

CHAPTER 1

Introduction

The major goal of this book is to communicate what is known about unconscious processes and to demonstrate how central they are to our functioning. We believe this knowledge will have an impact on the work of academic researchers, psychotherapy theorists, and clinical practitioners alike. (We also hope the educated and interested layperson can take something of value from this book.)

The first issue that must be addressed in any book purporting to tackle this area is that no unifying paradigm concerning unconscious processes currently exists. Instead, there exists a welter of work in different areas, often without communication between them. Moreover, each area of research and theory is rife with disagreements. Because of the disjointed and controversial nature of the field, several disparate and unconnected research literatures are examined. We review the differences and commonalities between these seemingly unrelated areas of research and try to make sense of them. We also consider what we believe are the most promising theoretical explanations of unconscious processes, which we identify as emerging from computational neuroscience. We discuss the potential as well as the limitations of these approaches. As with the research we review, we try to find unifying themes in these computational models and attempt their overall integration. And then we try to place the principles we have identified as common to unconscious processes into the unified theoretical account we have suggested.

Another goal of this book is to apply these insights to the theory and practice of psychotherapy. We (the authors) are psychotherapists as well as researchers ourselves. We argue that it is past time to incorporate what we know about unconscious processes into the theory and practice

of psychotherapy. Most current psychotherapy models are based on systems of thought and/or research that are decades old. We believe that current work on unconscious processes has to be seriously considered by researchers, theorists, and practitioners in the psychotherapy arena. Some of what this work suggests is in line with mainstream views of psychotherapy, and some is at odds with them. These need to be examined empirically in a psychotherapy context. Empirical research and clinical practice need to adjudicate between these views when they differ and offer support when they agree. And then whatever proves out should be incorporated into constructing new clinical models, which, in turn, should be tested empirically and clinically. We sketch what the first such model might look like.

HISTORY

Before we review current research and theory, we embark on a brief historical journey to provide context and explain how we arrived at our current formulations. This will also help to make sense of some of the controversies that have plagued and continue to plague the study of unconscious processes. We will show that for most of the history of Western thinking, unconscious processes were ignored, minimized, or flat-out denied.

PSYCHOANALYSIS

No review of unconscious processes can ignore the contributions of psychoanalysis. (But see Kihlstrom, 1999, a major influence on the acceptance of unconscious processes, who argues that this contribution was negative.) In contrast to the general neglect of unconscious processes elsewhere, psychoanalytic theory has always placed them front and center. We therefore examine the place of unconscious processes in several psychoanalytic models, including early and later Freud, object relations, self-psychology, the intersubjective approach, and modern relational outlooks.

Although their views of the unconscious, its contents, and how its operations are relevant to clinical work differ in some important ways, the centrality of unconscious processes has always been affirmed by Freudian and post-Freudian psychoanalysts. All agree that unconscious processes are affectively charged, poorly integrated, and more influenced by early than by later experiences. Thus, for all psychoanalytic models, many, if not all, of the roots of our behaviors are unknown

to us, affectively based, and poorly integrated into our personality. A major task of psychotherapy, therefore, is to integrate these processes into our personal narrative. Our well-being depends on the success of this integration. Psychoanalytic schools were among the first to insist that unconscious processes can be influenced and integrated through treatment and proposed concrete ways of doing so.

What psychoanalytic thinkers did not generally do was offer empirical data in support of their conceptions. Instead, they preferred to illustrate them with clinical case studies and offered theoretical constructions to make sense of their observations. Thus, psychoanalysis was relatively unaffected by developments in academic research. In turn, researchers were relatively unaffected by the work of psychoanalysts. There were a couple of exceptions to this rule, the most influential of which was a decade-long foray into the study of psychoanalytically inspired unconscious processes, termed the “New Look.” There are also two continuing programs of research that study unconscious motivation and subliminal psychodynamic activation. But for the most part, these remain exceptions.

THE NORMATIVE UNCONSCIOUS

With this history and psychoanalysis as context, the next several chapters, constituting the main body of this book, are devoted to continuing areas of research that are centrally concerned with unconscious processes. These include heuristics, implicit memory, implicit learning, implicit motivation, automaticity, affective salience, attribution theory, and embodied cognition. We address the main points of consensus and conflict in each of these literatures and try to determine what (if any) general principles they offer concerning unconscious processes. We also discuss the implications of each of the above areas of research, as well as the general contributions that they offer concerning psychotherapy. Although we firmly believe that much of this work has important psychotherapeutic implications, it is largely unknown to psychotherapists. This is somewhat due to a lack of interest in this work on the part of many clinicians but is also attributable to the fact that most researchers in these areas have not considered the clinical implications of their work. We try to bridge this gap.

We begin with the work on heuristics that made Kahneman and Tversky (deservedly) famous. A heuristic is an unconscious cognitive strategy for making a judgment or solving a problem that does not involve logic or effort. Although these heuristics often work, Kahneman and Tversky showed that the nature of their operation is such that

they can lead to predictable erroneous conclusions in certain situations. We tend to be unaware that we have made these mistakes unless they are explicitly pointed out to us (and sometimes not even then). Finally, unlike the dynamic unconscious of psychoanalysis, this kind of unconscious processing is not attributable to conflict, defense, relational needs, or psychopathology. That is, it is not motivated. Rather, these heuristics are normative and simply represent the structure of our cognitive architecture. So, *much of our thinking is normatively arational, unconscious, and can be flawed without our realizing it.*

We then review implicit memory. Implicit memory is inferred from behavior rather than assessed through conscious recollection or recognition. It is said to be present when a person performs an action, voices an attitude, or in some other way appears to have been influenced by a prior event even though she denies any memory of that event. That is, there is a measurable effect of past experiences that the person does not consciously recall.

We next discuss implicit learning, which refers to learning that takes place outside of awareness, such that the person does not realize what he has learned. The trajectory of the study of implicit learning paralleled that of implicit memory, which is not surprising, given that implicit learning is just the other side of the coin of implicit memory. Since one cannot learn what one does not remember and one cannot remember what one has not learned, we are talking of similar if not identical processes. The two areas are separated in the literature because they emerged from different research traditions. The study of implicit memory developed largely through examination of brain-damaged individuals. Only later did it transition to examining people without such damage. Research into implicit learning, in contrast, focused on unimpaired children and adults early on. Some studies, even earlier in the history of psychology, focused on animals (Tolman, 1949).

Like implicit memory, implicit learning is ubiquitous and unconscious. It turns out that we humans are exceptionally well equipped to recognize and pick up patterns in our environment. We learn all sorts of things without realizing what we have learned, or even that we have learned anything at all.

The next unconscious process we review, automaticity, has assumed huge importance in the field, especially in social psychology, probably because of John Bargh's (e.g., Bargh & Ferguson, 2000) work in this area. Automaticity was important to the history of unconscious processes, beginning with James's (1890/1950) understanding of habit and culminating in Shiffrin and Schneider's work on the development of automaticity in a simple learning task. Until Bargh's innovative work in the area changed it, our understanding of automaticity was that it

was an either-or phenomenon. Either a process was automatic, in which case it was characterized by certain properties, or it was controlled, and therefore characterized by the obverse of these properties. In contrast to this view, Bargh argued that the relevant properties of automatic and controlled functioning could be separated and could manifest in any combination. Moreover, although conscious practice or repetition could result in automatic behavior, this was not necessary to the development of automaticity; it could develop completely outside of awareness (i.e., unconsciously).

Attribution, the next area of interest, refers to the tendency, nay compulsion, people feel to explain their experiences, which includes events taking place in the world, the actions of others, and their own behaviors. Although this was initially considered a conscious process, we now know that it occurs outside of awareness and has some biases built into it (as do heuristics).

Affective primacy is next. The issues addressed here include: Are emotion and cognition served by two separate systems? Is one of these types of processing primary? And, which of the two is faster? Zajonc's (1980, 1984, 2000; Murphy & Zajonc, 1993) response to the above questions was that there are separate cognitive and affective systems in the brain/mind, and that affect was both primary and faster. That is, affectively charged information is processed separately from, as well as more readily and more quickly than is cognitive information. Lazarus (1984) had exactly the opposite point of view and argued for cognitive primacy. After a review of more recent literature on the subject, we conclude that, as with automatic and controlled processing, these are distinct questions that ought to be considered separately rather than together. And the answer to each depends upon specific factors in the situation being studied.

Embodied cognition refers to the idea that our thought parallels and is based on the physical body, largely sensory and motor functioning. We can see this operating in metaphors, which invariably refer to such parallels. We review a large body of research that shows how metaphors are literally true. For example, we like someone (i.e., perceive them as a warmer person) more when we experience physical warmth and we see the physical environment as warmer when we like someone. And, of course, all of this occurs outside of awareness.

COMPUTATIONAL NEUROSCIENCE MODELS OF THE BRAIN/MIND

Lastly, we review modern computational neuroscience models of the brain/mind. The models we discuss are massive modularity,

connectionism (as instantiated by parallel distributed processing [PDP]), and neural reuse. Each has submodels within it. We discuss each model in a bit of detail and then compare them to one another. Although there are important differences between them, most critically in terms of the a priori organization of the brain/mind each proposes, they all have certain characteristics in common as well. All posit parallel processing, and all take unconscious processes as a given. In fact, such processes are held to be central to mental/brain functioning. And all have important implications for psychotherapy. These models can be used to tie together many of the empirical findings and clinical implications we have discussed and that have thus far remained unconnected in the literature. We then attempt to integrate the models and hypothesize an overarching model to account for most of the findings and therapeutic implications we discussed.

WHAT DO WE KNOW AND WHAT DOES IT MEAN?

We close the book by summarizing what we believe we know about unconscious processes and how that knowledge can relate to a general theory of the brain/mind. We also show how the data and models we have reviewed can be applied to the theory and practice of psychotherapy. Finally, we place what we have gleaned about psychotherapy into the overall computational neuroscience model we have sketched. This chapter is necessarily speculative given the paucity of our current knowledge.