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## WHAT HAPPENS WHEN SOMEONE ACTS COMPULSIVELY?

**ABSTRACT.** The standard philosophical view is that compulsive behaviors are caused by “irresistible” desires. Gary Watson famously argued that this view conflates compulsion with weakness of the will, and proposed differentiating weakness and compulsion by appealing to the normal strength-of-will of members of the community. This extrinsic distinction leaves no room for phenomenological differences between weakness and compulsion. Evidence from clinical psychology shows, however, that compulsion is associated with certain phenomenological features that are absent in cases of weakness. I therefore reject the irresistible desire account. Instead, I propose that psychological compulsions “wear down” an individual’s normal faculty of self-control, i.e., the will. The recurrent inhibition of the behavior by the will overexerts this faculty, causing the psychological stress noted by psychologists. This stress raises the cost of resistance until it is unbearable. The subject abandons resistance and therefore performs the behavior.

### 1. INTRODUCTION

According to the standard view of compulsion, compulsive behaviors are caused by irresistible desires. Like ordinary actions, the irresistible desire for some state-of-affairs together with a belief that some behavior will produce this state-of-affairs cause the formation of an intention, which then causes the behavior. Unlike ordinary actions, the desire which is a cause of the action is resistant to the ordinary mechanisms of self-control which might otherwise have prevented its expression in action.

In other words, the irresistible desire account characterizes compulsive actions in terms of the ineffectiveness of our ordinary mechanisms of self-control. As Gary Watson famously noted, this poses a challenge in distinguishing compulsive

actions from weak-willed actions, which are also characterized in terms of the ineffectiveness of ordinary self-control (Watson, 1977). This paper will argue against the irresistible desire account and propose an alternative. I claim that the best way to account for compulsion without conflating it with other forms of action is to reject the standard desire–belief model of action. I begin by arguing that Watson’s account of the distinction between weakness and compulsion cannot work.

## 2. IRRESISTIBLE DESIRES

A desire need not be irresistible under any circumstances in order to count as “irresistible” under the standard account. After all, someone might suffer from a compulsion to stay home, but nonetheless rush into the night when his house is ablaze. It is necessary to delimit the modal. As the previous case shows, we should restrict the modal to normal circumstances. We must also stipulate that only an individual’s actual capacities of control are relevant to determining whether a desire is irresistible. A desire may be irresistible in the relevant sense even though some extraordinary training program would have allowed one to resist it successfully. However, we should also require that the individual has developed his capacities of self-control to a normal degree. I may be unable to resist a desire because I failed to develop my capacities of self-control, but my behavior is not thereby compulsive. So, an individual’s desire is irresistible if he has made reasonable efforts to develop his capacity for self-control but is nonetheless unable to resist engaging in the behavior under normal circumstances.<sup>1</sup>

Additionally, we should add that the irresistibility of a desire must be assessed relative to some temporal interval. Most individuals who suffer from psychological compulsions can suppress the behavior for short periods of time, but are unable to prevent the action from happening sooner or later. For instance, an addict in the grip of an urge for the drug can surely resist her desire for one second, but may be unable to hold out for an hour.

The notion of irresistibility suggests that there is some mechanism of self-control that is responsible for resisting desires in the normal order of things. This role is usually assigned to the “will,” which is treated variously as a faculty of practical judgment, values, or a particular subset of the individual’s desires.<sup>2</sup> The will is responsible, among other things, for preventing the expression in action of desires that do not, all things considered, represent what we really want. So, for instance, the will is responsible for the exercise of control we experience when refraining from eating a piece of cake we badly want because we’re on a diet. According to the irresistible desire account, compulsions involve a failure of the will to be effective in suppressing or resisting a desire.

Whatever the will may be, we may characterize its *strength* in terms of its ability to prevent desires from leading to action. Under normal circumstances, if a desire is successfully suppressed by the will, we say that the will is stronger than the desire. If the will is unable to suppress the desire, the strength of the desire exceeds the strength of the will. In general, there are limits to the resistive capacities of any individual’s will. If an individual is subject to a desire that is stronger than his will can resist, that desire will lead to action regardless of the strengths and contents of all his other desires.

Gary Watson noted that this traditional account conflates compulsion with weakness of the will. Cases of weakness of the will occur when an agent yields to temptation, even though doing so means going against her better judgment. Agents who act under psychological compulsion also tend to act against their own better judgment, but

...we are inclined to contrast weakness and compulsion like so: in the case of compulsive acts, it is not so much that the will is too weak as that the contrary motivation is too strong; whereas, in weakness of the will properly so-called, it is not that the contrary motivation is too strong, but that the will is too weak. (Watson, 1977, p. 327)

Watson correctly observed that the concept of strength at play here is relative: anytime the will is too weak, the desire is too strong, and *vice-versa*. The distinction he describes, though highly intuitive, doesn’t work.

In order to salvage the distinction between weakness and compulsion, Watson compares the strength of an individual's will to that of other normal adult members of the relevant community. In order to determine whether the individual was weak or the desire irresistible, we only need to know whether normal members of the community would have been able to resist the desire. A "contrary motivation" is "too strong" just in case a typical adult in the community could not successfully resist a desire of that strength. The will is "too weak" if the individual's will is not as strong as the community norm.

On Watson's view, weakness of the will involves a failure to develop one's will or capacity for self-control to the normal standards of the community. Moral responsibility for weak behavior is thus a result of a negligent failure to develop one's will. In compulsive cases there is no negligence since the individual's will satisfies community standards, and therefore the individual is normally not responsible for the compulsive behavior.

### 3. COMPULSIVE BEHAVIOR IN CLINICAL PSYCHOLOGY

Watson's account of compulsion conforms fairly well to our intuitions about moral responsibility in cases of weak and compulsive action, and has therefore been widely accepted. However, it ignores the large body of existing empirical research on compulsion that has been conducted by psychologists and neuroscientists. A philosophical account of compulsion should, at a minimum, be *compatible* with the primary features of psychological disorders which appear to involve behaviors that are compulsive in the everyday sense of that word.<sup>3</sup> In this respect, Watson's account fares rather badly. I will begin by discussing obsessive-compulsive disorder, which is one of the most notable compulsive disorders and covers a wide range of compulsive behaviors.<sup>4</sup>

Obsessive-compulsive disorder, or OCD, is characterized by both a mental and a behavioral component. The mental component consists of "obsessions," which are recurrent and

persistent thoughts associated with substantial tension or anxiety in the individual. Common obsessions involve cleanliness, germs, or disease. The thought that my hands are dirty and must be cleaned is a typical obsession. An individual with OCD who experiences obsessive thoughts feels a buildup of anxiety which leads to the performance of a compulsion. Compulsions, in the clinical sense, are highly stylized actions which must be performed according to rigidly applied rules created by the individual which alleviate the tension or anxiety experienced as a result of an obsession. Compulsions normally exhibit some association with the obsession, although the manner in which they are performed is frequently excessive or ridiculous. So, for instance, someone obsessed with germs may engage in a hand washing compulsion, where this involves using a particular kind of soap, clean towels, water so hot that he cannot adequately clean his hands, etc. However, the compulsion may have no discernible relationship with the obsession, in which case the subject may be characterized as delusional.

Many other psychological disorders which involve compulsive behaviors do not feature an obsession component, so it is clear that obsessions are not essential for psychological compulsion. Instead, I would like to emphasize the fact that compulsive behaviors in OCD serve as a mechanism for relieving tension or anxiety. Successful completion of the compulsion brings a sense of release as the anxiety is temporarily relieved. An individual suffering from OCD performs a compulsive behavior not because it is pleasant or judged worthwhile, but only in order to relieve a specific source of anxiety.

This feature is remarkable because it is present in a wide range of psychological disorders which feature compulsive behaviors. In social phobia, which closely resembles OCD, the subject experiences obsessions involving social situations which produce extreme anxiety, which may take the form of a panic attack. In order to relieve this anxiety, the individual engages in compulsions involving extreme and sometimes elaborate avoidance behaviors. Kleptomania, which involves compulsive stealing, exhibits the same tension or anxiety relieving pattern. The kleptomaniac experiences a rapidly increasing feeling of

tension immediately before committing a theft, and then a sense of release as he commits the theft. The stolen object is seldom valued, and is often discarded or given away. The trichotillomaniac also performs compulsive behavior in order to gain relief from a feeling of tension. Trichotillomania involves repeated and excessive pulling on hair, usually the subject's own, often resulting in noticeable hair loss. The subject experiences an increasing sense of tension before the hair-pulling behavior, and in some cases they report feeling an "itchlike" sensation. The hair-pulling behavior provides temporary relief of these symptoms.

The tension-release pattern in compulsive behaviors emerges from even a casual reading of the Diagnostic and Statistical Manual of Mental Disorders, or DSM-IV. However, notable exceptions may be found in that work as well. The most prominent example involves the tic disorders, such as Tourette's Syndrome, which involve "sudden, rapid, recurrent, nonrhythmic, stereotyped motor movement[s] or vocalization[s]. (DSM, 1994, p. 422). In everyday terms, we would normally describe these disorders as involving a psychological compulsion to perform the tic, movement, or vocalization. This is suggested by the recurrent nature of the behavior, the lack of a discernible physiological explanation, the fact that individuals suffering from these disorders don't want to perform the tic or movement, and their reports of the behavior as "irresistible." Unlike most other psychological disorders involving compulsive behaviors, individuals suffering from tic disorders rarely complain of a feeling of tension or anxiety before engaging in the compulsive behavior.

However, the tension-release cycle does occur in cases of tic *suppression*. (Leckman et al., 1997, p. 840) As with most compulsive disorders, individuals suffering from tic disorders are able to suppress the compulsive behavior for short periods of time, during which they experience a drastically increasing sense of tension or anxiety culminating in performance of the tic, which temporarily alleviates this symptom. In tic disorders, therefore, the experience of tension is associated with *resisting* or *suppressing* the compulsive behavior.

We may generalize this to explain the association of tension with compulsive behaviors in other psychological disorders. I propose that compulsive behaviors are characterized by a rapidly increasing buildup of tension, anxiety, or a similar form of psychological ‘discomfort’ while the individual attempts to suppress performance of the behavior. This psychological stress raises the cost of resistance, and that cost increases rapidly as the individual attempts to fight the compulsion, until the stress is unbearable and the individual succumbs. Once experienced this stress may be alleviated by abandoning resistance, and may be avoided altogether by immediately acting to satisfy the compulsion whenever it strikes. This explains the phenomenological reports of compulsives, as well as the general patterns of their behavior. In short, psychological compulsions do not simply “overwhelm” the will; they “wear it down” by producing psychological stress.

If a rapidly increasing feeling of tension or another form of psychological stress is associated with attempts to suppress compulsive behaviors, as I claim, then Watson’s account of compulsion is surely incorrect. It has never been suggested, after all, that weak behavior is in any way associated with rapidly increasing tension or anxiety. Watson’s model cannot accommodate any phenomenological differences between weakness and compulsion, because it distinguishes them solely by appeal to the extrinsic standard of normal strength-of-will. Without some psychological difference between the weak and compulsive agents, I cannot see how a phenomenological difference in their experiences can be explained. Because Watson’s account cannot accommodate the phenomenological difference between weakness and compulsion, it should be rejected.<sup>5</sup>

Instead, the phenomenological evidence suggests that compulsive actions are motivated by a desire to alleviate a particular source of tension or anxiety. Psychological compulsion involves being “wired up” so that resisting certain impulses results in unbearable tension or anxiety. Quite naturally, the compulsive acts to relieve this tension. The only direct way to relieve the tension is to stop resisting the impulse, so the individual performs the compulsive behavior. Compulsion, on this view, is simply a

matter of being the victim of severe psychological stress associated with particular behaviors. The causal mechanism for producing action is normal. The desire to relieve the tension combined with the belief that performing the compulsive behavior will relieve the tension cause the compulsive behavior.

Unfortunately, this view won't work. It treats compulsion as a variety of action under unfortunate circumstance. The agent rationally chooses a course of action given a set of undesirable choices. The chosen action is the best of a bad lot. According to this view, compulsions skew the individual's available choices so that she must decide between protracted psychological strain or the compulsive behavior, and the choice is clear. However, this view misrepresents the moral facts. Generally speaking, an individual choosing under unfortunate circumstances is excused for her bad action only if the alternative is worse.<sup>6</sup> Yet many compulsives are excused despite performing actions that are much worse, morally speaking, than the alternative. An individual psychologically compelled to kill an innocent bystander by pushing him in front of a train is not responsible for his action. The "unfortunate circumstances" theory of compulsion cannot accommodate this fact. It is morally reprehensible to choose to kill another rather than temporarily suffer psychological tension, however severe. The unfortunate circumstances view cannot capture the ways compulsion actually functions as an excuse.

The difficulty in distinguishing compulsive actions from other varieties of action is a result of a crucial deficiency in standard accounts of action. We characterize actions in terms of certain causes – desires, beliefs, or intentions – but do not describe the mechanisms for *inhibiting* unwanted actions. Compulsive behaviors appear to involve an abnormality in the normal functioning of a system, the will, that inhibits or prevents action. Because the standard accounts of action do not specify the roles of inhibition in producing action, it is difficult to describe compulsive action. I therefore propose revising the standard account of action to include a role for inhibition in generating behavior. I believe that including inhibitory systems in the account of action solves the conflation problem that plagues attempts to account for compulsion.



## 4. RETHINKING COMPULSION

The pattern of mounting stress or discomfort found in cases of compulsion is also associated with the phenomenon of muscle fatigue, which is far better understood. Imagine standing in a crouching position for an extended period of time. At first this is relatively easy, but as time passes it becomes increasingly difficult to hold the position. Eventually your legs will throb with pain and you will ultimately fall, experiencing the phenomenon known as muscle failure. Strictly speaking, however, this does not usually involve a physical incapacity to maintain muscular contraction. It is normally true that the individual could have maintained the contraction just a little longer. Instead, muscle failure is associated with a mounting experience of physical stress or discomfort which raises the cost of sustaining contraction until the subject “lets go.”<sup>7</sup> During strenuous muscular activity, muscle tissue generates lactic acid which slowly builds up in the muscle tissue. The phenomenal experience of discomfort as a result of extended tetanic muscle activity is known to be related to the accumulation of lactic acid in muscle tissue, as well as other chemical changes.<sup>8</sup>

A similar process may be associated with the activity of the will in suppressing or inhibiting desires or behaviors. Whatever neurochemical change may be involved, *overexertion* of the will may cause the psychological stress that is associated with the attempted suppression of compulsive behaviors. That is, I propose that the psychological tension or stress experienced by compulsives is a normal byproduct of overexertion of the neural circuitry – whatever it might be – that is responsible for inhibiting unwanted actions. This stress raises the cost of resistance until the subject “lets go” by abandoning resistance, thereby performing the behavior. Compulsion involves overworking the will, just as muscle failure involves overworking muscular tissues.<sup>9</sup>

If this is correct, the activity of the will must be to some extent episodic. In normal circumstances, the will must have periods of “rest” in between periods of activity. Extended activity without rest results in a state of overexertion, which is

experienced as a kind of psychological stress.<sup>10</sup> We need some account of this episodic activity of the will. When does the will cease resting and intervene in order to prevent an action from occurring? Unfortunately, this question has seldom been addressed. The standard Humean model of action says only that actions are caused by desires and beliefs. A desire for some state-of-affairs together with a belief that some behavior will produce that state-of-affairs jointly cause the behavior to occur. No mention is made of the inhibition of behaviors by the will.

If the inhibitory activity of the will is episodic, then the will must not operate on desires alone. If I resolve not to drink at a party, I can do so despite the continued presence of a desire to drink. The will need not continuously resist my desire for alcohol over the course of the night; at least, it must not exert so much effort in resisting desires that it is overtaxed. Instead, I propose that the “taxing” work of the will occurs at a later point in the causal chain. According to the Humean model of action, actions are initiated when a desire for some state-of-affairs interacts with a belief about the means for bringing about that state-of-affairs. This belief includes some specification of a set of behaviors which (it is thought) will effectively bring about that state of affairs. This specification of the behavior must include enough information in order to allow the individual to act. A desire to impress the partygoers and a belief that playing our host’s piano will impress them will not cause me to act unless I know how to play the piano. Some information representing the sequence of muscular contractions to be performed must either be included in or referenced by the belief about means. Call such information a “movement formula.” A movement formula must include enough information in order to allow the individual to behave, and this information must be presented in the right format. I can understand a complete scientific model of throwing a baseball and still be incapable of throwing a baseball. The problem is that I’m just not able to translate the scientific model into a series of coordinated muscular contractions. So, the information contained in a movement formula must be formatted for use by those systems that are responsible for generating muscular stimuli.

In these terms, the Humean model of action claims that a desire and a belief cause a movement formula to be transferred to some neurological system(s) responsible for implementing the formula. This may involve forming some kind of partial “plan” which includes the content of the movement formula, or perhaps the transfer of this information to neural circuitry that processes the formula into a series of nervous stimuli sent to muscle tissue. The precise empirical story of the generation of actions doesn’t matter for my purposes, so long as we can agree that the mental representation of the action which is one of its causes is processed and/or implemented by some neurological mechanisms.<sup>11</sup> However, the mere transfer of a movement formula to these “implementation systems,” whatever they may be, doesn’t guarantee action. One can interfere with this process of implementation in order to prevent behaviors from occurring. This, I claim, is one of the functions of the will.

Actions, on this view, are the result of the interaction of “stimulatory” and “inhibitory” neuropsychological mechanisms. Desires and beliefs interact to initiate the production of an action by transferring a movement formula to the relevant implementation systems, as the Humean model essentially states. This mechanism stimulates the production of behavior by initiating a process that will ultimately result in the transmission of nervous stimuli to muscles for producing the bodily behaviors which comprise the action. However, I believe that the initiation of action is *profligate*. That is, I propose that far more actions are initiated than are ever expressed in behavior. Actual behavior is the result of both the initiation and inhibition of action. Desires, values, and possibly some form of “practical judgment” are all involved in suppressing actions by interfering at some stage in the implementation of movement formulae. “The will” refers to all systems which play this inhibitory role. So desires play a dual role in generating behavior. Individual desires interact with beliefs to stimulate the implementation of movement formulae, but desires operate collectively in order to inhibit behaviors which are incompatible with their weighted sum.<sup>12</sup> Say an individual is subject to an “impulse” whenever a movement formula is sent to the

implementation systems. An impulse is “unwanted” just in case the behavior it encodes is incompatible with what the individual desires, all things considered. The will normally functions to guarantee action according to an individual’s all-desires-considered preferences by inhibiting unwanted impulses. This function occurs episodically. That is, individuals are not normally subject to a continuous stream of unwanted impulses, so the will only needs to intervene in this causal chain episodically. Compulsives, on the other hand, are subject to a near-continuous stream of impulses to perform a single behavior.<sup>13</sup> If these impulses are unwanted and the will attempts to prevent their expression in behavior, it ends up functioning continuously without rest and is overworked.

Compulsives, in other words, suffer from a specific abnormality in the systems which are responsible for *initiating* behavior. A compulsive is subjected to a nearly continuous stream of impulses to perform a specified behavior, which eventually overworks the will, producing a form of psychological stress. The individual abandons resistance, implementation of the movement formula is unimpeded, and the compulsive behavior is performed.

What is the nature of the abnormality that produces the continuous stream of impulses in compulsives? In principle, there are many possibilities, and this question is ultimately one for neuroscience. Psychiatrists and neuroscientists have conducted a great deal of research on this issue. At least for some compulsive behaviors, it appears that the uncontrolled electrical stimulations of epilepsy may be the culprit. A localized epileptic seizure can stimulate an adjoining section of the brain responsible for the storage of a movement formula for a particular behavior or behaviors.<sup>14</sup> This has been documented in a number of instances. In one case, a right-handed computer operator experienced a periodic compulsion to operate a computer with her right hand. Initial episodes were relatively mild, lasting less than two minutes and involving only a phenomenological urge to operate a computer. Later episodes were more severe, including motion of the right-hand in a key-handling rhythm, and were also associated with speech arrest and involuntary

vocalizations. Subsequent testing showed a tumor in the supplementary motor area, which is involved in the initiation and control of complex voluntary movements. Researchers believed that epilepsy triggered by the lesion was responsible for the compulsions. As the tumor grew, the seizures probably involved higher levels of current, which were able to produce the key-handling behavior, and spread to brain regions governing speech. After removal of the tumor, the patient experienced no subsequent compulsions.<sup>15</sup> Separate studies have found that electrical stimulation of the supplementary motor area can cause an urge to perform a movement, and that localized seizures may be implicated in some forms of OCD.<sup>16</sup>

So far, I've assumed that the "desires" responsible for initiating the causal chain leading to action are identical with the "desires" responsible for interfering with this causal chain in order to prevent particular behaviors from occurring. I should now note that this strikes me as highly implausible. We should at least admit the possibility of divergence, as this greatly expands our ability to model cases of irrational behavior. Consider a case of "motivated forgetting." Imagine there's a lecture at your department this afternoon. The topic doesn't interest you and the speaker is infamous for his monotonous delivery. You really don't want to go, but decide to attend anyway out of a sense of obligation. Suppose, for the sake of argument, that this involves a desire that can initiate the causal chain leading to the behavior but cannot play the inhibitory role. So, you intend to attend the talk. Unfortunately, on the way to lunch you run into some old friends, and eventually find yourself in a bar on the other side of town. You don't even remember the lecture until it's halfway over, and too late to get there. What happened? Some might be inclined to argue that you never really intended to attend the talk, but this isn't really the most plausible interpretation of the case. After all, imagine that a colleague had asked you if you were going to the lecture before you left for lunch, and you replied "yes". This appears to be a sincere report of intention. Moreover, it may very well be true that if you had not run into your old friends, you would have attended the lecture. There is no reason to think that our

case cannot be one in which you intended to go to the lecture. Rather, it looks like you intended to go, but forgot.

However, this was no mere forgetting. Anyone familiar with your feelings about attending would find this “forgetting” altogether too convenient. The fact that you did not want to attend the talk is certainly responsible in part for your behavior. On my view, it explains the failure to suppress the impulse to go have a beer with your friends. The occurrence of meeting your friends caused the impulse to go have some beer. I claim that “not wanting to attend the talk” in this case indicates the absence of a state responsible for inhibiting actions. The “sense of obligation” which caused the formation of your intention – whatever it may be – is not the type of state which can play this inhibitory role. By claiming that different psychological states are responsible for the initiation and inhibition of actions respectively, I allow the possibility that an action may be initiated (or intention formed) without acquiring the corresponding disposition to inhibit behaviors incompatible with this action. This allows us to model certain difficult cases of irrational action, like the “motivated forgetting” case from this example. Since there was no desire with which having a beer was incompatible, the implementation of your impulse was unimpeded and you failed to attend the talk, despite your intention.<sup>17</sup>

## 5. CONCLUSION

I’ve argued that the available evidence from clinical psychology shows that compulsion is phenomenologically richer than philosophers have previously acknowledged. Existing philosophical accounts of compulsion cannot capture this phenomenology. Instead, I’ve proposed an account according to which psychological compulsions “wear down” normal faculties of self-control. The recurrent inhibition of a compulsive impulse overexerts these faculties, and this overexertion causes the psychological discomfort experienced by compulsives. In order to describe compulsion in this way, I offer a description of actions which explains what it means to be subject to an “impulse” to

perform a behavior and explicitly provides for the role of inhibition in generating behavior.

What about weakness of the will? As you recall, I began this paper by arguing that Watson's famous account of the distinction between weakness and compulsion doesn't work. So it's natural to wonder whether my account suffers from the same conflation problem. Fortunately, this worry is easily dispelled. The conflation problem arises because both weakness and compulsion are traditionally described as abnormalities in the normal functioning of the will. I've described an account of compulsion in which the abnormality is located in the systems that initiate the causal sequence leading to action. The will functions normally, although it is overwhelmed because it is not "designed" to operate without rest. Philosophers are free to follow the traditional approach and identify weakness of the will as an abnormality in an individual's resistive capacities. In fact, because I've identified a specific abnormality in the initiation of behavior (too many impulses for a time interval) in my account of compulsion, we may even identify weakness with some different abnormality in the initiation of behavior. Because I avoid the traditional characterization of compulsion by locating the abnormality in the systems which initiate actions, I avoid the conflation problem altogether. Of course, an account of weakness still needs to be provided, but that is a topic for another paper.

One exception to this view on compulsion should be noted. Some cases of weakness exhibit a tension-release pattern similar to the one found in cases of compulsion. You want the slice of cake, but you're on a diet. At first you resist, but your attention is drawn back to it again and again, until you "give in" and eat the cake. We may even suppose that there is some tension or stress associated with your temporary resistance. Many such cases are best regarded as weakness rather than compulsion. Unlike cases of compulsion, it appears that in these cases of weakness the psychological tension or stress reaches a peak and subsequently tapers off. It is at this point that Watson's original account has a role to play. We may say that a behavior is weak just as long as the peak level of psychological discomfort is

considered manageable under community norms. This is presumably why some people regard smokers who unsuccessfully try to quit as weak-willed. So we may rely on Watson's account to distinguish weakness and compulsion for the subclass of weakness cases that have the same phenomenology as compulsion. However, his account cannot serve as a general account of the distinction between weakness and compulsion because many cases of weakness lack the tension-release phenomenology.<sup>18</sup>

#### NOTES

<sup>1</sup> This formulation may require additional provisos, but fixing the precise sense of irresistibility is not necessary for my purposes. For a detailed analysis of irresistibility as it pertains to compulsion, see Mele (1990).

<sup>2</sup> My vocabulary here differs from that of Frankfurt (1982).

<sup>3</sup> "Compulsion" has a narrowly defined meaning within clinical psychology, involving a specific component of obsessive-compulsive disorder, which I discuss below.

<sup>4</sup> Unless otherwise noted, my discussions of psychiatric disorders below are drawn from DSM (1994).

<sup>5</sup> Although Watson's appeal to the normal resistive capacities of members of a community cannot capture the distinction between weakness and compulsion, I do believe that an adequate account of compulsion will include some such appeal. We can imagine individuals who experience a rapidly increasing sense of tension while resisting an impulse to perform an action which subsequently tapers off. If the peak level of psychological discomfort is manageable given community norms, we may want to characterize subjects who succumb to the impulse as weak rather than compulsive. I'll briefly revisit this point at the end of the paper.

<sup>6</sup> Admittedly there are some exceptions to this. An individual may kill in self-defense in order avoid grievous bodily injury, even if he is not at risk of death. This question has been extensively discussed in the literature on self-defense. Since the psychological "pain" to which the compulsive subject is subjected is clearly not as bad as an innocent's death, this complication should not affect my argument.

<sup>7</sup> I do not deny that there is some point at which muscles are physically incapable of sustaining contraction. Rather, my point here is that individuals usually desist activity before that point is actually reached.

<sup>8</sup> Tetanic muscular activity occurs when the nervous stimulation of the muscle tissue occurs with such rapidity that individual contractions are indistinguishable. Muscle fibers do not have time to rest between contractions, so prolonged tetanus results in the buildup of lactic acid. See any



college-level biology textbook for a description of muscular chemistry. I used Keeton and Gould (1986).

<sup>9</sup> Richard Holton has also proposed an account on which the will functions somewhat like a muscle. See his Holton (forthcoming) for details.

<sup>10</sup> We need not think that the will must be completely inactive in order to rest. Muscle tissue may be at rest just as long as the frequency of contraction falls short of tetanus. Similarly, the will could be performing some functions during rest periods, so long as these activities are not overly taxing.

<sup>11</sup> I should add that we needn't think that this process occurs entirely within the brain, although we should expect it would occur largely within the brain. Ultimately this is a question for neuroscience.

<sup>12</sup> Presumably this occurs in conjunction with other neural systems. In fact, some research has identified a distributed neural circuit in primates consisting of elements of the prefrontal, parietal, temporal and cingulate cortices which appears to participate in the inhibition of unwanted impulses. See Goldman-Rakic (1987) and Peterson et al. (1998) for details.

<sup>13</sup> I assume here that an individual may be subject to a psychological compulsion even if this is a compulsion to perform some desired behavior, like Frankfurt's willing addict. So construed, being subject to a psychological compulsion is not an excusing condition in and of itself. Instead, compulsions excuse only if the impulse is unwanted.

<sup>14</sup> Depending on the actual functioning of the pathways responsible for action, there are other possibilities. For instance, the information stored in a movement formula may first need to be temporarily stored in "working memory" of the implementation system so that stimulation of that system could trigger the behavior, provided the stimulus is of sufficient intensity.

<sup>15</sup> This description is paraphrased from Tei et al. (1998).

<sup>16</sup> See Freid et al. (1991) and Berthier et al. (1996), Levin and Duchowny (1991) and Ward (1988), respectively.

<sup>17</sup> Since there may be several different systems responsible for suppressing behaviors, other failures may also be involved.

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