

12 The Missing Self in Hacking's Looping Effects

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A significant philosophical discourse has been dedicated to the ontological status of mental disorders. (See, for example, Hacking 1986, 1995a,b, 2007a,b; Cooper 2004a,b, 2007; Samuels 2009; Graham 2010; Zachar 2001.) The primary focus has been on whether mental disorders are natural kinds—that is, whether they are similar to the kinds found in the non-human natural world, such as gold.¹ Ian Hacking argues that mental disorders are human kinds, differing from natural kinds insofar as they are subject to the looping effects of scientific classifications.² The precise reason why mental disorders cannot be natural kinds is that being classified as having a mental disorder can bring on changes in the self-concept and the behavior of individuals so classified. Such changes, in turn, can lead to revisions in the initial descriptions of mental disorders. Members of natural kinds, however, are not subject to such looping effects.

The phenomenon of looping effects is considered a compelling challenge to the claim that mental disorders are natural kinds, and thus is discussed widely by both Hacking's followers and his critics. It is also widely resorted to by social scientists, especially those in critical disabilities studies, sociology, and anthropology. (See, e.g., Carlson 2010; Stets and Burke 2003.) Yet the inherent complexity of the phenomenon has not been addressed, even by Hacking himself. In particular, the causal trajectory in which looping effects are generated and the way in which the subject responds to being classified remain unclear. Nor it is clearly understood how looping effects come about in the context of psychopathology. In this chapter, with a view to filling in some of these gaps, I note two connected shortcomings in Hacking's analysis of looping effects. First, his framework lacks an empirically and philosophically plausible account of the self to substantiate the complex causal structure of looping effects. Second, he fails to engage with the complexity of mental disorder in the consideration of this phenomenon in the realm of psychopathology. Once the

complexity of selfhood and the complexity of the encounter with mental disorders are considered, it becomes clear that the causal trajectory of looping effects is more complex than hitherto envisioned.

Hacking uses the phenomenon of looping effects to articulate a dynamic nominalism, according to which the scientific classifications of human phenomena interact with those phenomena, leading to mutual changes. In other words, there is an interactive causal trajectory between scientific classifications and the subjects classified. Instead of describing what looping effects are, in reference to the features of the subject classified and the features of scientific classifications, Hacking uses examples to illustrate them. He includes not only mental disorders but also other human phenomena that are subject to scientific research, such as obesity, child abuse, and refugee status. With these examples, Hacking shows how scientific classifications may generate changes in a subject's self-conceptions and behavior. However, a full discussion of looping effects requires both an account of the way in which scientific classifications influence the subjects and an account of how and why the subject responds to being classified in the way she does. Such scrutiny requires recognition of what the self is, of how self-concepts are formed, and of how behavioral changes are motivated. In addition, when the phenomenon of looping effects is considered in the context of psychopathology, this scrutiny requires recognizing the complexity of the ways in which mental disorder influences the subject. The encounter with mental disorder changes an individual's self-concept and behavior, and it is not easy—if indeed possible—to discriminate the influence of diagnosis of mental disorder on self-concepts and behavior from that of the mental disorder itself. The fact that the diagnosed subject changes her self-concepts and behavior not only in response to being classified but also in response to her encounter with mental disorder reveals that the causal net of looping effects is much more complex than Hacking envisions. To the extent that he discusses the self (he seems to be using self/person/subject/soul interchangeably—see, e.g., Hacking 2004), he is informed by a simplified account of personhood that situates the subject somewhere between genetic and neurobiological dispositions and freedom of choice. Hacking neither offers an account of mental disorders nor embraces the complex ways in which they shape people's self-concepts and behavior. Owing to his superficial treatment of the self and mental disorder, he fails to make explicit the necessary and sufficient conditions for looping effects to be generated. This caveat makes his account the target of several partially successful criticisms (e.g., Cooper 2004a,b; Khalidi 2010).

In this chapter, I offer a close reading of Hacking's work on looping effects, evaluating his early and later works. Focusing primarily on the first arc of looping effects (that is, on how scientific classifications influence the subject classified), I show how Hacking overlooks the complexities of the self and mental disorder. I then offer a model of the multitudinous self that substantiates the phenomenon of looping effects. In section 1, I expand on Hacking's work on looping effects and emphasize his dynamic nominalism—the key to understanding the features of looping effects. In section 2, I focus on Hacking's application of looping effects to mental disorders. In section 3, I zoom in on Hacking's discussion of the self and discuss its superficiality. In section 4, I posit the multitudinous self, a philosophically and empirically plausible model of the self that substantiates the complexity of looping effects in the context of psychopathology. This model of the self, I point out, can help scientific research programs to taxonomize mental disorders and can facilitate successful interventions in the lives of those with mental disorders, allowing them to flourish (Tekin 2010, 2011). Thus, with the multitudinous self, I advocate a new style of reasoning about mental disorders in philosophy of psychiatry.

1 Dynamic Nominalism and Looping Effects

The phenomenon of looping effects is the linchpin of a series of works on what Hacking calls “making up people”—works that point to the way in which a new classification made by human sciences may bring a new kind of person into being (e.g., Hacking 1986, 1995a,b, 1999, 2004, 2007a,b). Looping effects have two arcs. The first arc is constituted by the influence of classifications on those so classified; the second comprise the ways in which some of those who are classified—and altered—modify the systems of classification. Some people with mental disorders (e.g., multiple personality and schizophrenia) are subject to the looping effects of psychiatric classifications; but looping effects are not restricted to the domain of mental disorders. Hacking also uses as examples women refugees, pregnant teenagers, child abusers, the obese, and the genius. (See, e.g., Hacking 1986, 1995a,b, 2007a,b.)

Hacking's dynamic nominalism is the metaphysical scaffolding for the phenomenon of looping effects; he explores “making-up people” by applying the realism versus nominalism debate to human phenomena.³ The fundamental question in this debate is whether there is anything in reality that corresponds to universals, or whether there are only particulars.

Realists accept universals into their ontology as mind-independent objects; that is, they believe that universals are given by nature and that they exist independent of any perceiving human mind. Nominalists, on the other hand, argue that there are no universals, and that they are not to be included in our ontology. Only particulars exist, and it is human convention that individuates particulars according to human interests. Hacking applies this query to what he labels “human kinds”—kinds of human beings, their embodiment, their character, their emotions, and so on (1995b). He asks whether human kinds are given by nature, sorted and categorized independent of human intellect, or whether they are artifacts of human conventions. Does our naming, conceptualizing, and classifying individuate phenomena in the human world, or are human kinds determined by nature prior to our ordering them? Hacking’s traditional “static nominalist” would deny the existence of a mind-independent world sorted into neat categories (1986, 1995b), holding that all classifications, taxonomies, and classes are imposed by human conventions, not by nature. Over time, these categories become fixed. The traditional realist, in contrast, is committed to the idea of a naturally ordered world; as science progresses, we come to recognize and name pre-given categories. These categories are independent from humans; we discover them through science (Hacking 1986, p. 228).

Hacking’s dynamic nominalism is situated somewhere between traditional realism and static nominalism. He believes that “many categories come from nature, not from the human mind” (1986, p. 228). However, these categories are not static, because the acts of sorting out, naming, and classifying influence the individuals classified in those categories:

The claim of dynamic nominalism is not that there was a kind of person who came increasingly to be recognized by bureaucrats or by students of human nature, but rather that a kind of person who came into being at the same time as the kind itself was being invented. In some cases, that is, our classifications and our classes conspire to emerge hand in hand, each egging the other on. (p. 228)

Dynamic nominalism, situated as it is between traditional nominalism and realism, tracks interactions over time between the phenomena of the human world studied by the human sciences and the classifications of these phenomena. It is, for Hacking, “realism in action,” because “real classes of people” are sorted in new and specific ways; “making and moulding people as the events were enacted” (2004, p. 280). Another way of making sense of dynamic nominalism, Hacking points out, is thinking of it as “dialectical realism.” Kinds of individuals come into being as a result of the dialectic between classifications and the classified. The naming of

individuals as an outcome of scientific inquiry “has real effects on people,” and such changes in people have “real effects on subsequent classifications.” For Hacking, this phenomenon, can be captured neither by “an arid logical nominalism” nor by a “dogmatic realism” (p. 280).

Hacking appeals to dynamic nominalism not only to elaborate on how sciences carve out human phenomena but also to consider the implications of the study of human phenomena on the “possibilities of personhood” (1986, p. 230). Descriptions of human kinds influence the self-reflection of those human beings being described. Put otherwise, creating new ways of classifying people changes the subjects’ epistemic and moral relations with themselves, including their self-concepts and self-worth. New ways of classifying even changes how these subjects remember their own pasts (Hacking 1995b, p. 369). Hence, for Hacking, whenever philosophers think about persons as particulars, they “must reflect on this strange idea, of making up people” (1986, p. 230).

It is important to emphasize that even though dynamic nominalism provides the metaphysical scaffolding, there is no “uniform tale” or “general story to be told about making up people” (Hacking 1986, p. 233).

If we wish to present a partial framework in which to describe such events, we might think of two vectors. One is the vector of labeling from above, from a community of experts who create a “reality” that some people make their own. Different from this is the vector of autonomous behavior of the person so labeled, which presses from below, creating a reality every expert must face (*ibid.*, p. 234).

Although Hacking acknowledges the need to attend to both the scientific labeling from above and individual’s response from below in making sense of looping effects, I argue that his primary focus is on how human sciences influence and change the subjects they study. This is evident in his strategy to explain the phenomenon of looping effects: in accordance with his dynamic nominalism, he provides a plethora of examples to illustrate how human sciences generate changes in the individuals they study. However, as I show in section 2, his analysis of how the self—the subject of scientific study—responds to being classified remains superficial.

Let me turn to Hacking’s understanding of how human sciences induce changes in the subjects they study. The goal of these sciences is to acquire systematic, general, and accurate knowledge about puzzling and idiosyncratic phenomena pertaining to human beings in “industrialized bureaucracies”—for example, suicide, child abuse, multiple personality, obesity, and refugee status. They seek to attain “generalizations sufficiently

strong that they seem like laws about people, their actions, or their sentiments,” so that helpful interventions can be made (Hacking 1995b, p. 352). Unlike the objects of inquiry in natural sciences, the subjects of human sciences—i.e., human kinds—respond to how they are classified. Hacking distinguishes between human and natural kinds by noting that human kinds are subject to looping effects due to the “self-awareness” of at least some of those classified⁴:

Responses of people to attempts to be understood or altered are different from the responses of things. This trite fact is at the core of one difference between the natural and human sciences, and it works at the level of kinds. There is a looping or feedback effect involving the introduction to classifications of people. New sorting and theorizing induces changes in *self-conception* and in *behaviour* of the people classified. Those changes demand revisions of the classifications and theories, the causal connections, and the expectations. Kinds are modified, revised classifications are formed, and the classified change again, loop upon a loop. (ibid., p. 370, emphasis added)

Hacking’s best-known example of looping effects is multiple personality. Through this example, elaborated on in the next section, the discussion of looping effects enters philosophical discussions of psychopathology, challenging the view that mental disorders are natural kinds.

2 Mental Disorders and Looping Effects

Hacking (1995a, p. 5) uses multiple personality as a “microcosm of thinking-and-talking about making-up people.” He wants to understand how “the sciences of the soul,” in their attempts to make the soul an object of scientific query, make up people (1986, 1995a,b). Thus, he is interested in the soul/subject/self/person⁵ insofar as the soul is the *object* of scientific study; he does not consider the soul as a *subject*—that is, he does not delve into what it is about the self that is prone to being made up (Tekin 2010, p. 2011). This poses a problem concerning the details of the mechanism of the first arc of the looping effects, namely, what it is about the subject that makes her amenable to changing her self-concepts and behavior after being classified.

In Hacking’s view, the popularity of the phenomenon of multiple personality among philosophers in the late 1980s and the 1990s stemmed from the challenges it posed to widely accepted conceptions of the self. Simply stated, it “refute[d] the dogmatic transcendental unity of apperception that made the self prior to all knowledge” (Hacking 1986, p. 224). Hacking observes that the symptoms that characterize multiple personality

disorder changed as knowledge of the illness entered popular culture under the combined influence of curious psychiatrists, television-show producers, and alliances of patients. As Hacking sees it, those diagnosed with multiple personality start displaying different symptoms as they learn more about the illness and its manifestations in different individuals through popular culture. In other words, the symptoms that individuals display fit the popular descriptions of this condition. The changes in the symptoms they display, in turn, alter the classification of multiple personality. The following is a formulation of how looping effects are manifest in those with multiple personality:

PM1 Psychiatry (as a human science) acquires systematic knowledge (K1) about human subjects (S1) who exhibit alternating personalities that are amnesic to one another. K1 picks out the perceived law-like regularities about S1 (e.g., alternating personalities).

PM2 On the basis of K1, psychiatry forms classifications (CL1) of S1, labeling S1 "persons with multiple personality."

PM3 At least some individuals with multiple personality become aware of their categories as K1 is disseminated in popular culture through the combined impact of psychiatrists, television-show producers, alliances of S1a and so on (Hacking 1999, p. 106). (S1a), informed by K1, change their (b) behavior and (c) self-concepts.

PM4 The awareness of being classified, the changes in the behavior and the changes in the self-concepts of those classified (S1a) amount to changes in the perceived regularities about these people. S1a, different from S1, starts to feature new symptoms; e.g., they exhibit animal personalities.

PM5 Changes in the perceived regularities of S1a lead to changes in knowledge (K1) about their classifications (CL1), because S1a no longer fits the criteria for CL1.

CM Thus, classification of some people as "people with multiple personality" results in the creation of new knowledge (K1a), new classifications (CL1a) and new kinds of people (S1a) (e.g., according to K1a, people with multiple personality may exhibit animal personalities).

Hacking's claim that looping effects are not manifest in natural kinds is challenged by those who advance what I call the Parity Argument (PA), according to which there are looping effects in natural kinds comparable to those observed in human kinds and the interaction between classifications and individuals is not exclusive to the human or social realm. (See Bogen 1988; Khalidi 2010; Cooper 2004a,b.) Proponents of PA suggest that our classificatory practices result in looping effects that alter some natural

kinds. As examples, they note the influence of being classified as harmful on microbes, the influence of legal bans on the shape of the marijuana plant, the influence of selective breeding on animals, and the influence of training on the domestication of dogs (Bogen 1988, Cooper 2004a,b; Khalidi 2010; Douglas 1986). A corollary to PA is the failure of Hacking's claim that mental disorders are not natural kinds; if looping effects are not exclusive to human kinds but also are exhibited by natural kinds, it would be plausible to argue that those with mental disorders who exhibit looping effects can also be considered natural kinds (Cooper 2004a,b).

In his early writings, apparently foreseeing such objections, Hacking attempts to clarify precisely what is unique about the looping effects in human kinds. He emphasizes, through different examples, that in the case of human kinds, because subjects are "aware" of "what we are doing to them," they are influenced by our "descriptions," and they change their self-concepts and their behavior accordingly (1999, p. 106). However, he is not consistent in his emphasis on the changes that occur in a subject after classification. In particular, in some examples he postulates "being aware of being classified," "changes in self-concepts," and "changes in behavior" as individually sufficient changes that have to occur in the subject to generate looping effects (e.g., women refugees), while in other examples all three are construed as jointly necessary changes for the looping effects (e.g., multiple personality). This inconsistency obscures his discussion of looping effects; it remains unclear whether these three variables are individually sufficient or jointly necessary for the looping effects to be generated. In his later writings Hacking adds new elements to the causal trajectory of the looping effects, but it remains unclear how and why the subject responds to being classified in the way she does.

In his early work, Hacking takes into account that the scientific classification of certain microbes as harmful and the resulting interventions influence these microbes. Such influence, however, is different from the influence of being classified on people:

Elaborating on this difference between people and things: what camels, mountains, and microbes are doing does not depend on our words. What happens to tuberculosis bacilli depends on whether or not we poison them with BCG vaccine, but it does not depend on how we *describe* them. Of course we poison them with a certain vaccine in part because we describe them in certain ways, *but it is the vaccine that kills, not our words*. Human action is more closely linked to human description than bacterial action is. (1986, p. 230, emphasis added)

Hacking emphasizes here that, in addition to the "intervention" facilitated by the classifications of human sciences, our "descriptions" guide subjects'

self-directed feelings, concerns, and actions, generating changes in their self-concepts and in their behavior. Natural kinds, on the other hand, are not subject to such looping effects: our words do not lead to changes in the self-interpretations of natural kinds; it is our interventions, *qua* classifications, that change them.

Elsewhere, Hacking develops this idea when he argues that naming and classifying, in and of themselves, do not make a difference in natural kinds: "the mere formation of the class, as separable in the mind, and in language, our continuing use of the classification, our talk about it, our speculation using the classification, does not 'of itself' have the consequences" (1992, pp. 189–190). To this, he adds (in a later work) the following:

If N is a natural kind, and Z is N, it makes no direct difference to Z, if it is called N. It makes no direct difference to either mud or a mud puddle to call it 'mud.' It makes no direct difference to thyrotropin releasing hormone or to a bottle of TRH to call it TRH. Of course seeing that the Z is N, *we may do something to it* in order to melt it or mould it, or drown it, breed it, barter it. . . . *But calling Z, N, or seeing that Z is N, does not, in itself make any difference to Z.* If H is a human kind and A is a person, then calling A H may make us *treat A differently*, just as calling Z N may make us do something to Z. We may reward or jail, instruct or abduct. But it also makes a difference to know that A is an H, precisely because there is so often a *moral connotation to a human kind*. Perhaps A does not want to be H! *Thinking of me as an H changes how I think of me.* Well, perhaps I could do things differently from now on. Not just to escape opprobrium (I have survived unscathed so far) but because I do not want to be that kind of person. *Even if it does not make a difference to A it makes a difference to how people feel about A—how they relate to A—so that A's social ambiance changes.* (1995b, pp. 367–368, emphasis added)

Note that in the passages quoted above Hacking emphasizes how the classification (or naming) changes the subject's epistemic and moral relations with herself. In other words, the category (the outcome of scientific query) into which the subject is placed leads her to reflect on and judge herself differently. Being classified as A changes how she "thinks" about herself and her "self-worth." Such self-related epistemic and moral changes are generated through the scientific knowledge of the categories and are mediated *qua* self and *qua* others (who share the same cultural and linguistic community). Thus, in human kinds, naming and classifying *qua*-self and *qua*-others change the person. But natural kinds change only when naming and classifying lead to interventions.

Consider Hacking's (1986, pp. 100–102) response to Mary Douglas, a proponent of the Parity Argument. Douglas, arguing for looping effects in microbes, suggests that microbes adapt themselves to the attempts to

eradicate them (based on our classifying them as harmful) by mutating to resist antibacterial medications. This, in turn, eventually results in the modification of the classification scheme. Hacking responds as follows:

My simple-minded reply is that microbes do not do all these things because, either individually or collectively, *they are aware of what we are doing to them*. The classification of a microbe is indifferent, not interactive. (1999, p. 106)

Hence, emphasizing the subjects' "awareness" of "what we are doing to them" and the change in their self-concepts and behavior is Hacking's way of distinguishing human kinds from natural kinds. However, he is not consistent in his emphasis on the "awareness" of being classified as a necessary condition for the generation of looping effects. Consider the following point about women refugees:

A woman refugee may learn that she is a certain kind of person and act accordingly. Quarks do not learn that they are a certain kind of entity and act accordingly. But I don't want to overemphasize the awareness of an individual. Women refugees, who do not speak one word of English, may still, as part of a group, acquire the characteristics of women refugees precisely because they are so classified. (Hacking 1999, p. 32)

Hacking presents women refugees' inability to speak English as a detriment to the degree to which they are "aware" of their labels and to the extent of the knowledge they acquire about their categorizations. Yet lack of awareness or limited access to knowledge about their labels does not prevent them from "acquiring the characteristics" associated with their category. How refugee women acquire these characteristics is not clearly articulated by Hacking, but it appears to be closely connected to their social cognition. A plausible explanation may go as follows: A refugee woman's interactions with others, who treat her as such, may lead her to change how she operates in the world and shape her behavior in a way that fits the label "women refugee."⁶

Proponents of PA, in developing the claim that natural kinds may be subject to the looping effects that Hacking attributes to human kinds, point out the ambiguity in Hacking's notion of "awareness" and discuss whether it is a necessary condition for looping effects to be generated. For instance, Muhammad Ali Khalidi (2010), a PA proponent, looks at Hacking's discussion of women refugees. For Khalidi, this example is a testament to the idea that awareness is not a necessary causal variable in the trajectory of looping effects. Thus, "awareness of being classified" does not demarcate human kinds from natural kinds. Rachel Cooper, another PA proponent, also considers Hacking's emphasis on awareness. She suggests

that, in itself, awareness of being classified does not show that human kinds cannot be natural kinds, because Hacking's discussion, as it stands, merely shows that "human kinds are affected by a mechanism to which other kinds of entity are immune" (Cooper 2004a, p. 79). Although this indicates a difference between human kinds and other kinds, Cooper does not take it to be fundamentally significant, because "many other types of entity can be affected by mechanisms to which only entities of that type are vulnerable (*ibid.*). In other words, PA proponents conclude that awareness of being classified is not necessary for generating looping effects; thus, natural kinds can exhibit looping effects.

In my view, PA proponents are seeking to deflate Hacking's emphasis on the subject's awareness of classification and the changes in her self-concepts upon being diagnosed. In particular, PA proponents neglect "the changes in self-concept" in Hacking's premises PM3 and PM4, taking the classification-induced changes in the subject to be primarily changes in behavior and interpreting these as culminating in "alterations in the kind." But Hacking doesn't offer a clear account of what a self-concept is, of how self-concepts are formed, or of exactly how being labeled in a certain way changes a subject's self-concepts. In addition, as the PA proponents rightly point out, Hacking is ambiguous as to whether awareness of being classified is a necessary variable in looping effects. Though I agree with the claim that natural kinds are subject to some feedback effects, I contend that the types of causal loops exhibited in natural and human kinds, especially in the case of psychopathology, are significantly different from one another owing to the complexity of selfhood and the complexity of the encounter with mental disorders. Once the shortcomings of Hacking's account are remedied by adding an empirically and philosophically plausible model of the self to the looping effects (see section 4), the types of differences between causal loops in natural kinds and those with psychopathology are explicit.

Figure 12.1 summarizes the causal web of looping effects in Hacking's early work. Scientific classifications influence and alter the self-concepts and behavior of those classified; this, in turn, influences and alters the initial classifications.

My main concern with this framework is Hacking's reduction of the subject/soul/person/self to "classified person." Even when he considers the subject's awareness of her label and the alterations in self-concept and behavior, he does not offer a detailed scrutiny of the self—the subject of classification. He does not explain what is involved in subjects' being "aware of what we are doing to them," or how people are influenced by

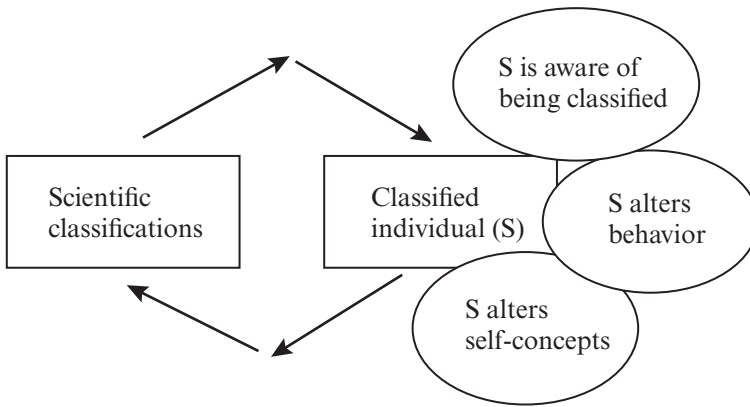


Figure 12.1
Looping effects in early hacking.

“our descriptions of them” and change their self-concept and behavior accordingly. Is it a rudimentary level of awareness, or is it reflective and more elaborate? What motivates changes in self-concepts and behavior?⁷

In fact, Hacking’s treatment of the “classified person” is superficial. This superficiality is problematic, especially when the phenomenon of looping effects is used in the context of psychopathology, as the subject of classification (or the clinical diagnosis) is also the subject of the mental disorder. In particular, the following three questions remain unanswered:

How much of the change in the subject’s self-concepts and behavior is connected to the knowledge she receives about the diagnosis?

How much is connected to the particular mental disorder to which she is subject? For instance, if the mental disorder is disruptive of her “awareness” and connected capacities for self-reflection, we need to take that into account. Anosognosia in schizophrenia is a good example.

How much of the change in the subject’s self-concepts and behavior is connected to the clinical “treatment” she receives from mental-health professionals upon diagnosis?

It is hard to isolate these questions, as changes in the subject can be connected to a few factors, to none, or to all of them. Answers require a detailed scrutiny of the self and a close examination of the mental disorder. Although Hacking fails to consider these questions, they have important implications to understanding what looping effects actually are.

In his later work, Hacking—partially responding to PA—advocates the abandonment of the notion of “natural kind” altogether and offers a

framework within which to understand looping effects. In this latter discussion of looping effects, the causal net is wider; it includes not only the classifications and the individuals classified, but also experts, institutions, and knowledge as the core generators of looping effects.

Consider first Hacking's abandonment of the concept of natural kind (2007a,b). He argues that there are now so many radically incompatible theories of natural kinds that the concept has destroyed itself. Some classifications, he suggests, are "more natural than others," but "there is no such thing as a natural kind" (2007b). This is not to say that there are not kinds in the world, but the idea of a well-defined class of natural kinds is obsolete (*ibid.*, p. 205). For Hacking, the sheer heterogeneity of the paradigms for natural kinds invites skepticism (*ibid.*, p. 207). Calling something a natural kind no longer adds new knowledge; rather, it leads to confusion:

Take any discussion that helps advance our understanding of nature or any science. Delete every mention of natural kinds. I conjecture that as a result the work will be simplified, clarified, and be a greater contribution to understanding or knowledge. Try it. (*ibid.*, p. 229).

Corollary to this change, Hacking no longer employs the term "human kind" when referring to human phenomena studied by the human sciences. Instead, he writes exclusively about the causal net of looping effects and instances of making up people, continuing to illustrate the phenomenon with examples (2007a). He proposes a "framework for analysis" to understand the kinds of people studied by human sciences. In this new framework, the looping effects no longer occur on the two axes previously noted: *classifications made by human sciences* and *people so classified*. Rather, they emerge from the interaction of five "axes," including the *experts* who classify, study, and help people classified, and the *institutions* within which the experts and their subjects interact. Additionally, there is an evolving body of *knowledge*⁸ about the people in question, as well as *experts* who generate the knowledge and apply it in their practice. The interaction between these axes leads to changes in individuals' self-concepts and behavior, as well as to changes in each component of this causal network, which, in turn, change the classifications.

Thus, whereas in his earlier writings Hacking focuses on how classifications lead to the alterations in self-concept and behavior of persons, in the new and more complex framework the other three axes are equally responsible. Hacking points to the experts involved in the research on human phenomena, and to the connected interventions, arguing that the experts,

through their engagement in these activities, influence the subjects they study. Similarly, the institutional framework within which these subjects are studied or helped also influence the subjects' self-concepts and behavior. Finally, the knowledge generated in this process is a mediator of change.⁹ Thus, the causal net of looping effects, according to this new framework, is much wider. See figure 12.2 for an illustration.

Hacking's later framework is more responsive to how human sciences may generate changes in people's self-conception and behavior, with the inclusion of the instruments through which these changes are mediated. However, Hacking still does not explain what it is that about the individual that makes her respond to being studied in the way she does. He continues to overlook the complexities of the "classified people" and the complexities of mental disorders they are subject to. The three questions raised above remain unanswered. How much of the changes in the subject's self-concepts and behavior are connected to the knowledge she receives about the diagnosis, how much of such changes are connected to her particular mental disorder, and how much of the changes in her self-concepts and behavior are connected to the clinical treatment she receives upon diagnosis still aren't explicit. In other words, the course of illness and the influence of treatment remain excluded from the causal net of looping effects.

Let me illustrate with an example why these three questions are important. This case, depicting the complexity of looping effects, exemplifies why we need to know the complexities of selfhood and the complexities of mental disorders to understand how, why, and when looping effects occur.¹⁰

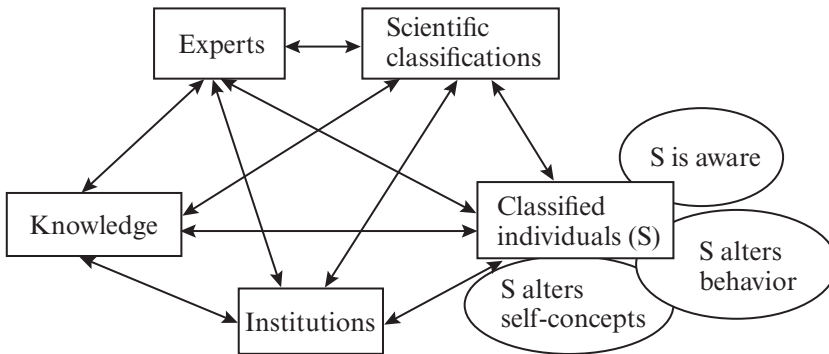


Figure 12.2
Looping effects in later hacking.

Karl is a 26-year-old student working on a doctorate in music. He is known as a nice and respectful person. Although he is usually quiet, he opens up when he gets to know people. In his spare time, he teaches piano to children. He has two roommates. His dog has been with him since Karl was his early twenties. While studying for his PhD comprehensive exams, Karl begins to hear voices and see horrifying images. The voices are loud, and they order him to do things he does not want to do, such as hitting the walls of his bedroom. He sees flames burning in his surroundings. He is unable to sleep. He talks to himself in an attempt to quiet the voices in his head. He is confused. Owing to these orientational obstacles connected to his condition, he behaves differently at home and at school: he does not talk to his roommates, and he ignores the walking hours of his dog. Karl sees a specialist. After a few visits, the specialist decides that his symptoms are best individuated with the diagnosis of schizophrenia; she prescribes a kind of medication that, in her experience, is effective in reducing or removing hallucinatory symptoms.

Interrelated sets of conceptual and behavioral changes happen in Karl upon the diagnosis—the starting point of Hacking's looping effects. As Karl's illness unfolds, he continues to hear voices and talk to himself, but the visual hallucinations diminish with the help of the medication. The immediate changes are mediated by his illness; his treatment influences how he behaves and how he conceives himself. For instance, after noticing people's questioning looks when he is caught talking to himself, he spends less time in public spaces. For similar reasons, he stops giving piano lessons. His medication has side effects, which lead to more changes in his behavior: he sleeps too much, and he keeps his hands in his pockets to prevent them from shaking. The course of his illness and the treatment he receives also lead to alterations in his self-concepts. He used to consider himself a healthy person, fairly social, and a good dog owner; now he considers himself ill and socially isolated, and contemplates giving his dog away, as he is unable to care for him.

The knowledge Karl gains about his mental disorder, as well as the stereotypes associated with it, motivates changes in his self-concepts and in his behavior. He surfs the Internet, he consults books, and he reads the blogs and personal writings of other patients. He learns about aspects of his illness to which he was previously blind. After learning, for instance, that some schizophrenics have poor hygiene, he over-attends to his personal hygiene, to the extent that he annoys his roommates. Having encountered stereotypical representations in the media of the inability of people with schizophrenia to hold a job, he begins to doubt his ability to

finish graduate school.¹¹ He considers leaving graduate school, fearing that he is not well suited to becoming an academic. Yet at times he wants to continue. He is confused.

Note that the changes Karl undergoes upon diagnosis are associated with (i) the knowledge he gains about his illness (including professional and cultural conceptions, as well as stereotypes), (ii) the course of his illness, and (iii) the clinical treatment he receives. Hacking's looping effects, applied to psychopathology, primarily target (i). As cited above, Hacking suggests that changes occur in the subjects due to their awareness of being classified, and that "new sorting and theorizing induces changes in *self-conception* and in *behavior* of the people classified." In so suggesting, he takes knowledge about categories to be fundamental to the subject's changes. However, in the example above, the changes in Karl's self-concepts and behavior after diagnosis are not just mediated by (i), the knowledge Karl receives about his illness, but also by (ii), the course of his illness, and (iii), the psychiatric treatment he receives. It is difficult, therefore, to discriminate the influence of (i), (ii), and (iii) on Karl's self-concepts and behavior. If changes in the subject, i.e., "awareness of being classified," "changing self-concepts," and "changing behavior" are the fundamental generators of looping effects, Hacking must explain what leads to these changes. The course of the mental disorder and the treatment the subject receives are as influential as Karl's knowledge of his illness.

Nor does Hacking's addition of new elements to the complex causal structure of the looping effects in his more recent work answer these questions. Although the explicit articulation of the interaction of institutions, experts, and knowledge, and their separate and combined influence on the subject's self-concepts and behavior, show that the causal net of looping effects is wider and more complex than originally envisioned, it remains unclear how and why the subject responds to these factors in the way he does. Hacking continues to consider the subject of human sciences as the "classified individual," and overlooks the complexity of the self that is subject to a mental disorder. To account for precisely how and why self-concepts and behavior may change upon diagnosis, he must take into account (ii), the course of the illness, and (iii), the subject's clinical treatment, not just (i), the knowledge the subject acquires about the illness.

These three questions can be answered by including the complexity of the self in the causal net of looping effects because the self is the *subject* of mental disorder, diagnosis, and treatment. The self is the agent of "awareness," as well as the agent of the changes in self-concept and behav-

ior—the three causal variables of looping effects. It is also necessary to acknowledge the complexity of the subject's mental disorder. In section 4, I flesh out these contentions by including an empirically and philosophically plausible model of the self in its causal trajectory.

3 The Self/Soul/Subject/Person in Hacking

Arguably, I am overstating my case; Hacking did, in fact, write about selfhood, though not frequently. Be that as it may, my claim that Hacking's "classified individual" does not depict the complexity of selfhood is supported by his own work (Hacking 2004). In "Between Michel Foucault and Erving Goffman: Between Discourse in the Abstract and Face-to Face Interaction" Hacking discusses his view of "making up people." He clarifies his notion of "personhood," while developing his view that human sciences, in their classifications of people, their actions, and their sentiments, generate looping effects and make up new people:

I must repeat my caution that there is not, and never will be any universally applicable theory of making up people. Just because dynamic nominalism is grounded in the intricacies of everyday and institutional life it will not lead to a general philosophical structure, system or theory. There is, nevertheless, a rather plausible general question in the offing. If we talk about making up people, we can sensibly be asked: 'What is your idea of a person, who can be thus made up?' I believe my own view was unwittingly formed in one of the heroic episodes of philosophy. Philosophy is heroic (in my version of events) when it tries to paint a picture of the *whole* human nature—and of the place of human beings in nature. Kant was heroic. Aquinas was heroic. Aristotle was heroic. I am the very opposite of heroic, not cowardly but proudly *particularist*. I think there is no fixed whole of human nature to discuss. (2004, p. 281, emphasis added)

This particularist stance is shaped by Sartrean existentialism. Hacking states that he relies on Sartre's conception of a person as a free individual, with no essential features, who makes choices and creates his own destiny:

We are born with a great many essential characteristics that we cannot change. Most of us can change how fat or thin, how trim or flabby our bodies are. But we can make only the most miniscule alterations to our height. A very great many physical characteristics appear to be fixed at the moment of conception, and many more are determined before the fetus sees the light. We do not yet have the genetic technology to change that, even if it were desirable. Neurologists and cognitive scientists teach us the same about the brain—that a great many of our potential thoughts and thought processes are innate, and that many more mental traits are

part of our biological constitution. Many of the possibilities available to us, and many of the constraints imposed upon us, were dealt us at birth. At most we can choose what to do with what is there, although we know little except the most obvious facts about what is ‘in our genes’ and what is the result of other developmental processes. The chances of birth, of family, of war, of hunger, of social station, of the supports and the oppression that can result from religion or caste—the chances of wanton cruelty or high rates of unemployment—once you start listing everything there does not seem to be much room for choice at all. But of course there is. All that stuff is the framework within which we can decide who to be. (2004, p. 283)

It seems to me that Hacking places persons somewhere between “facticities” (Sartre’s term)—that is, one’s biological, genetic, neurological dispositions, and limitations, as well as social and cultural realities—and the “freedom” to choose whoever one wants to be in the face of these facticities, but he does not take into account the complexities involved in such placement. In other words, it is not straightforward to make choices in the face of facts; human decision-making capacities work in complex ways and do not allow one to “freely” make choices in the face of facticities. Consider, for instance, how Hacking takes the existentialist motto “Existence precedes essence.” Despite “constraints” to freedom, one can still choose:

I favour an almost existentialist vision of the human condition over an essentialist one. But that vision is wholly consistent with good sense about what choices are open to us. We take for granted that each of us is precluded from a lot of choices for the most mundane of physiological or social reasons. Social: as a young man growing up in Vancouver, I could not have chosen to be an officer in the Soviet Navy. Physiological: my father thought I should spend my first two university years at a college that trains officers for the Royal Canadian Navy, because tuition was free, I would get free room and board, and it would make a man of me. Happily my vision was not good enough for me to be accepted. So I had the moral luck not to have to make a choice between a fight with my family and enrolling in the naval college. (2004, p. 286)

But while trying to avoid an essentialistic account of the self, an attitude consistent with his dynamic nominalism, Hacking stumbles on a simplistic account of the self that is not responsive to the complexities of real experience, the features of selfhood that make us responsive to our social and cultural environments and to scientific classifications.¹² This rather simplified account is not responsive to how selves actually experience the world, how they interact with others, how they develop self-related concerns and change their self-concepts, or what motivates behavioral change and how

individuals make choices. Empirical evidence in cognitive sciences supports these intuitions about the complexity of human cognition. They offer perspectives on how the self interacts with the social world, how self-concepts are developed, what factors motivate behavior and behavioral changes, how the self experiences mental disorder, and how mental disorders shape behavior and self-concepts. (See, e.g., Neisser 1988; Flanagan 1991; Nisbett and Wilson 1977; Pennebaker 1993; Miller, Potts, Fung, Hoogstra, and Mintz 1990; Marin, Bohanek, and Fivush 2008; Jopling 2000.) They point to the limitations of our computational capacities and to those aspects of our reasoning processes that are driven by short-sighted reasoning strategies, cognitive biases, and opportunistic oversimplifications (Gilbert 2006; Kosslyn 2006; Wilson 2002). Such findings exhibit the complexity of selfhood and show that a Sartrean account is too simplistic. Most important, this simplistic account of the self does not enable us to answer the three questions raised above in the context of looping effects in psychopathology, i.e., how the subject's self-concepts and behavior change in response to knowledge about the illness, the course of the illness, and the clinical treatment.

4 The Multitudinous Self and Looping Effects

In what follows, I substantiate the complexity of looping effects in the context of psychopathology by including what I call the multitudinous self in its causal trajectory.¹³ The multitudinous self is an empirically and philosophically plausible model of the self that captures the complexities of mental disorders and the process in which alterations occur in self-concepts and behavior. The multitudinous self is a dynamic, complex, relational, multi-aspectual, and more or less integrated configuration of capacities, processes, states, and traits that support a degree of agential capacity subject to various psychopathologies. To develop the multitudinous self, I build on Ulric Neisser's (1988) account of the self as a complex configuration specified by various kinds of information originating from the subject and its social and physical environment. Neisser argues that the forms of information that individuate the self are so different from one another that it is plausible to suggest that each establishes a different "self." Therefore, he distinguishes five separate selves: the ecological self, or the self who perceives and who is situated in the physical world; the interpersonal self, or the self embedded in the social world who develops through intersubjectivity; the extended self, or the self in time grounded on memory and anticipation; the private self, or the self exposed to

private experiences not available to others; and the conceptual self, or the self that represents the self to the self by drawing on the properties of the self and the social and cultural context to which she belongs. All five selves are empirically traced by research in cognitive sciences, including developmental psychology, social psychology, cognitive psychology, and neuroscience.¹⁴

Instead of construing these five as distinct selves, I take them to be five aspects of the self, forming the multitudinous self. Each aspect is identifiable from the first-person and third-person points of view. These aspects are instrumental in connecting the subject to her self and to the physical and social environment in which she is situated (Neisser 1988). The multitudinous self can be construed as a self-organizing system of these five aspects, a locus of agency that remains more or less integrated through time. The ecological and intersubjective aspects of the self are based on perception and action and are present at the earliest stages of human development. Meanwhile, the temporally extended, private, and conceptual aspects of the self are often grounded upon memory, reasoning capacities, representational skills, and language. These aspects of the self develop as the cognitive mechanisms mature. (See Neisser 1988; Jopling 1997; Pickering 1999; Gibson 1993.) The ecological aspect of the self is embodied: it perceives the immediate physical environment and acts on it. It is specified by the physical conditions of a particular environment and the active perceptual exploration of these conditions by the subject (Neisser 1988).¹⁵ It is continuous over time and across varying physical and social conditions (Jopling 1997, 2000). The intersubjective aspect is individuated by “species-specific signals of emotional rapport and communication” between the self and others (Neisser 1988, p. 387). It appears from earliest infancy, as the infant engages in social exchange through interaction with caregivers. (See Trevarthen 1980; Neisser 1988; Fogel 1993; Murray and Trevarthen 1985; Bowlby 1969; Stern 1993.)

The temporally extended aspect of the self emerges through memory: it is based on what the self remembers and anticipates. It relies on autobiographical memory or other stored information.¹⁶ What the subject recalls depends on what she now believes, as well as what she once stored. The private aspect of the multitudinous self contains the subject’s felt experiences that are not phenomenologically available to anyone else (such as pain); it appears when children first notice that some of their experiences are unique to them.¹⁷

What is most important for the purposes of this chapter is the conceptual aspect of the multitudinous self, because it hosts self-concepts, which

are influential in guiding behavior. Self-concepts selectively represent the self to the self. They are the products of the dynamic interaction between the aspects of the self and the features of the social and cultural environment. In turn, self-concepts inform and shape the aspects of the self as well as some features of the social and cultural environment. Self-concepts are thus informed by the features of the four aspects of the multitudinous self and by the subject's embodied experiences in the world (such as illness) (Neisser 1988; Jopling 1997; Tekin 2011). Let me consider them in turn.

Self-concepts include ideas about our physical bodies (ecological aspect), interpersonal experiences (intersubjective aspect), the kinds of things we have done in the past and are likely to do in the future (temporally extended aspect), and the quality and meaning of our thoughts and feelings (private aspect). (See Jopling 1997, 2000; Neisser 1988.) For instance, my self-concept as a "friendly person" is a product of the intersubjective aspect of my selfhood and of the norms of friendliness in the culture of which I am a part.

Self-concepts are informed by the pathologies to which the person is subject. This influence is mediated by the changes that occur in the ecological, intersubjective, temporally extended, and private aspects of the self owing to illness, by the scientifically based or folk-psychological knowledge available to the person about her illness, and by the person's self-narratives in making sense of her condition (Tekin 2010, 2011). For example, my having lung cancer affects my ecological self by, say, making it difficult for me to breathe, and this may lead to alterations in how I conceive myself and may cause me to limit my actions. (I may decide to stop running outside.) This, in turn, affects my self-concept about my body, something tied to my ecological layer. (I may form a self-concept as a person who has difficulty breathing.) Or consider Karl. Because he hears voices, he talks to himself. To avoid being seen talking to himself, he stops taking public transit. His self-concept as a responsible person caring for the environment by using public transit may shift in the light of his altered behavior.¹⁸

Self-concepts are shaped by folk and scientific knowledge available to the subject about his or her illness. For instance, what Karl learns about the course of his illness from various scientific and folk media may lead him to alter his self-concepts. Before his illness he considered himself someone who wanted to pursue a career in academia, but upon learning the scientific accounts of the course of his illness he revises his self-concepts. In addition, the narratives Karl tells himself about his illness may alter his self-concepts.

Self-concepts are action-guiding; our ideas about ourselves inform how we behave. My self-concept of my physical strength affects my physical activities. (I may or may not reach out to lift a suitcase, depending on how strong I feel and how heavy I perceive the suitcase to be.) Similarly, my self-concept of my intelligence and my ability to learn new philosophical material influences what I can actually learn or how well I do in a job interview. Similarly, in the context of mental disorders, the self-concepts formed or altered in this vein influence a subject's actions. For instance, Karl's concept of himself as a person with schizophrenia who will not be able to finish graduate school may in fact influence his decision to quit the graduate program in which he is enrolled. Similarly, his self-concepts may constrain or expand his resources in responding to his illness (Tekin 2010, 2011). Perceiving himself as someone who needs help, he may reach out to the communities of other individuals with schizophrenia who experience a similar condition. Thus, self-concepts motivate the subject to think, act, and behave in certain ways, restricting or expanding his or her possibilities for action (Tekin 2010, 2011, in press; Jopling 1997).

Note that the multitudinous self incorporates psychopathology in its structure, taking it as a possible feature of the self. Mental disorder is broadly construed in this model of the self by considering how well the subject functions with respect to the layers that connect her to her self, her social world, and the physical world; it takes the complexity of selfhood as the norm. Because the multitudinous self embraces the complexity of being subject to psychopathology, we can use it to make sense of how self-concepts change after the subject receives a diagnosis of mental disorder. Self-concepts and behavior change as a result of the subject's knowledge of the illness (as Hacking emphasizes in his discussion of looping effects), as a result of the course of illness, and as a result of the psychiatric treatment the subject receives.

The multitudinous self illuminates the case study cited above. Karl's experience with schizophrenia can be traced through the five aspects of the multitudinous self. The symptoms of schizophrenia, such as hearing voices and encountering hallucinations, are encountered by the private aspect of the self. These can also be traced through the ecological aspect, insofar as some neurochemical changes are associated with such experiences. Schizophrenia compromises Karl's interpersonal relationships; he does not talk to his roommates and ignores the walking hours of his dog, phenomena linked to the intersubjective aspect of his selfhood. Schizophrenia may also compromise Karl's plans for the future and his feelings

about the past, thereby affecting the temporally extended aspect. All these alterations in the way Karl experiences himself and the world change how he conceives himself and how he behaves. The diagnosis he receives, the psychiatric treatment that accompanies the diagnosis, the onset of schizophrenia, the social treatment he receives from his community, and the knowledge he acquires about his illness lead to interrelated changes in his self-concepts and behavior. As was discussed above, some symptoms may diminish while others remain: although he may continue to hear voices and talk to himself, the visual hallucinations may diminish with the help of the medication. But other experiences may present themselves; he may begin sleeping excessively, for instance, or he may become more socially isolated. His former conception of himself as a healthy person, as fairly social, and as a good dog owner may be replaced by the idea that he is ill and socially isolated. Knowledge he gains about his schizophrenia, the cultural stereotypes and prejudices associated with it, and the self-narratives he creates will all influence his self-concepts and behavior.

Thus, the changes in Karl stem not only from (i) the knowledge he gains about his illness (including professional and cultural conceptions as well as stereotypes), as Hacking emphasizes, but also from (ii) the illness itself and (iii) the clinical treatment he receives. Thus, Hacking's discussion of looping effects (see figure 12.2), insofar as it emphasizes (i), is only the tip of the iceberg; the changes in those receiving a psychiatric diagnosis are more complex, in view of the dynamic and multilayered nature of selfhood and the complexity of the encounter with mental disorder.

The multitudinous self bolsters our understanding of looping effects by explaining how and why the self responds to being studied in the way it does. Three features of the multitudinous self framework permit such scrutiny: the multitudinous self explains the reflective influence of psychiatric diagnosis on people, it considers the illness experience as a part of the self-experience of the subject, and it explains how the clinical and intersubjective treatment the subject receives changes her self-concepts and behavior.

In short, the multitudinous self is an empirically and philosophically plausible model of the self; the aspects of the self are responsive to experiences of actual people as we encounter them in daily life and can be scrutinized by multiple, interdisciplinary scientific analyses.¹⁹ Because unexplainable phenomena will remain despite the multiple approaches offered by various sciences and first-person accounts of selfhood, it is important to work with a model of the "self" rather than with the particular properties of the self, say, "genetic make-up" or "moral luck" (as Hacking

Multitudinous Self

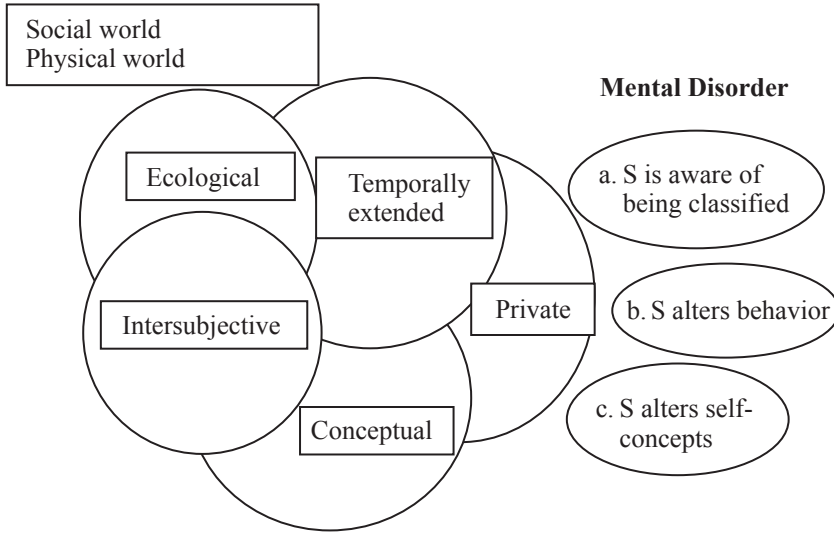


Figure 12.3

does). Doing so prevents the reduction of a complex set of questions pertaining to the self and mental disorders. Without the multitudinous model of the self, in other words, we will lose important information about actual persons. Figure 12.3 illustrates the multitudinous self.

Conclusion

In this chapter I have filled in some gaps in Hacking’s account of looping effects by introducing the multitudinous self in its causal trajectory. In particular, I have argued that there are two connected gaps in Hacking’s analysis of looping effects. First, the causal structure of looping effects lacks an empirically and philosophically plausible account of the self. Second, Hacking fails to engage with the complexity of mental disorder in the consideration of this phenomenon in the realm of psychopathology. Because of these shortcomings, exactly how classifications of mental disorders change the self-concepts and behavior of those diagnosed with these conditions is not explicit in Hacking’s looping effects. I have offered the multitudinous self, an empirically and philosophically plausible model of the self that fills these gaps. The multitudinous self, capturing the complexity of selfhood and the encounter with mental disorder, makes explicit

how self-concepts are formed, how they evolve, and how they motivate behavioral changes in the subjects. Grounded as it is in the sciences of the mind and responsive to the experiences of those living with mental disorders, the multitudinous self better explains the causal trajectory of looping effects. The multitudinous self, I have further suggested, is a fruitful schema for both the scientific research programs in their investigation of mental disorders and the clinical and ethical contexts in facilitating successful interventions in the lives of those with mental disorders, allowing them to flourish (Tekin 2010, 2011). Thus, with the multitudinous self, I advocate a new style of reasoning about mental disorders in philosophy of psychiatry.

Acknowledgments

I owe special thanks to Jackie Sullivan, Owen Flanagan, Muhammad Ali Khalidi, Harold Kincaid, George Graham, Peter Zachar, David Jopling, Francoise Baylis, and Nathan Brett for helpful feedback. An earlier version of this chapter was presented at a weekly colloquium at Dalhousie University's Philosophy Department. I am grateful to the audience for their comments. I acknowledge Canadian Institutes of Health Research grant NNF 80045, Canadian Institutes of Health Research, States of Mind: Emerging Issues in Neuroethics.

Notes

1. There is no uncontroversial definition of natural kinds (Cooper 2004a,b). Philosophers who discuss whether mental disorders are natural kinds mostly work with specific examples from the natural-kind family—water, gold, animals, and so on. (See, e.g., Hacking 1986; Cooper 2004a,b; Khalidi 2010.) I follow their lead in this chapter.
2. "Feedback effects" and "looping effects" are used synonymously by both Hacking and his critics. Throughout this chapter, I use the latter.
3. Although it is crucial to understanding the notion of looping effects, Hacking's critics have not discussed this metaphysical framework. (See, e.g., Cooper 2004a,b; Khalidi 2010.)
4. Two other traits distinguish human kinds from natural kinds. First, human kinds pertain to certain individuals and behaviors at a particular time and in a particular social setting, whereas natural kinds refer to the same kinds at all times. Second, human kinds are laden with social values (e.g., schizophrenia is a mental condition that is "bad" and is to be "healed"), whereas natural kinds are value neutral (e.g., mud is not intrinsically good or bad) (Hacking 1995b, p. 367).

5. As I noted above, he uses the “self,” “soul,” “person,” and “subject” interchangeably. I follow his lead.
6. Changes in behavior are explainable as outcomes of “socialization,” a concept used in social psychology and sociology that is broadly defined as the way in which individuals are guided in becoming members of a social group. During their socialization, individuals conceptualize cultural knowledge as they do any other social information; they acquire, maintain, and apply these cognitive conceptualizations in their cognition and behavior (Kesebir, Uttal, and Gardner 2010). The effects need not be conscious; indeed, they are often automatic. Women refugees may go through such socialization and unconsciously and automatically adapt to their labels.
7. Some of these challenges are raised by proponents of PA, as was discussed above. For an overview, see Khalidi 2010.
8. By “knowledge,” he does not have in mind traditional epistemology’s “justified true belief” but rather a Popperian conjectural knowledge.
9. The influence of knowledge is discussed in Hacking’s early work, but in his later work he makes this influence more explicit.
10. The example of Karl is informed by various memoirs of schizophrenia (e.g., Saks 2007) in a bid to show the complexity of mental disorder experience, something neglected by Hacking.
11. There is considerable evidence that stigma robs people with mental disorders of work, independent living, and important life opportunities (Corrigan, Edwards, Green, Diwan, and Penn 2001; Farina 1998; Phelan, Link, Stueve, and Pescosolido 2000). Further, self-stigma may lead to impoverished self-esteem and self-efficacy (Corrigan and Holzman 2001; Corrigan and Lundin 2001; Wahl 1999).
12. Feminist philosophers have criticized Hacking’s neglect of the complexity of subjectivity and its inherent relationality, saying that, especially in his discussion of women’s experience of multiple personality, he neglects the importance of oppression on the way women remember their past. In particular, Susan Campbell challenges Hacking’s claim that the cultural acceptance of traumatic forgetting has allowed women to become suggestible to re-narrating their past as having encountered and forgotten being abused as a child. Campbell (2003, p. 192) criticizes Hacking’s failure to consider social and relational influences on how women remember their past, and to politically analyze women’s oppression.
13. The inspiration for this model of the self is the poem “Song of Myself” by Walt Whitman, in which he proclaims “Do I contradict myself? Very well, then, I contradict myself; (I am large—I contain multitudes.)” Special thanks to Owen Flanagan, who steered me in the direction of these lines; hence the word “multitudinous.”
14. Neisser investigates each of these selves by appealing to a wide range of research in developmental, social and cognitive psychology. He edited and co-edited several volumes on the different selves. See, e.g., Neisser 1993; Neisser and Fivush 1994; Neisser and Jopling 1997.

15. Eleanor Gibson (1993, p. 41) calls this the "rock-bottom self" that collects information about the world and interacts with it.
16. See Bartlett 1932.
17. It is difficult to determine when introspective reference to private experiences develops, but many studies show that children are aware of the privacy of their mental life before the age of five years.
18. Of course, not every illness experience leads to alterations in self-concepts. People with delusional disorder (once known as paranoia) and schizophrenia commonly suffer from anosognosia—that is, a lack of awareness of their disorder, its symptoms, and its severity (Amador and Seckinger 1997; Amador, Strauss, Yale, and Gorman 1991). Such psychiatric patients may not change their self-concepts in response to the illness experience.
19. Flanagan, natural method.

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