

The Use of Metaphor in Kahneman's Psychology¹

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The substance of psychology has been and is built of metaphor. While this is not the place to argue for a strict dichotomy between objective and subjective worlds, it is clear that physics, chemistry, astronomy and geology have descriptive tasks that are much simpler than those of the science of mental life. So Galen imagines four *humors* coursing through the body, Fechner thinks of *thresholds* for perceptions, Mesmer invents animal *magnetism*, Freud reasons by analogy from thermodynamics to *psychodynamics*, introspectionists put *images* in the mind, behaviorists used an old word for a prod or goad, the *stimulus*, as a key concept. Gestalt psychologists used geometric and topological concepts—form, closure, figure and field—to describe mind. Eugen Bleuler invented the term *schizophrenia* as an opaque metaphor to stand for a supposed *mental illness* that afflicted some people. After Darwin, the concept of *evolution* became available for thinking about how mental life develops in the animal kingdom and in the individual—and thus comparative psychology was conceived and developed. By now we are quite accustomed to reasoning by analogy from rats and monkeys to human beings. With the development of modern digital computers in the last fifty years, a new set of metaphors became available for psychology—namely those of *information processing*. Oddly enough, the development of machines that could do something analogous to thinking proved to be liberating for psychology. Just 50 years ago, few psychologists would describe themselves as cognitive scientists. Now this is the most powerful and dominant branch of what used to be called experimental psychology. William James defined psychology as the science of mental life. Now

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that we have developed computers that perform as if they had a mental life, it is no longer embarrassing to think of human beings as possessing something like the same capacity.

We are forced by the nature of our subject matter—mental life—to use metaphors freely and copiously. Metaphors are not right or wrong—but they can and should be judged in terms of their utility, perhaps for their aesthetic qualities and well as for their dangers. One of the most influential papers in the history of psychological theory presented the idea that psychologists often account for their observations in terms of “intervening variables and hypothetical constructs” (MacCorquodale & Meehl, 1948)—processes or entities presumed in theory. This landmark article urged a distinction between *intervening variables* that could be completely specified in quantifiable and observable terms, and *hypothetical constructs* that carried with them surplus meaning. *Drive* as used by Hull is an example of the former—and *libido* as used by Freud is an example of the latter. Both of these theoretical terms permit and even encourage the use of metaphors as elements of psychological vocabulary, while MacCorquodale and Meehl in 1948 were clearly urging psychologists to beware of theoretical language that is empty, ambiguous or carrying surplus meaning.

The use of metaphors in psychological theory has obvious dangers. I might describe the book that forms the major focus of the remainder of this paper, *Thinking Fast and Slow* by Daniel Kahneman, as a perfect gem, or as a beacon of hope for the future of psychology. But surely I would not mistake this book or any other for an actual gem that I might try to sell at auction or mount as a piece of jewelry. Nor would I attempt to use the book to illuminate the darkness. It would be absurd to be so captured by metaphor. But in the development of psychological theory, a transformation often occurs after a metaphor is first proposed and the reception and use of theoretical metaphors by succeeding generations of students and

practitioners. This has been called by many writers, the *metaphor-to-myth* transformation.² This transformation is deeply problematic—nowhere more conspicuously than in the domain of psychopathology—where the *as if* qualifier to a descriptive term is commonly dropped. The person is treated not *as if* diseased, but as *actually* diseased and as a consequence subject to the loss of control, the enforced medication and confinement accorded to sick people.

The stock for metaphorical borrowings always is provided by the surrounding culture. If that culture is dominated by religious thinking, then people who act strangely might be described as possessed by demons. If the culture is permeated by psychoanalytic thinking, then unusual conduct might be attributed to fixations or to anxiety-producing childhood traumas. If dominant modes of thinking feature the concepts of modern neuroscience, then accounts for conduct are offered in terms of chemical imbalances or of structural anomalies in the central nervous system. These metaphorical accounts are not necessarily wrong; but when the provisional or “as if” quality of these accounts is ignored or forgotten, the consequences can be disastrous. It might be poetically apt to think of someone acting as if they were possessed by a demon. But the process of exorcism that might follow from a literal belief in demon possession can and has killed people.

The use of metaphor in psychological theory is quite necessary, given the nature of our subject matter. While the analysis of metaphor is a standard topic within linguistics, such analysis within psychology is uncommon. Sarbin (1982) provides an argument for the importance of metaphor within psychological theory, with particular attention to the tendency of psychologists to shift from metaphoric to literal interpretations as theories mature. Moser (2000) has provided a more recent examination of the pervasiveness of metaphor use in psychological

² See Sarbin, 1982; Turbayne, 1962

theory and has argued as well for alertness to the danger not recognizing the metaphoric status of psychological terminology.

Two Agents within the Same Person

Daniel Kahneman has been described as the most influential social scientist of his generation (Goldstein, 2011). His recent book, *Thinking Fast and Slow* (Kahneman, 2011), has received glowing reviews. Kahneman is one of two psychologists (the other is Herbert Simon) to receive a Nobel Prize (in Economics). He is one of the founders, along with his late colleague, Amos Tversky of the field of behavioral economics, now recognized as having brought about fundamental changes in the basic premises of contemporary economics. Starting with their work on judgmental heuristics, (Tversky and Kahneman, 1974), Kahneman has continued to produce new insights into how human beings think—with special attention to common errors in thinking, overconfidence in judgments, unacknowledged sources of bias, the phenomenon of risk aversion, and more recently, determinants of feelings of satisfaction and happiness. He has suggested the term Prospect Theory to stand as the heading for the extensive list of propositions he has formulated about how human beings typically make choices and evaluations as they face the *prospect* of the future from the evanescent point of the present.

A consideration of the place of metaphor in Kahneman's work is warranted for two major reasons. First, he has boldly formulated a metaphor for how we think by positing two agents within the same person who think in fundamentally different ways—one fast, one slow; one automatic, the other deliberate, one self-confident, the other critical, deliberate, and painstaking. I shall elaborate more carefully some of the features of these two agents within—a powerful metaphor. But Kahneman scrupulously avoids the mistake of viewing the existential status of these two agents as anything more than metaphorical.

Kahneman's work presents a challenge to thinking about metaphors for another reason. The established and time-honored paradigm for thinking about human choice by economists has centered about the assumption of context-free rationality, and the accompanying idea that human beings act in such a way as to maximize their own advantage or utility. These assumptions have been in place within economics for generations, since the founding of the discipline in the 18th century and are still embodied in the mathematical models of which economists are so fond. Perhaps initially, the principles of rationality and maximization were recognized as mere metaphors—provisional analogies to help us think about choice and action. Now psychologists have come along to offer direct and empirically-backed counter-claims that these assumptions—these metaphors—are wrong, or at best misleading. It is not surprising that Kahneman and his supporters have met walls of resistance from the economics establishment. Kahneman has had the temerity to assert that the rational choice models used in classical economics are flawed at their source—that human beings do not act, are incapable of acting, in a way that is consistent with the strictures of consistent rationality. This is rather like Galileo asserting that the earth is not the center of the solar system, despite the inherited wisdom of the ages to the contrary. Sacred metaphors resist displacement.

Kahneman recognizes rationality in human beings and concedes that for the most part we are remarkably good at recognizing things as they are—eating the right foods, avoiding obvious dangers, and navigating our lives with accuracy. He argues that System 1 includes an enormous and easily accessible mass of associative memory. This system operates quickly, silently, effortlessly, and for the most part works well. But it is not good at statistical thinking, is more confident in its conclusions than it deserves to be, and is subject to a variety of subtle forms of distortion—such as framing and anchoring effects and biases due to vividness and availability.

System 2 is available as a check to System 1—but it is much slower, cumbersome and is lazy. System 1 gives answers to problems that can simply be read off—such as the answer to the question about the name of the current president of the United States. But if one is asked who the fourth president of the United States was, System 1 can rarely produce an immediate answer, and System 2 is then activated to begin the compilation of an ordered list. In daily life, System 1 does a good deal more work than System 2—but that work is quick, silent, and relatively effortless. System 2 may or may not be able to produce good answers to difficult questions—such as whom to marry, what career to choose, or how to invent a better mousetrap. But if solutions are to be found for such difficult challenges, it will be System 2 that produces them.

We must credit Kahneman with being explicit about the metaphoric character of these constructions.

“I describe mental life by the metaphor of two agents, called System 1 and System 2, which respectively produce fast and slow thinking. I speak of the features of intuitive and deliberate thought as if they were traits and dispositions of two characters in your mind. In the picture that emerges from recent research, the intuitive System 1 is more influential than your experience tells you, and it is the secret author of many of the choices and judgments you make” (Kahneman, 2011, p. 13).

Much of the content of Kahneman’s book is a detailing of empirical studies on the operation of System I thinking. The list of these studies is extensive and impressive. The effect of these studies is to inform us about the limitations of our own mind: “...our excessive confidence in what we believe we know; and our apparent inability to

acknowledge the full extent of our ignorance and the uncertainty of the world we live in” (Kahneman, 2011, pp13-14).

Two other metaphorical distinctions are presented in Kahneman’s book—both of which are linked to the primary distinction between System 1 and System 2 thinking, but are conceptually distinct.

Econs, Humans and Nudging

Noting the stubbornness with which economists defend the assumption of fundamental human rationality, Kahneman adopts a fictional distinction first proposed by Thaler and Sunstein (2008) between two types of people—called Econs and Humans. Econs are hypothetical creatures who are completely rational and are not subject to all of the many errors in thinking to which Humans are subject. If one believes in the pervasiveness of Econs, then one is also likely to believe in the mechanism of free markets and unconstrained individual choice as the best way to regulate decisions and action—and a version of libertarian philosophy follows. Kahneman argues that self-professed Econs are really Humans, subject to errors in thinking of which they are at best partially aware. A version of paternalistic libertarianism then emerges as a means for the regulation of individual thought and conduct. In this view, institutions and governments are allowed to *nudge* people to make good decisions that will be in their long-term best interest. Making a pension plan available by default rather than by optional selection is an example of a nudge. Such nudges are far from the kind of totalitarian control that comprise the feared beast of ardent libertarians; but they do take into account the demonstrated weaknesses of ordinary Humans in making rational choices. The distinction between Econs and Humans is obviously a metaphorical fiction—but it is a most useful fiction and one that is leading to policy debates and decisions that are central to our collective lives.

The Experiencing Self and the Remembered Self

The final metaphorical dichotomy offered by Kahneman refers to two selves within the person—the remembering self and the experiencing self. This distinction was prompted by experiments done on pain and well-being. Suppose that a person is exposed to a period of inescapable pain, and suppose that the same person is exposed again to this same period of pain, but this time with a diminishment or slight relief of the pain in an extension of the original period. Most people will choose the latter experience over the former, even though the total amount of pain experienced is greater than in the latter case. It is as if memory of a period of pain is altered by the way in which that period ends—and “All is well that ends well.” This is truly a paradoxical finding—suggesting that our memories for the course of pain and joys in our lives are quite different from the actual course of pains and joys as they were experienced. The objective feelings experienced in our lives are rolled into memories that are not faithful replicas of what we have endured. Thus it is that a person who has endured a cataclysmic pain, such as the loss of limb, and a painful and extended rehabilitation, perhaps lasting years, might emerge at the end smiling, equable, and optimistic—an inspiration and model to those who witness such a miracle. This distinction provides an entirely new perspective on the question of human suffering. A better understanding of suffering and sacrifice, of the sort required in the treatment and remediation and treatment of such conditions as blindness, deafness, diabetes, heart disease, spinal injuries and cancer can be achieved by basing that understanding on the distinction between the experiencing self and the remembered self—recognizing that the experiencing self is

ephemeral and the remembered self is recorded in some form and trotted out for somewhat fictional recitations.

Summary and Conclusions

The use of metaphors is unavoidable in psychology. But metaphors can be either confining or liberating. The history of psychology, as well as other fields of inquiry, is replete with examples of confining metaphors that have outlived their usefulness or have been transformed into lasting myths. The effect of dead metaphors is to retard innovation and the development of fresh insights.

The work of Daniel Kahneman on human thinking is an example of the value of new and powerful metaphors as a way of opening the way to new understandings in the science of mental life. System 1 is fast, System 2 is slow. Econs are idealized rational people—but are really Humans with an attitude and a certain lack of insight into their ignorance and frailty. The experiencing self is not the same as the remembered self—which is generally a good thing, since long periods of suffering do not necessarily lead to an embittered and ruined life. Along the way, Kahneman, with others, has challenged the prevailing metaphors and models in thinking about economics and has enormously strengthened the proposition that the principles that govern workings of large human collectivities must be compatible with the basic facts of human psychology.

References

Goldstein, E.R. 2011. The anatomy of influence. *The Chronicle of Higher Education*.

November 8.

Kahneman, D. 2011. *Thinking Fast and Slow*. New York: Farrar, Straus and Giroux.

- MacCorquodale, K., & Meehl, P.E. 1948. On a distinction between hypothetical constructs and intervening variables. *Psychological Review*, 55, 95-107.
- Moser, K.S. 2000. Metaphor analysis in psychology—Method, theory, and fields of application. *Forum: Qualitative Social Research*. 1, (2), art. 21.
- Sarbin, T.R. 1982. A preface to a psychological theory of metaphor. In V.L. Allen & K.E. Scheibe, (eds.) *The Social Context of Conduct*. New York: Praeger.
- Turbayne, C.M. 1962. *The Myth of Metaphor*. New Haven: Yale University Press.
- Thaler, R.H. & Sunstein, C.R. 2008. *Nudge: Improving Decisions about Health, Welfare, and Happiness*. New Haven: Yale University Press.
- Tversky, A. & Kahneman, D. 1974. Judgment under uncertainty: Heuristics and biases. *Science*. 185, 1124-1131.