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MENTAL DISORDERS AS FAILURES OF ATTENTION

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SUMMARY: The DSM–5 characterizes mental disorders as significant disturbances in cognition, emotion, or behavior. But what might unite the disturbances on this list? We hypothesize that mental disorders can all be meaningfully characterized as *failures of attention*. We understand these as failures to distribute attention in the way one has most reason to, and we include both failures of tendency and of ability. We discuss six examples of mental disorders and offer a preliminary gloss of how to recast each as centrally involving a failure of attention. We close by highlighting theoretical and practical upshots of our proposal.

KEY WORDS: mental illness, control, DSM–5, RDoC, reasons

RESUMEN: El DSM–5 caracteriza los trastornos mentales como alteraciones significativas de la cognición, la emoción o el comportamiento. ¿Qué podría unir a las alteraciones en esta lista? Según nuestra hipótesis, los trastornos mentales pueden caracterizarse como fallos de la atención [*failures of attention*]. Los entendemos como fallos al distribuir la atención según las razones que uno tenga, y hablamos tanto de fallos de tendencia como de fallos de habilidad. Discutimos seis ejemplos de trastornos mentales y ofrecemos una glosa preliminar para la reformulación de cada uno en términos que involucran centralmente fallos de la atención. Concluimos subrayando algunas consecuencias teóricas y prácticas de nuestra propuesta.

PALABRAS CLAVE: enfermedad mental, control, DSM–5, RDoC, razones

The current Diagnostic and Statistical Manual of Mental Disorders (DSM–5–TR) defines a mental disorder as "A syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or development processes underlying mental functioning" (American Psychiatric Association 2022).[1] While cognition, emotion, and behavior can all be central to mental disorders, this list does not tell us what these types of disturbances have in common.[2]

One candidate for this unifying role is *failures of attention*. To pay attention to something is, roughly, to perceive or think about it as opposed to something else. A failure of attention is then a tendency either (a) not to pay or sustain attention to things that one has reason to pay or sustain attention to or (b) to pay or sustain attention to things that one has reason not to pay attention to or not to pay so much attention to. The relevant things can be objects, information, events, or their parts or properties. The failure is sometimes (but not always) due to an inability to control where attention goes or how long it stays there.

We propose that these various kinds of failures of attention can explain many disturbances in cognition, emotion, and behavior that are included as mental disorders in DSM–5–TR. If so, failures of attention may be a promising way to explain the unity, source, and disorderliness of many mental disorders and why they deserve to be lumped together as mental disorders. Viewing mental disorders as failures of attention could also explain why certain treatments work and point toward ways to make them work better. Thus, attention is both theoretically and practically important.

The importance of attention makes it surprising that the definition quoted above from DSM–5–TR does not explicitly mention attention. Moreover, attention does not fall clearly within the categories that DSM–5–TR does mention. Emotions affect and are affected by what we pay attention to, but attention itself is not an emotion—it is neither fear, anger, happiness, nor surprise, and it cannot be analyzed in terms of more basic emotions. Paying attention to something is also obviously not a physical, external behavior of the kind DSM–5–TR refers to. At best, paying attention is sometimes a mental action, because sometimes one can choose to do it, but attention is often

[1] Some qualifications are added to this definition, but they do not affect our discussion here.

[2] Plato argues against defining a term by a mere list in his *Meno* (1961, 72b).

not action-like at all but is instead involuntary and more like passive perception than active searching.

DSM–5–TR does include "complex attention" as one example of cognition (American Psychiatric Association 2022), but this seems to refer to the kind of attentional mechanisms that are measured with specific cognitive tasks like the computer game used by the Test of Variables of Attention (The TOVA Company 2024).[3] Our proposal is broader: we want to highlight failures of attention not just on narrow lab tasks but also in terms of what an agent tends to consider, focus on, take into account, and think about in real life over time. Attention of this broad kind is not captured by the current DSM–5–TR account. Moreover, the DSM–5–TR definition of mental disorder does not give attention any special prominence. Attention is mentioned only as one of many forms of cognition in only one of three components listed in the DSM definition of mental disorder.

Attention receives somewhat more attention in the NIMH Research Domain Criteria (RdoC; National Institute of Mental Health 2024). RDoC lists attention as one "Cognitive System" and refers to neural "attentional systems", including the dorsal and ventral attention networks. RDoC also lists attentional biases to threat and to negatively valenced information as well as attentional lapses versus sustained attention as "Units of Analysis" or "Elements" under the heading "Behaviors". Nonetheless, like DSM–5–TR, RDoC identifies attention as only one cognitive system or behavioral unit of analysis among many others with no special emphasis (National Institute of Mental Health 2024).

We propose that attention deserves more attention, because failures of attention play a central role in many mental disorders. We do not claim that *all* mental disorders can be explained by failures of attention. We also do not claim that any mental disorder can be *fully* understood in this way. Our proposal is only that failures of attention can neatly explain many disordered features of many mental disorders. Moreover, we think failures of attention can often explain the features of specific mental disorders in a more unified way than a list of symptoms does; and, in the abstract, failures of attention can explain what many mental dysfunctions are better than a mere list of types of disturbances—cognition, emotion, behavior—in DSM–5–TR.

To develop our proposal, section 1 will explain more precisely what we mean by attention and its failures. Section 2 will apply our

[3] This game is available online: https://www.tovatest.com/

account of failures of attention to some mental disorders. Section 3 will summarize, discuss implications for theory and therapy, admit limitations, and suggest future directions.

1. *Attention and its Failures*

Our suggestion is that a key dimension of many mental disorders is failures of attention. Here, we sketch a basic account of such failures. We don't take what we say here to define or exhaust the nature of attention or attentional failures. Our aim is only to specify what we mean by these contested ideas in our proposal.

1.1. What is Attention?

We rely on a common understanding of attention: a person attends to something when they think about it or experience it to the partial or total exclusion of other things. This understanding of attention can be traced at least as far back as William James, who wrote:

> Everyone knows what attention is. It is the taking possession by the mind, in clear and vivid form, of one out of what seem several simultaneously possible objects of trains of thought. Focalization, concentration, or consciousness are of its essence. It implies withdrawal from some things in order to deal effectively with others. (1980, p. 403)

Our notion of attention also fits well with the recent definition of the US National Institute of Mental Health's Research Domain Criteria (RDoC):

> Attention refers to a range of processes that regulate access to capacity-limited systems, such as awareness, higher perceptual processes, and motor action. The concepts of capacity limitation and competition are inherent to the concepts of selective and divided attention. (National Institute of Mental Health 2024)

This conception of attention is crucial for understanding a variety of cognitive processes, including perception, thinking, and reasoning. When a person looks at a complex scene, they can perceptually attend to one part of the scene at a time to the exclusion of other parts. Similarly, when a person thinks about a complex mathematical calculation, or considers how to make a difficult decision, they can pay attention to one step at a time. Our notion of attention is thus broader than that of psychologists who study the role of attention in specific cognitive contexts, such as perception.

We need selective attention, of the kind RDoC describes, because it is impossible for our computationally limited human minds to process all incoming information about everything at once. We cannot look simultaneously at each element in a scene (including each leaf on each tree in a forest we see) or think about every fact that we know (including all facts of history and mathematics). We all constantly limit what we think about, look at, listen to, and so on, amidst the blooming buzzing confusion of everyday life. Whether by conscious effort or subpersonal computational processes,[4] that selection is when we pay attention to those things.[5]

How do we choose what to attend to? A recent influential account developed by Wayne Wu understands attention in terms of selection for action. Roughly, attention involves selecting or focusing on particular information in our environment that allows for the production of a (mental or behavioral) response (Wu 2011a; 2011b; 2016).[6] Other work has discussed the tight relationship between attention and mental control: the ability to direct our minds (and ultimately, acts) toward a particular task (Jennings 2022). Because of this, many philosophers of action have thought that attention plays a central role in agency.[7]

Though our account does not hinge on any specific account of attention, some reliable connection between attention and agency is

[4] The relevant notion of selecting, picking, or choosing what we pay attention to does not imply any consciousness of choosing among alternatives. We often focus on one thing without being aware that we are making any selection, without being aware of alternatives, and without deliberating about the pros and cons of attending there instead of somewhere else. If my attention is drawn by a nearby lightning strike, I pay attention to the lightning, but I do not consciously choose to pay attention to it. Nonetheless, in the sense that is relevant here, I select the lightning as a focus of attention to the exclusion of other things, such as the task I was engaged in before the strike.

[5] Some theorists claim that paying attention to something is the same as being conscious of it (Prinz 2011). In these theorists' view, we are conscious of whatever we pay attention to and never conscious of what we do not pay attention to. Others think that we can pay attention to some things that we never become conscious of, such as masked rapid stimuli in experimental settings (Giattino, Alam, and Woldorff 2018). We will not take sides in this debate here, because our argument will not hinge on the relation between attention and consciousness.

[6] See also Watzl (2011a) for an account of attention as the mechanism that allows us to manage and prioritize information and stimuli in the environment.

[7] They still disagree about the precise nature of that role. E.g., Wu (2011a; 2014) holds that attention is necessary for and constitutive of exercising agential control, while Buehler (2019) argues that attention allows us to flexibly adjust the degree of agential control we deploy. See also Watzl (2011b).

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both uncontroversial and crucial for our account. The basic idea is that attention guides our actions in a consistent and reliable—even if not perfect—way: we will act one way if we pay attention to one thing, and we will act another way if we pay attention to something else. We focus attention in order to help us perform an appropriate act. Reasons for or against our actions can then become reasons for or against directing our attention in one way or another.

1.2. Failures of Attention

When attention is going well, we attend to what we have most reason to attend to (given our goals, aims, and interests). If someone is playing ping pong, they attend more successfully if they focus on their opponent and the ball, and not on an unsightly painting on the wall ahead of them. If they instead pay attention to the painting and not to the ball, then they exhibit a *failure of attention*. They do not fail to pay attention at all to anything, but they do fail to pay attention to what they have most reason to attend to or they fail to shift attention away from what they have most reason not to pay attention to.

Successful attention also requires the ability to respond not only to task-relevant concerns but also to an agent's broader set of reasons. For instance, if there were suddenly an explosion elsewhere in the building, we wouldn't say the agent is attending successfully, on the whole, if they entirely ignore the explosion and stay focused on their ping pong game. Assuming that explosions are dangerous and that this one was unexpected, they now have strong reason to break their ping pong focus and attend to the emerging threat and crisis. They need to respond to that reason as well in order to succeed overall.

1.2.1. Tendencies versus Abilities

Failures of attention occur when attention does not respond to overriding reasons. Such failures can happen in two ways: failures of tendency and failures of ability.

A *failure of tendency* occurs when an agent repeatedly fails to direct or sustain their attention toward things that they have most reason to pay attention to or when they repeatedly fail to shift their attention away from things that they have most reason not to pay attention to. Someone might have reason to spend their writing time on final revisions to an old paper but find themself thinking instead about how to sketch out a new project. Getting distracted without enough reason is a failure, because their attention does not in fact respond to their reasons to finish the old paper first.

To have a failure of tendency, people need not try or feel as if they are trying to direct their attention toward or away from anything. They could have a genuine failure of tendency precisely because they aren't trying at all to distribute their attention according to their reasons. Moreover, they can have the ability to sustain their attention on what they have reason to attend to or to shift their attention away from what they have reason not to attend to. They can have a failure of tendency just because they do not exercise their ability to control their attention. As a result, they might do well on tests that cognitive psychologists use to measure attentional capacity, for they do not have any deficit of cognitive attention mechanisms. Rather, they are failing to deploy their attentional capacities as they should, given their goals and values.

In contrast, a *failure of ability* occurs only when an agent is unable to direct, sustain, or shift their attention in response to reasons. People who lack the ability to control their attention often also have a tendency not to distribute their attention according to reasons, but what makes them have a failure of ability specifically is their lack of ability, capability, capacity, or control over attention. This category includes cases in which an agent is trying to pay attention to an important task at hand but is unable to sustain their focus or attention. It also includes cases where an agent tries *not* to focus on some distraction that they have no reason to pay attention to, but they are unable to stop thinking about that distraction. Many cases of failure of ability will be marked by the phenomenology of trying: a feeling of aiming to attend in a particular way, given one's goals, and failing. This feature is not strictly necessary, however, for an agent could in fact lack control but not experience that lack because they never try to exercise this control.[8]

Failures of tendency and ability can both be understood as deviations from normal functioning. As in all organisms, our mechanisms of attention evolved to enable our species to thrive and survive. An animal that pays attention only to its prey without paying attention

[8] Failures of ability in attention need not be domain general. Someone could generally have perfectly fine attentional control, but specifically have trouble getting their mind off some particular thing, such as an object of phobia. This person could perform well on classic measures of attentional control, such as a Stroop task, as long as the target of their attentional failures is not present; but then they might do very badly on the same task, for example, when there is a spider in the room or when the test includes the word "spider". In such cases, their problem is not with control over attention in general but only with control over attention in certain circumstances or with regard to certain topics that are tied to their mental disorder.

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to a nearby predator will not live long, so it has reason to pay attention to the nearby predator. Similarly, our attention performs its normal function successfully when we pay attention to what we have reason to pay attention to and shift attention away from what we have reason not to pay attention to. Our attention fails to perform its normal function when it is not successful in these ways. Thus, its failures can be either a disability or a mere tendency, but failures of attention are dysfunctional in either case.

1.2.2. Reasons

Because success or failure of attention depends on what we have reason to attend to, we need to clarify what a reason for attention is. We understand this idea broadly: agents have reason to pay attention to things (considerations, information, objects, and so on) when attending to those things is likely to help facilitate patterns of thinking and action that would be good for the agent.[9]

Talk of what would be good for the agent can be interpreted in different ways. What's good for an agent is often understood in terms of what will serve their aims or fulfill their desires. The individual's goals then give them a *subjective*, instrumental, or internal reason (in this case, a reason to attend in a particular way). However, subjective reasons can be distorted by mental illness. Imagine someone who is so depressed that they want to commit suicide by jumping out of a high window. If they genuinely have no desire at all to live any longer, they no longer seem to have any subjective reason not to jump out of the window. Even so, many people respond that this person still has an *objective* or external reason not to jump out of the high window. This supposedly objective reason can be understood simply as the fact that the jumper would die, and death is bad for them (on many accounts of wellbeing). These facts hold regardless of whether or not the jumper cares about living. Just as we can conceptually distinguish objective and subjective reasons for acts like jumping out a window, so too we can distinguish between objective and subjective reasons to attend: how an agent should attend given their actual goals and values versus how they should attend given what would in fact be good for them to attend to.

[9] A person can have a stronger reason to attend to something and also a weaker reason *not* to attend to the very same thing. In this conflict, attending to it is not a failure, even though it goes against the weaker reason. Thus, failures of attention involve failing to attend in the ways that a person has *most* reason to attend, though, for simplicity, we will often talk about what a person has reason to attend to.

Objective or external reasons are controversial: some deny their existence or coherence (e.g., Williams 1979), while others claim that objective reasons are reasons even for people who do not recognize them as reasons (e.g., Sinnott-Armstrong 2022). We will not try to adjudicate here among these competing accounts, nor will we take a definite stand on whether a failure of attention occurs when there is an objective reason that has no psychological grip on the person. We'll be discussing failures of attention in mental disorders in which the reasons—objective or subjective—to which the agent is failing to be responsive are reasons that have at least some psychological grip on the agent.[10] For instance, many people who are severely depressed usually have some desire to be less sad, more motivated, and to stay alive, at least in better circumstances. Thus, one need not buy into totally objective reasons in order to accept our account of mental disorder as failures of attention or to determine what patients have reason to pay attention to. Our proposal will work equally well on either a subjective or an objective account of reasons.[11]

1.2.3. Top-down versus Bottom-up

Another clarification might also be useful. When we say that someone is able to control their attention, we often refer to what is called "endogenous" or "top-down" attention. Top-down attention is exercised,

[10] Cases in which a reason has *no* psychological grip on an agent are those where people who disagree about whether objective reasons exist may disagree about whether something still counts as a mental disorder. If there is an agent who genuinely and truly has no will to live, for example, then theorists who deny that there are entirely objective reasons for them to continue to live might have to admit that such agent is not disordered if they attempt suicide. We are not in any way committed to this point, and anyone who thinks that an agent still has an objective reason to live—even if that reason lacks psychological grip on the agent—will still be able to say that the agent has a mental disorder of some kind.

[11] The only accounts of reasons that are incompatible with our proposal are those on which the mere fact that a person pays attention to something by itself shows that the person has adequate reason to pay attention to it, and the mere fact that a person does not pay attention to something by itself shows that the person does not have adequate reason to pay attention to it. These views sometimes claim that what people happen to pay attention to is conclusive evidence of what they desire. Then, if desires are subjective reasons, it becomes impossible for anyone ever to fail to pay attention in accordance with their reasons. Such theories, however, cannot accommodate many mental disorders, such as when a person with arachnophobia cannot stop paying attention to a spider that they do not want to pay attention to, because they know it is harmless. Thus, these extreme theories cannot capture what we mean by desires, reasons, or the failures of attention that are central to mental disorders. That is why we ignore them here.

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for example, when someone intentionally focuses on something, such as when they think through a grocery list or look for Waldo in a "Where's Waldo?" puzzle.

These cases contrast with exogenous or "bottom-up" attention, which occurs when something in the (internal or external) environment, such as a headache or an unexpected loud noise, captures and pulls someone's attention unintentionally.[12] Something grabs our attention in the bottom-up way when it is *salient*, in the psychological sense of standing out. Something often stands out and is salient when it is incongruent with background information or expectations (e.g., a colorful spot on an otherwise black and white image) or because it is relevant to an agent's goals, motivations, and values (e.g., food to a hungry person).

People can have failures of bottom-up attention, e.g., if a hiker fails to notice a poisonous snake on the trail. However, the failures of attention that are central to mental disorders are usually (though not always) failures of top-down attention, perhaps because mental disorders typically involve acting instead of merely reacting. For our purposes, failures of bottom-up attention are relevant mainly when they undermine top-down attention. For instance, two hungry students taking an exam might both find pizza on the teacher's desk salient, and it might grab both of their attention. But if one of them repeatedly looks at or thinks about the pizza and then is unable to focus on her work, while the other is able to redirect her attention back toward the exam after only one quick glance at the pizza, then only the former is suffering from a failure of attention.[13] Since the pizza is salient to both students, appealing only to what is salient cannot capture the kinds of top-down failures of attention that we suggest are at play in many mental disorders.[14]

[12] The idea of "intention" or "intentionally" introduces yet another layer of complication, one that space prevents us from exploring. For example, if a person *intends* to find Waldo and, while looking at the left side of the page for him, their eyes feel immediately and unintentionally pulled to a glimpse of red on the right side of the page, is that intentionally or unintentional? Is it top-down or bottom-up? Fortunately, our account doesn't depend on our being able to sort every possible case.

[13] Assuming that the students are not genuinely starving or food insecure; in other words, supposing that they genuinely have most reason to attend to their classwork at the moment. Recall note 9.

[14] We leave it as an open question whether there are any mental disorders that are best characterized as *primarily* failures of bottom-up attention. We did not come up with an obvious candidate, though we do not want to rule out the possibility here. It would be worth exploring whether any mental disorders are best characterized as

1.3. When Do Failures of Attention become Mental Disorders?

No one can completely avoid failures of attention all the time. We all frequently get distracted and fail to pay attention as we have reason to. Thus, mere attentional failure is not always a mental disorder. Even systematic failures of attention are not always mental disorders. For example, a person who regularly forgets to pay attention to what supplies they have in their pantry before grocery shopping is not thereby mentally ill, even if this creates regular problems.

What turns a failure of attention into a mental disorder is that it is lasting and harmful enough to warrant treatment by clinicians. Thus, we accept DSM–5–TR's requirement (quoted above) that mental disorders must be clinically significant disturbances (American Psychiatric Association 2022).[15] Disturbances by definition must be harmful, and they become clinically significant only when they are harmful enough and not too fleeting. We could also require that the mental disorder persists due to some malfunction in a biological or psychological mechanism. However, we are reluctant to add this requirement, because clinicians often do not know the mechanism that is malfunctioning. If someone fails to maintain focus on things that they have reason to focus on or fails to stop focusing on things that they have reason not to focus on, and if this failure causes enough harm and lasts long enough to warrant clinical treatment, then their failure counts as a mental disorder.[16]

primarily bottom-up failures. Of course, many will involve bottom-up processes, but often the disordered component seems to arise at the interplay of bottom-up and top-down processes. For instance, both people with and without a phobia of spiders may be likely to notice a spider in the corner in a bottom-up way, but the non-phobic person will be able to direct their attention away, while the phobic person may not. Perhaps this pattern has something to do with the fact that bottom-up attention is more perceptual and less volition-driven, and maybe this changes the relationship to an agent's reasons. We lack the space to work this out here.

[15] We also accept another qualification in DSM–5–TR: "Socially deviant behavior (e.g., political, religious, or sexual) and conflicts that are primarily between the individual and society are not mental disorders unless the deviance or conflict results from a dysfunction in the individual, as described above." To see why this qualification is needed, imagine a transgender person who needs to attend to a presentation they're giving but cannot stop paying attention to rude, transphobic comments of the audience. Others' misbehavior does not make them mentally ill, so failures of attention due to social circumstances rather than internal conditions do not count as mental disorders. This distinction is admittedly hard to draw in some cases.

[16] Harmless attentional tendencies are not mental disorders even when they are not guided by an agent's reasons. For instance, feature contrast often determines bottom-up saliency for attention; though there may be good historical reason for our

Of course, saying that they lack attentional ability or tendency does not mean that they *completely* lack ability to control their attention or that they *never* appropriately attend as they have reason to. Rather, it means that they have a deficit compared to normal functioning. As a comparison, consider Sripada (2018)'s discussion of addiction: he argues that whether an alcoholic takes a drink on a particular occasion is under their control, for they have the ability to resist that impulse at any given moment. Nonetheless, they are very likely to fail at some point or other during a longer period of time, because exercising this kind of control is difficult and has a non-zero chance of failure—that is, the control is fallible. This ascription of fallible control over time is how Sripada solves the paradox that addicts seem both to have and to lack control over whether they take their drug of choice: they have control at any given moment over whether they give in to a drug-directed desire, but they still have diminished control over whether they give in at some point in the long run. A similar way of thinking applies to our present analysis of failures of attention. At any given moment, someone with a mental disorder of a particular kind might have the ability to attend in appropriate ways; but in the long run, they have a diminished ability to do so, due to their mental disorder.

1.4. What Does Our View Accomplish?

Attention is manifested in almost all mental processes, so it might not be surprising that it is involved in all mental illnesses. After all, consciousness and emotion of some kind is also involved in all mental disorders. However, we claim more than merely that attention is involved somehow in mental disorders. Our thesis is more specifically that a wide range of mental disorders are best understood as lasting and harmful failures of attention. On our view, these mental disorders must display (a) persistence over time, (b) harm to the person who is mentally ill, and (c) an inability or tendency not to

visual systems to evolve this way, it's not likely that agents who have a tendency to attend to bright colors (as opposed to dull ones) always have most *present* reason to do so. But it's *also* not plausible to say that agents who attend in this way—despite lacking reason—are thereby mentally disordered. These tendencies are generally not harmful to or disruptive for the agent and may often help them, given that we tend to construct our environments in ways that take advantage of these basic perceptual tendencies. Thus, we aim to emphasize that any attentional pattern that is not driven by what the agent has most reason to do is not thereby a disorder: lasting and being harmful are critical.

pay attention to what the person has reason to attend to or to shift attention away from what the person has reason not to attend to.

These more specific claims are what do the work in explaining what is going on in mental disorders. Of course, various biological, psychological, and social factors can cause these patterns of attention. Those factors are a diverse bunch and might affect some mental disorders but not others. Nonetheless, claims (a)-(c) can still unify mental disorders by explaining what it is to have a mental disorder. These claims are intended to capture what is shared by a wide variety of mental disorders that makes them mental disorders. They are supposed to provide a more unified, explanatory, and fruitful way of thinking about mental disorders than DSM–5–TR's list of disturbances in behavior, emotion, or cognition.

2. *Mental Disorders*

To illustrate our thesis in somewhat more detail, we'll now discuss a variety of mental disorders and show how our analysis of attentional failures applies to each of them. We will consider a series of disorders that can be categorized roughly along two dimensions. The first dimension concerns the direction of the attentional failure: toward or away from the object. Some people cannot or do not shift or sustain their attention *toward* certain objects that they have reason to pay attention to. Others cannot or do not shift or keep their attention *away from* certain objects that they have reason not to attend to. The second dimension captures the three categories highlighted by the DSM: cognition, emotion, and behavior. Table 1 gives a simplistic example of each of these six groups.

MENTAL DISORDERS	**Behavior**	**Emotion**	**Cognition**
Failure to sustain attention toward an object when there is reason to pay attention to it	ADHD from inability to sustain attention toward desired tasks	Depression from inability to sustain attention toward good parts of life	Delusions from inability to sustain attention toward evidence against delusions
Failure to shift attention away from an object when there is reason not to pay attention to it	Eating disorders, such as anorexia nervosa, from inability to shift attention away from body shape and fat	Phobias from inability to shift attention away from what is feared	Narcissism from inability to shift attention away from oneself

Table 1: Subdivisions of Mental Disorders

This way of carving up the space is admittedly very crude. Mental disorders usually involve cognition, emotion, and behavior as well as both attending to what does not matter and not attending to what does matter. Cognitions affect emotions, which in turn affect behaviors. When someone cannot shift their attention away from one thing, this fixation often makes them unable to sustain attention toward other things. Thus, each mental disorder could also be placed in other boxes in our table. These categories are neither exclusive nor exhaustive.

Luckily, these complications and interactions are all compatible with our proposal, because our main claim is only that failures of attention are central to many mental disorders, including these six. We introduce our simplistic subdivision here to convey an initial sense of the diversity of mental disorders that our proposal is intended to unify and to structure our discussion of various mental disorders.

2.1. Mental Disorders of Behavior

Some mental disorders are primarily concerned with behaviors. Our examples will be Attention-Deficit/Hyperactivity Disorder (ADHD) and anorexia nervosa, although these disorders involve much more than hyperactive and eating behaviors.

2.1.1. Failure to Sustain Attention toward: Attention-Deficit/Hyperactivity Disorder

We begin with the most obvious case in which failures of attention are clearly at the root. A person with ADHD has difficulty maintaining focus on tasks, even when they see those tasks as important. This mental disorder involves not only a tendency but also an inability to sustain attention when they are unable to keep their attention from wandering. The failure of attention shows up most directly as an inability to direct one's attention where it needs to go as one tries to focus on work, school, or other tasks that they want to perform. The result is behavioral problems, especially when the disorder manifests itself with hyperactivity or impulsivity. This failure is cognitive in some ways, and people with ADHD can also have problems with emotion regulation. Despite these complexities, a key explanatory feature in ADHD is that people who have it experience frequent and disruptive failures to sustain attention toward their projects.

Of course, many people with ADHD can have some limited indirect control over their attention. They can get therapy, take medications, exercise more, and cut down on their caffeine and screen

time. Moreover, many people without ADHD fail to sustain attention toward the right things. An athlete's weakness might be her failure or even inability to focus on the opponent whom they are supposed to guard, but this is far from a mental disorder. The failure of attention in ADHD is, thus, less than total lack of control over attention and more than merely failing or lacking ability to sustain attention according to reasons. Instead, the relevant failure of attention is not ADHD unless it is persistent and disruptive enough to be "clinically significant". Moreover, this failure of ability is a disorder, even if the person can remedy the disorder indirectly. Similar qualifications are also needed for understanding failures of attention in the other mental disorders that we will discuss.

2.1.2. Failure to Keep Attention Away: Anorexia Nervosa

Our second behavior-focused disorder is an eating disorder: anorexia nervosa. Anorexia is often characterized cognitively by a body image disturbance, a persistent misunderstanding of how thin one is, and emotionally by disgust at food or fat (Harris, Romer, Hanna, Keeling, LaBar, Sinnott-Armstrong, Strauman, Wagner, Marcus, and Zucker 2019). Nonetheless, anorexia is also, and perhaps more centrally, characterized by behaviors, including extremely restricting food intake, excessively exercising, and continually counting calories (both consumed and expended) to control weight.

On our proposal, anorexia can be understood as a failure to keep one's attention away from one's body shape and weight, and things that might affect it. Someone with anorexia will fixate on their own bodies or even narrowly, for example, on an area of subcutaneous fat. Or they might notice only people and reactions to people who are exceptionally thin instead of noticing the range of body types.[17]

[17] Many people who have long since recovered from disordered eating continue to find their attention drawn to the same food-related items that drew their attention when they were overly restricting their food. These persistent patterns of attention suggest that, on our way of understanding the mental disorder, they still have some mental disorder if (but only if) these failures of attention remain disruptive and harmful enough to be clinically significant. Their failures of attention might, for example, cause negative emotions, distract them from other interests, or make them avoid otherwise desirable situations in order to continue their healthy eating. These harms can occur even if their eating behaviors are now healthy. Moreover, people in these situations might have to exert effort to prevent themselves from giving in to the characteristically harmful behavior, and this needed effort will itself be disruptive compared to agents who lack the need to regulate such behaviors. Whether that disorder is correctly classified as an eating disorder is a further question, if they now control the behavioral effects of their attentional failures.

This case shows how a distinction between attention *toward* versus *away* from something gets tricky. People with anorexia fail to pay attention to the abundant evidence that they are far thinner than their healthy weight, that their health is in fact at risk, that their behaviors are damaging their relationships and quality of life, and that whatever benefits they are seeking are either not achieved or are far outweighed by the damage they are doing. Their attention is not towards any of those things. However, those failures of attention are less useful as an explanation of the disorder than the failure of attending *too much* to particular aspects of one's body. In contrast with ADHD, whose main problems arise from an inability to *sustain* attention to tasks, the problems in anorexia nervosa are explained by an inability to shift attention *away* from a distorted body image.[18]

Anorexia seems to involve a lack of ability or control rather than a mere tendency failure, because people with anorexia do not shift their attention away from their bodies even when they know their health is at risk. What's puzzling, however, is that people with anorexia exert tremendous self-control in other ways. They exert self-control over what they eat, sometimes even to the point of starving themselves to death in a society of over-abundance. They might even control their attention to the food they cannot have, at least enough to keep themselves from eating it. Still, these kinds of control do not show that people with anorexia have the ability to control their attention to their body shape and weight. Indeed, attention to their body image might instead explain why they exercise extreme control over their food intake and over their attention to foods they want to avoid. Thus, anorexia can be understood as an inability to control attention to one thing—body shape and weight—even while people with that inability to control their attention have a correspondingly great ability to control attention to other things: eating and food. This picture of anorexia is compatible with our proposal, which is to understand anorexia in terms of a specific failure of attention rather than a widespread inability that pervades all aspects of attention.[19]

[18] Is this the only way to characterize anorexia nervosa? Certainly not. As with any of these disorders, multiple clusters of symptoms can comprise the same disorder, and multiple etiologies can cause those symptoms. We are focusing on a straightforward analysis of a common set of symptoms for ease of illustration.

[19] Recall note 8.

2.2. Mental Disorders of Emotion

Our next group of mental disorders are centrally characterized by emotions: fear in phobias and sadness in depression. Of course, these disorders involve more than just emotional symptoms, but our main point is that they are based on failures of attention.

2.2.1. Failure to Shift Attention Away: Phobias and Fear

Not all fears are phobias. Many people dislike spiders and do things to avoid being near them, but only some of them have a clinical phobia of spiders. A fear becomes a phobia only when it reaches an extreme degree, lasts a long time, and causes serious harm to the person. Those conditions are what distinguish a mere fear from a phobia. If a person with arachnophobia thinks that a spider is present—or even *could* be present—they become so anxious that they are unable to do anything except get away from the spider.[20] What superficially characterize arachnophobia are then (a) beliefs or thoughts about the (possible) presence, objectionableness, even dangerousness of spiders, (b) strong anxious or fearful reactions to thoughts that spiders might be present, and (c) behaviors like actively trying to avoid or eliminate spiders. Phobias of other things share similar cognitive, emotional, and behavioral features. But *why* do phobias share their features? This question isn't asking here about the etiology of specific phobias, but about why the symptoms of the disorder cluster the way they do in something that is recognizably a mental disorder.

Attention is again the key. The failure to shift and keep one's attention away from the object of the phobia can explain why fear and anxiety build and lead to characteristic behaviors. Beliefs that spiders are dangerous might initially explain why people pay attention to spiders, but constantly thinking about spiders can strengthen this belief and extend it to spiders that are known not to be dangerous, leading to more fear and avoidance. One explanation for this cluster of phobic symptoms, then, is that people with phobias have failures of attention: they tend to focus their attention on actual or possible spiders and sometimes are unable to shift or keep their attention

[20] In anxiety disorders, including phobias, the person might have a high level of anxiety before their attention is drawn to the spider, and the high level of anxiety might be part of the explanation of why the person's attention is drawn where it's drawn. Nonetheless, while there might be explanations (like anxiety) of why a person has an attentional failure, that is compatible with the claim that the unifying explanation is a failure of attention.

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away from spiders and toward other features of their situation, even when it would be better for them to do so.

To be sure, some spiders are dangerous, and there are times when a person should pay close attention to spiders. Someone who is comfortable around spiders and ignores the black widow creeping across his hand should shift more attention to the spider. In cases where a person should pay attention to something, their inability to shift their attention away from it is not a sign of mental disorder. Again, if a black widow just climbed onto my hand, I might be unable to shift my attention away from it, but I also have a *very good reason* not to shift my attention. This inability is not a symptom of a mental disorder—it is due to a reasonable worry about painful spider bites. In contrast, an inability to control one's attention in a mental disorder must be an inability to shift one's attention even when one knows one has a good enough reason to shift one's attention.

Phobias, then, illustrate our position as it applies to mental disorders of emotions. Someone with a phobia has a failure of ability to redirect their attention away from what they fear, even when they know that it is less threatening than their actions suggest. The fear directs their attention, and then excess attention to the object of the phobia magnifies the phobic's fear and shapes their thoughts and behavior. The result is that they think about the object of the phobia and fail both to think about other important aspects of their environment and to act in ways that are not directly related to relieving their anxiety. Failures of attention thus neatly explain the unity of the disordered emotions, cognitions, and behaviors that characterize phobias. When these patterns grow to become clinically significant, they become a mental disorder.[21]

2.2.2. Failure to Sustain Attention toward: Depression and Sadness

Another paradigmatic disorder of emotion is depression, which is often characterized by sadness, low mood, or loss of interest in activities that normally bring about positive emotions like joy and excitement. Depressed people often feel worthless or guilty, have difficulty concentrating or deciding, and don't find pleasure in everyday activities.

[21] Someone could suffer from an attentional fixation on some object in their environment, such as a pigeon, without feeling fear. This would not count as a phobia, even though it shares the patterns of attention. However, it could still count as a mental disorder if the attentional fixation leads to enough harm to be clinically significant.

As a result, they often engage less in ordinary activities, including eating, in which case they lose weight. Though these cognitive and behavioral effects are important symptoms of depression, the emotional symptoms are often seen as central to the disorder.

Our proposal suggests that these varied symptoms are unified by a failure of attention. People with depression are typically unable to keep their attention focused on the things that matter to them or things that are positive and going well in life, including features of their lives that they might agree are valuable, good, and successful, at least in the abstract. Because they fail to attend to these considerations, they fail to act in accordance with important values and desires. For example, a depressed person might not eat, despite understanding that they need to eat. They might not attend class or show up to work, despite wanting to graduate or keep their job. Or they might not show up to their kid's events, despite loving their kids and knowing that their kids will feel hurt if they do not show up. Assuming they mean it when they say that those things are important to them, why don't they act according to their desires and values? The answer is complex, but we propose that one central element is a failure—or either tendency or ability—to pay enough attention to valuable things and why they matter.

Of course, depressed people might pay some attention to things that matter, at least temporarily, if they are reminded. They also might put some value on things that matter, such as eating or their jobs or kids. Nonetheless, they don't or can't hold their attention there, so they pay more attention to the parts of their lives that are meaningless or bad. As a result, they can place too much weight on the meaningless or bad parts of life and too little weight on the good parts of life—too much and too little for their own good.

The importance of attention in depression is confirmed by findings that rumination, which involves "repetitively and passively focusing on symptoms of distress and on the possible causes and consequences of these symptoms", "exacerbates depression, enhances negative thinking, impairs problem solving, interferes with instrumental behavior, and erodes social support" (Nolen-Hoeksema, Wisco, and Lyubomirsky 2008, p. 400). More specifically, failure to sustain attention toward good things seems crucial because distracting activities that help depressed people stop ruminating on bad things do not usually reduce depression if the depressed people do not "pour their attention fully into any one of these activities" (Nolen-Hoeksema, Wisco, and Lyubomirsky 2008, p. 405). This is why we classify depression under failure to sustain attention toward, although our main

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proposal is only that depression stems from failures of attention, which can involve both fixating on bad things and not sustaining attention to good things.

These failures of attention can help us understand the behavioral, emotional, and cognitive symptoms of depression. A person might not pay attention to what they can do if they get out of bed, which might both cause and be caused by loss of interest in those activities. They might instead pay attention to their sadness and how bad they will feel if they get up to face the world and to how these feelings could be relieved by going back to sleep. The immediate comfort of going back to sleep instead of, say, going to class or work, will make it even more rewarding in the future to stay in bed and to avoid paying attention to activities that would draw them out of bed. In such ways, failures of attention can explain how the symptoms of depression are unified and mutually reinforcing.

The point is not necessarily about etiology. Like other disorders, depression might be caused by biological factors, psychological or social pressures, circumstantial triggers, or a number of other influences. Also, of course, failures of attention are themselves caused by such factors. The point is only that such causes alone are not enough to explain all of these symptoms of depression and why they reinforce each other. Attention also plays a central role in the overall story. In conjunction with biological, psychological, social, or circumstantial causes, failures of attention can lead people from feeling sad to being depressed, so tendencies and abilities to control attention can help to explain why some individuals become clinically depressed and others who face similar problems do not.

2.3. Mental Disorders of Cognition

Our last pair of mental disorders is classically understood in terms of cognition. The role of attention in these examples is less clear, perhaps because attention itself is cognitive, so attention is hard to separate from other aspects of cognitive disorders. As a result, these cognitive mental disorders might not fit as neatly into our categories of failures to keep attention away or toward a certain thing.

2.3.1. Failure to Keep Attention Away: Narcissism

Our first example of a cognitive mental disorder is Narcissistic Personality Disorder (NPD). People also use the term "narcissistic" to refer to arrogance, which is a defect of character but not one that rises to the level of a mental disorder. NPD itself is characterized by

an elevated sense of oneself as special or exceptional, by craving admiration while finding others less deserving of that same admiration, and by a lack of concern for, or even resentment toward, others.

Attention lies behind and unifies these symptoms of NPD. When narcissists continuously focus on their own achievements and strengths, this focus can lead them to an elevated sense of self. When they fail to pay attention to others' achievements and strengths, this failure can explain their lack of concern for others. These patterns of attention can also lead them to believe that they deserve others' admiration, to crave that admiration, and to resent and feel slighted by others who do not give them as much admiration as they think they deserve. Their need to justify these feelings to themselves can in return strengthen their belief that they are worthy of greater admiration and that others deserve less concern. This circle of feelings, beliefs, and patterns of attention then becomes self-reinforcing.

Such narcissistic beliefs, feelings, and patterns of attention shape characteristic behaviors but still need to be distinguished from those behaviors. Some people behave in ways that appear narcissistic but are actually based on low self-esteem that makes them constantly look to others to validate their own worth. They might, for example, constantly talk about how great they are in order to get others to praise them. Such typically narcissistic behavior could result from attending too much to their own needs for admiration and not enough to the needs of others, which makes them attend to others' apparent opinions of them. This complex failure of attention differs from the kind of NPD that instead involves a tendency to pay too much attention to their own achievements and too little to the views of others. Different kinds of narcissism can then involve different failures of attention, even if they all involve some kind of failure of attention.[22]

Many people display these failures of attention occasionally, and arrogant people display them regularly, but they still might not have a mental disorder. Paying due attention to one's strengths can

[22] Attention is also crucial to defense mechanisms common in narcissism. If a narcissistic person strikes out while believing they are a great batter, they might want to blame the umpire, so they direct their attention to every little sign that the umpire is unfair or incompetent—or they might focus on reasons to criticize the rules or quit the team on the spot. Narcissists tend to employ these defense mechanisms often and to keep their attention focused on their own strengths and others' weaknesses in the face of overwhelming evidence. This tendency can result from an inability to shift or keep their attention away from these things, even when their focus causes serious losses in their lives, so they have strong reasons to move their attention elsewhere.

prevent self-doubt, and arrogance can even be useful in certain circumstances. These patterns of attention, feeling, and belief become a mental disorder—NPD—only when they interfere with life badly enough to count as a clinically significant disturbance.

2.3.2. Failure to Sustain Attention toward: Delusions

Delusions are false beliefs (or belief-like mental states) that persist in the face of overwhelming evidence to the contrary. People with Capgras delusions believe that a loved one has been replaced by an imposter who looks exactly the same. People with paranoid or persecutory delusions believe that someone or something is manipulating, spying on, or attempting to harm them.

Delusions raise two main questions: (A) How does the false belief initially arise? (B) Why does the belief persist despite overwhelming evidence to the contrary?

A widely-accepted answer to (A) is that a person encounters something surprising that cries out for explanation, and the person forms the false belief to explain the anomaly. A person with Capgras syndrome, for example, might not react with normal emotions when they see their loved one, so they postulate that this person is an imposter to explain their lack of emotional reaction. Similarly, a person with a persecutory delusion might have noticed a police car parked in their neighborhood, so they postulate a conspiracy against them to explain the car.

The deeper mystery is why they do not reject these obviously false beliefs, as question (B) asks. Many of us occasionally form strange thoughts but immediately renounce them as absurd on the basis of incontrovertible counterevidence. There is also plenty of counterevidence against delusions, so why don't people with delusions also renounce them as absurd? One answer might be that they are not aware of the counterevidence. This cannot be the whole story, however, because they sometimes talk about it, at least when asked about it. Another possible answer is that they quickly dismiss the evidence as misleading without taking time to recognize its real force as evidence. However, that does not tell us *why* they dismiss it so readily.

Our proposal is that delusions persist because of a failure—whether of tendency or ability—to sustain attention toward easily available and abundant evidence against the delusion. For example, someone with a delusion that a celebrity is sending her secret messages that he's in love with her fails to pay adequate attention to the

evidence that people rarely fall in love without meeting, and people almost never communicate solely through secret messages that nobody else can verify. Someone with a delusion that the government is out to get them fails to sustain attention toward the evidence that the government has no special reason to want to get them (yet). They might think about this counterevidence occasionally when prompted, but they tend not to think about it enough and might even be unable to focus on it.

On the other hand, people with delusions often pay close attention to what strikes them as evidence *for* their delusion. For example, a person convinced that the government is out to get them might cite a helicopter flying overhead or a glance by a postal carrier as signs of ongoing surveillance. These observations are obviously not good evidence for the paranoid delusion, because the observations have much more plausible explanations. Still, if their attention is focused firmly enough on the conclusion that they are under surveillance, then this non-evidence might seem like evidence to them.

As in narcissism, the attentional failure in delusions can be understood both as a failure to shift or keep attention away from and a failure to direct or sustain attention toward. It's a failure to shift or keep attention away from what appears to them as evidence. It's also a failure to direct or sustain attention toward the counterevidence and toward standards of good evidence. These failures might be mere tendencies, but it is often an inability to control attention. In any case, failures of attention are central to understanding delusions.[23]

2.4. Other Cases

Failures of attention are also explanatorily central in a wide variety of mental disorders. We will discuss a few cases more quickly here.

2.4.1. Addiction

Substance use disorder is characterized by chronic relapse, among other things. When people with this disorder—"addicts"—attempt to reduce or stop their use, they often fail and return to using the substance excessively. It's puzzling why people continue using when

[23] Although we focus on delusions, it is also worth mentioning hallucinations, which involve experiences that do not correspond to reality. People with schizophrenia often hear hallucinations of voices and sometimes see hallucinations of people. Their condition can become more manageable if they learn not to pay attention to these hallucinations (as John Nash reportedly did).

there are good reasons to stop, but the deeper puzzle is why, long after a person succeeds in stopping, they begin again.

The solution to this puzzle is complicated and involves neurological changes as well as the lack of support structures. Another part of the answer, which is relevant here, is that addicts' attention is consistently drawn to addictive cues, both when they're using and after they've quit. An alcoholic, for example, might find his attention drawn to drinking by seeing a house or street where he drank before, by a happy moment worth celebrating, or by a mildly stressful event. This can remain true for years after they have stopped drinking and after continually recalling strong reasons not to drink. Once their attention is drawn toward drinking, it becomes difficult for them to keep their attention off the addictive cues, and they begin thinking up rationalizations in favor of drinking. Their failures of attention can then help to explain why they relapse.[24]

2.4.2. Obsessive Compulsive Disorder

A person with obsessive-compulsive disorder (OCD) has intrusive thoughts (obsessions) that induce anxiety and lead them to perform mental or physical actions (compulsions) to reduce their anxiety. Those with a hand-washing disorder, for example, feel anxious that their hands aren't clean enough, so they scrub their hands until they are raw and hurt. People with religious scrupulosity might feel anxious that their prayer wasn't said correctly and then compulsively repeat the prayer instead of taking care of their family (Summers and Sinnott-Armstrong 2019).

OCD is a disorder of thoughts (obsessions), behaviors (compulsions), and emotions (anxiety), but what lies behind and unifies these disparate symptoms are failures of attention. A person with hand-washing OCD, for example, cannot shift their attention away from their obsessions about germs, which prolong and magnify their anxiety. They have to wash until their anxiety goes away, but it never goes away as long as their attention is fixated on their obsessions. Failures of attention thus explain why compulsions are so hard for people with OCD to stop.

2.4.3. Psychopathy

Psychopathy is not an official diagnosis in DSM–5–TR, and much about it remains mysterious, but one popular theory—the response

[24] For more on addiction, see Sinnott-Armstrong and Pickard (2013) and Sinnott-Armstrong and Summers (2018).

modulation hypothesis—makes attention central to psychopathy (Hiatt and Newman 2006). Participants in a Stroop test are typically slower to report the color of ink in a word (e.g., blue) when the word names a different color (e.g., green), supposedly because they cannot stay focused on the ink color and not get distracted by the meaning of the word. Psychopaths perform better than normal people on this task (e.g., Hiatt, Schmitt, and Newman 2004). Psychopaths' hyperfocus on the task at hand can sometimes be beneficial, but it also might make them fail to adjust their behavior as risks and rewards change during an activity. This inflexibility is supposed to explain why psychopaths do not pay enough attention to risks and harms to themselves and others while they doggedly pursue their current goals. In this way, their failures of attention can lead to horrible behaviors.[25]

3. *Conclusions and Beyond*

Many other mental disorders probably also involve failures of attention, but we will not try to list them all. We have tried to show that many do, including ADHD, anorexia, depression, phobias, narcissism, delusions, addiction, OCD, and psychopathy. That is enough here, because we are not suggesting that all mental disorders must involve failures of attention. Our proposal is only that many and varied mental disorders are best understood in terms of failures of attention. This proposal achieves greater theoretical unity than the bare lists of mental disorders, disturbances, and dysfunctions in DSM–5–TR.

Our conclusions also have implications for therapies, since training patients to overcome their failures of attention could improve treatments for mental disorders. We already mentioned how training depressed people to sustain attention to distracting activities can reduce their depression (Nolen-Hoeksema, Wisco, and Lyubomirsky 2008, p. 405). Mindfulness training, such as in dialectical behavior therapy, is also effective in many mental disorders (Nolen-Hoeksema, Wisco, and Lyubomirsky 2008, p. 417). If this training improves control over attention, and if failures of attention are central to many mental disorders, then we can understand why mindfulness training works so well for so many mental disorders. Similarly, biofeedback treatments also often increase control over attention, since participants

[25] Do psychopaths fail in tendency or ability? One experiment found that psychopaths are *able* to attend to others' pain when instructed to do so but do not *tend* to register others' pain when not instructed to do so (Meffert, Gazzola, den Boer, Bartels, and Keysers 2013).

need to control their attention in order to control the biofeedback. Some emotion regulation strategies also involve redirecting attention to other or different parts of a stimulus in order to elicit less aversive emotional responses, so similar strategies might reduce failures of attention that are central to many mental disorders. Our proposal could potentially teach important lessons about how to make such treatments more effective and about when to add attention training to other treatment regimens.

Of course, we have only begun to scratch the surface in this short paper. A lot more details and distinctions need to be added to clarify the nature of attention and its failures. We need to compare our notion of failures of attention to related concepts, such as vigilance (e.g., Murray 2024), and look for their computational and neural bases. Our discussions of particular mental disorders are also too simplistic, since every mental disorder has multiple variations and complexities. Many other mental disorders and treatments also deserve discussion. We need to perform experiments to gather evidence that mental disorders really are (or are not) related to failures of attention in the ways we claim. We recognize these and other limitations.

Our goal has not been to say the last word. We seek only to begin to say a few first words that might point in a general direction toward a new perspective on mental disorders. We will be satisfied if our proposal stimulates fruitful discussion.[26]

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