's early experimental work, which helped bring about the cognitive revolution, the logico-scientific mode is powerful and useful for understanding truths about the mind which can be manipulated and studied in the laboratory. However, whether it is in perception or problem-solving skills, there are essential aspects which cannot be sufficiently understood in that context. The world of values, meaning, and morality is investigated by the narrative mode of understanding. This is where we can find truths about the human condition that are not necessarily open to causal manipulation or prediction but convey the human condition in ways that we understand and identity with. This is the world of novels, myths, stories, poetry, and other expressions of the narrative mode. I have tried to show how some of the problems we see in psychology today, the alienation of the self in positive psychology, the reduction and trivialization of the moral realm with the Dark Triad, the misplaced certainty in concepts like self-esteem and death anxiety, can be better understood and

seen more clearly when we adopt Bruner's interpretative psychology and put culture at the center of our inquiry into the mind. And finally, a theme throughout this thesis has been the way scientists (and many non-scientists) have come to accept human beings as kinds of machines and brains as computers. Once again, I think Bruner sheds light on this problem. After all, Bruner explored humanistic topics with his narrative philosophy of psychology as a response to the lack of concern for meaning —and the human experience — which dominated (and still dominates) psychological science. In writing this thesis about Jerome Bruner and attempting to expand on some of his ideas, I hope to have done justice to some of his thoughts on psychology — and for that matter, the human condition.

I believe that there are some important practical lessons we can take from Bruner's work. The first is that we must be mindful of cultural considerations when theorizing and conducting research in psychology. This is not to say that all research findings are merely relative, or that psychological theories should be reduced to a handful of socio-cultural factors. The lesson from Bruner here is that these considerations are important but should not be viewed in a deterministic manner. If we take Bruner's interpretative narrative psychology in a deterministic manner — that psychological knowledge is merely the product of larger cultural forces, for example — then we are committing the same errors which Bruner saw in the cognitive revolution. Another lesson from reading Bruner is how understanding the two modes of knowing — the logico-scientific and the narrative — sheds light on the many tensions we see in psychology today. These are tensions between empirical and theoretical research, between social constructivism and logical positivism, as well as the divide between qualitative and quantitative methods. In reading Bruner, we see that these different approaches apply different criterions of truth and do not need to be in conflict and should be in conversation with each other. The final lesson from reading Bruner is

that psychology must reorient itself towards meaning through further work on narrative. There is the sense of a missing human spirit in psychological science, and we must encourage perspectives which break from orthodoxy: there must be an effort to make the science of the mind more true to the human experience.

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