

# Defending Internalists from Acquired Sociopaths

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People who suffer brain damage to their ventromedial prefrontal cortex (VM patients) have a puzzling psychological profile: they seem to retain high intellect and practical reasoning skills after their brain injuries, but continually make poor decisions in many aspects of their lives. Adina Roskies argues that their behavior is explained by the fact that, although VM patients make correct judgments about what they ought to do, they are entirely unmotivated by those judgments. Roskies thus takes VM patients to be real-world counterexamples to *motivational internalism*: the thesis that, necessarily, if S judges that she ought to  $\phi$  in circumstances C, then S is somewhat motivated to  $\phi$  in C. In this paper, however, I argue that the neuropsychological evidence that Roskies appeals to does not actually show that VM patients are entirely unmotivated by their normative judgments. Rather, I argue, the evidence suggests that VM patients form weaker normative judgments than normals during practical deliberation. And this affords the internalist with a plausible explanation for VM patients behavior: because VM patients form weaker normative judgments than normals, they are less motivated by their normative judgments than normals, which allows their decision-making to be overruled by their standing desires for greater and more immediate rewards.

## 1. Introduction

Patients who suffer brain lesions in their ventromedial prefrontal cortex (*VM patients*) have attracted much interest in neuropsychology due to their puzzling psychological profile: despite retaining normal intellect, memory, and practical reasoning skills after their brain damage, VM patients consistently make poor decisions and fail to learn from their past mistakes. For example, they often have trouble keeping a job, have multiple failed marriages or strained relationships with family and friends, and suffer financial hardships due to failed risky investments.<sup>1</sup> Since this psychological profile is similar to that of sociopaths, but develops only after their brain damage, VM patients are referred to as “acquired sociopaths”.

In a series of papers, Adina Roskies argues that VM patients’ self-reporting during psychological experiments suggests that they make normal judgments about what they ought to do in practical and moral situations, but that skin-conductance response (SCR) data suggests that they

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<sup>1</sup> See Eslinger & Damasio (1985) and Cato *et al.* (2004) for detailed case studies.

are not motivated at all by those judgments.<sup>2</sup> Roskies thus takes VM patients to be real-world counterexamples to *motivational internalism*:

Motivational Internalism (MI) Necessarily, if an agent S judges that she ought to  $\phi$  in circumstances C, S is somewhat motivated to  $\phi$  in C.<sup>3</sup>

Of course, some self-described internalists only claim that, if S is in *normal* conditions, or if S is *practically rational*, and S judges that she ought to  $\phi$  in C, then S is somewhat motivated to  $\phi$  in C.<sup>4</sup>

But Roskies argues that these more modest theses do not capture the spirit of internalism and are philosophically uninteresting. So, Roskies provides a dilemma for motivational internalists: either their view is empirically false or philosophically uninteresting.

Roskies's argument has already been criticized from different angles. Cholbi (2006a/b) argues that Roskies fails to show that VM patients form genuine judgments about what they ought to do. Whereas Smith (2008) argues that the claim that normative judgments are motivating, if one is practically rational, is an interesting bona fide internalist thesis; he thus takes VM patients' failure to be motivated by their normative judgments to only show that they are not practically rational. My primary aim here is to offer a new criticism (in §3): I argue that the SCR data that Roskies appeals to does not actually show that VM patients are entirely unmotivated to act in accord with their normative judgments because SCRs are not in fact correlated with motivation.

But Roskies's claim that VM patients form the same normative judgments as normals, but are entirely unmotivated by them, is at least compatible with the evidence and provides an explanation for why VM patients consistently make poor decisions, despite retaining normal intellect

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<sup>2</sup> Roskies (2003), (2006), and (2008).

<sup>3</sup> Two clarifications: First, while MI is formulated here in terms of ought-judgments, internalists typically claim that *all* normative judgments are necessarily motivating: that if one judges that x is good, bad, right, wrong, etc., one necessarily has some corresponding motivation. Second, as Svavarsdottir (1999: 166) and Zangwill (2008: 93-4) point out, MI does not require that, if S judges that she ought to  $\phi$  in C, S *will*  $\phi$  in C, or even that S is *overall most motivated* to  $\phi$  in C; it only requires that, if S judges that she ought to  $\phi$  in C, S has at least some motivation to  $\phi$  in C. Finally, I remain neutral here regarding whether motivation amounts to a dispositional state or an occurrent feeling.

<sup>4</sup> Dreier (1990) and Smith (1993), respectively, make these two more modest claims.

and practical reasoning skills. And one may reasonably doubt that the internalist has an equally plausible explanation of VM patients' behavior. So, Roskies's claim that VM patients are unmotivated by their normative judgments may nonetheless seem plausible on abductive grounds.

My secondary aim here, however, is to show (in §4 and §5) that the leading neuroscientific account of VM damage proposed by the Damasio<sup>5</sup> and their colleagues affords the motivational internalist with an explanation of VM patients' behavior that is actually better than that offered by Roskies, and thereby undermine this abductive argument against MI. But first, I make some important clarifications regarding what the motivational internalism vs. externalism debate amounts to, which will help illuminate both what MI requires and what the internalist's explanatory burden is in this debate (in §2).

## 2. Clarifying Motivational Internalism

As Zangwill (2008) notes, while the debate between motivational internalists and motivational externalists is often carried out by focusing on MI, what's at stake in this debate goes beyond this modal claim. The central issue at stake in the debate is whether normative judgments are intrinsically motivating.<sup>6</sup> Internalists claim that they are: that S's judgment that she ought to  $\phi$  in C by itself motivates S to  $\phi$  in C.<sup>7</sup> Whereas, externalists claim that they are not: if S judges that she ought to  $\phi$ , S is motivated to  $\phi$  only if S has some additional desire to do what she ought to do. As Zangwill points out, the internalist's view thus cannot be captured merely in modal terms because it could be necessary that everyone has a general desire to do what they ought to do. In such a case, it

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<sup>5</sup> I refer to Hannah Damasio and Antonio Damasio, who have led most of the research on VM patients, as "the Damasio".

<sup>6</sup> This is a separate issue than the other internalism vs. externalism debate in Williams (1987): the latter debate concerns whether what normative reasons one has depends on one's motivational states. I use the term "motivational internalists" and "motivational externalists" here to distinguish these two debates, but, henceforth, I omit this qualification.

<sup>7</sup> Roskies thus takes the more modest claims that normative judgments bring along motivation, if one is in normal conditions, or if one is practically rational, to not capture the spirit of internalism because, on these views, normative judgments are not intrinsically motivating.

would be necessary that, if S judges that she ought to  $\phi$  in C, S is motivated to  $\phi$  in C, without it being the case that normative judgments are by themselves motivating.<sup>8</sup> So, Zangwill suggests that the internalist's view is better captured by the claim that motivation is *essential to* normative judgment. In other words, according to the internalist, part of what it is to judge that one ought to  $\phi$  in C is to be motivated to  $\phi$  in C.

The dialectic between internalists and externalists often focuses around the modal claim MI, though, because refuting MI is sufficient for refuting internalism. But appreciating what is at stake for the internalist is important for understanding exactly what MI amounts to. First, regardless of whether normative judgments are beliefs (as cognitivists claim) or desires (as non-cognitivists claim), since we can both believe things to varying degrees (i.e. we can have weaker or stronger credences) and desire things to varying degrees, normative judgments may vary in strength. So, since the internalist claims that motivation is essential to normative judgments, and normative judgments of any strength are nonetheless normative judgments, MI concerns normative judgments of any strength.<sup>9</sup> Regardless of how strong one's normative judgment is, then, whether one is motivated to act in accord with that judgment is relevant to the truth of internalism.

But whether the internalist takes the strength of one's corresponding motivation to be necessarily correlated with the strength of one's normative judgment depends on what specific internalist position she adopts. On a non-cognitivist internalist view, normative judgments are essentially motivating because what it is to form a normative judgment just is to be in some motivational state (e.g. to have some desire or emotion). So, a non-cognitivist internalist presumably takes the strength of one's normative judgment to be necessarily correlated with the strength of the

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<sup>8</sup> Zangwill (2008: 94-5).

<sup>9</sup> Zangwill (2008: 95).

motivational state that constitutes that judgment.<sup>10</sup> But the cognitivist internalist need not claim that there is a necessary correlation between the strength of one's normative judgment and the strength of one's corresponding motivation. For example, if normative judgments are beliefs with normative content, which are essentially motivating (e.g. "besires", as McDowell (1978) claims), then the strength of one's normative judgment may simply be the degree to which one believes the relevant normative proposition, while the strength of one's corresponding motivation need not be determined by one's degree of belief.<sup>11</sup> The cognitivist internalist may thus admit that, for example, someone suffering from severe depression may strongly believe that she ought to get out of bed, but only be very weakly motivated to do so.<sup>12</sup>

But presumably the cognitivist internalist at least insists that, so long as S is rational, if S believes that one ought to  $\phi$  in C, the degree to which S is motivated to  $\phi$  in C by that judgment will be sensitive to changes in her degree of belief that one ought to  $\phi$  in C. Indeed, this seems plausible regardless of the internalism vs. externalism debate or the cognitivism vs. non-cognitivism debate. As Smith (2002) argues, if someone grows less confident that one ought to donate their money to famine relief, for example, but she does not thereby become less motivated to donate, this seems irrational: her attitudes would be more coherent if she were to undergo such a change in her

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<sup>10</sup> This does not imply, though, that the strength of one's normative judgment is necessarily correlated with the strength of one's overall motivation to act in accord with one's normative judgment, since one may have other desires that influence how one is motivated overall.

<sup>11</sup> Similarly, if normative judgments are beliefs in ordinary content with a special motivational "mode of presentation" (as Dreier (1990) claims), then the strength of one's normative judgment may simply be the degree to which one believes the relevant ordinary proposition, while the strength of one's corresponding motivation need not be determined by one's degree of belief.

<sup>12</sup> Some claim that severe depression makes one entirely unmotivated to act in accord with one's normative judgments. I do not discuss this issue here, though, because my aim in this paper is simply to show that VM patients are not counterexamples to MI – not that there are *no* counterexamples to MI. A full defense of internalism requires a piecemeal approach to all the various potential counterexamples to MI.

motivations. Likewise, if someone becomes more confident that one ought to donate to famine relief, it seems rational for her to become even more motivated to donate to famine relief.<sup>13</sup>

So, while all internalists maintain that all normative judgments are essentially motivating, some internalists may deny that the degree to which normative judgments are motivating is necessarily correlated with the strength of one's normative judgment. Consequently, I assume here that MI does not presuppose that there is a necessary correlation between the strength of one's normative judgment and the strength of one's corresponding motivation.<sup>14</sup> I do assume here, however, that changes in the strength of one's normative judgment at least results in changes in the strength of one's corresponding motivation, if one is rational.

Another important clarification regarding MI is that, since the internalist's view is that motivation is essential to normative judgment, the relevant sort of necessity involved in MI should be taken to be at least metaphysical necessity. Many parties to the debate assume, more strongly, that MI concerns conceptual necessity. But this seems unnecessarily strong. While the metaphysical possibilities are plausibly constrained by the essences of things, the conceptual possibilities need not be. For example, Fine (1994) argues that the metaphysical possibilities are a subset of the conceptual possibilities that are compatible with the essences of things. So, for example, if it's essential of water that water is H<sub>2</sub>O, then it's not metaphysically possible for water to have had a different molecular composition. But it's not a conceptual truth that water is H<sub>2</sub>O, and so, before we had discovered the molecular composition of water, it was conceptually possible that water had a different molecular composition. Similarly, if motivation is essential of normative judgments, then it's metaphysically impossible for someone to judge that one ought to  $\phi$  in C, but be unmotivated to  $\phi$  in C. But it may not be a conceptual truth that normative judgments motivate, and so, it may not be conceptually

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<sup>13</sup> Smith (2002) argues, moreover, that if one is rational, how motivated one is by one's normative judgment is also dependent on how stable one's judgment is in the face of new information, and how important one takes the normative judgment to be in comparison with one's other normative judgments.

<sup>14</sup> This is one important way in which I disagree with Zangwill (2008).

necessary that S is motivated to  $\phi$  in C, if S judges that she ought to  $\phi$  in C, even though motivation is essential to normative judgments. So, I will assume here that the internalist may take MI to concern only metaphysical necessity.<sup>15</sup>

This is important because it helps clarify the internalist's explanatory burden in this debate. As Svavarsdottir (1999) argues, if the internalist is committed to MI, understood as concerning conceptual necessity, then whenever she is presented with a case in which an agent seems to form a normative judgment, but fails to act accordingly (like VM patients), the internalist must claim that the only conceptually possible explanations of the agent's behavior are (a) that the agent does not sincerely hold the normative judgment or (b) that the agent does sincerely hold the normative judgment and is somewhat motivated by it, but that this motivation is overridden by competing motivations. The internalist must deny that it's conceptually possible that the agent sincerely holds the normative judgment, but is entirely unmotivated by it. Svavarsdottir thus claims that the internalist has a very heavy dialectical burden in the debate: she must explain why the externalist's proposed explanation of such cases is conceptually impossible, even though it seems coherent.

But if the internalist is committed to MI, understood as concerning only metaphysical necessity, she may admit that we can conceive of (metaphysically impossible) individuals who judge that they ought to  $\phi$ , but are entirely unmotivated to do so, and thus admit that the externalist's explanation of an agent's behavior is conceptually possible. This not only makes the internalist's view more plausible, but also lightens the internalist's explanatory burden. When faced with potential counterexample cases, the internalist need only show that the externalist's explanation of the agent's behavior is not any better than one of the above internalist explanations.

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<sup>15</sup> I am not claiming here that the internalist cannot take MI to concern conceptual necessity. I'm leaving it open for the internalist to decide how strong of a claim she thinks is warranted.

### 3. Roskies's Case Against MI

Now that we have a better understanding of MI and the internalist's explanatory burden, let's examine Roskies's argument. First, Roskies claims that the psychological research on VM patients shows that VM patients retain high practical reasoning skills after their injury and form the same normative judgments as normals.<sup>16</sup> The research that Roskies refers to is Saver & Damasio's (1991) study on a particular VM patient referred to as EVR. This study aimed to evaluate EVR's practical and moral reasoning skills compared to normal controls, by administering five different tests that measured (i) his ability to imagine possible courses of actions in hypothetical situations, (ii) his ability to imagine consequences of alternative actions available in those situations, (iii) his ability to understand cause and effect, (iv) his ability to predict the most likely consequences of certain actions, and (iv) his "stage of moral development" on the Kohlberg scale. Saver and Damasio found that EVR performed at a level equivalent or superior to normal controls on all five tests.

The only test that involved a comparison of EVR's normative judgments with that of normals, however, was the Kohlberg test, in which subjects were asked whether a man's breaking into a pharmacy and stealing a drug to save his wife's life is wrong (Kohlberg's "Heinz dilemma").<sup>17</sup> But this is a question that normals typically give divergent answers to – indeed, that is why it's called a *dilemma*. So, no matter which response EVR had given, his judgment would have concurred with some normals. This study alone thus does not provide much evidence that VM patients form the same normative judgments as normals.

But other studies of VM patients provide further evidence for this claim. Bechara *et al.* (1994) performed a study in which both VM patients and normal controls participated in a gambling task (the *Iowa Gambling Task*). Subjects were instructed to choose one card from any of four decks 100 times. Each card had a number on it indicating dollars won or lost, and the subjects were told to

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<sup>16</sup> Roskies (2003) p. 56-57.

<sup>17</sup> See Saver & Damasio (1991).



try to maximize their winnings. Two of the decks were risky: they contained cards with high returns, but even higher penalties. And the other two decks were safe: they contained low returns, but even lower penalties. Bechara *et al.* found that, while both VM patients and normal controls started out by sampling from all the decks, the normal controls soon shifted toward picking mostly from the safe decks, while VM patients shifted toward picking mostly from the risky decks. Moreover, Bechara *et al.* (2000b) found that, unlike normal controls, VM patients' performance on the task did not improve when they re-tested them over different time intervals. And crucially, in the post-experimental debriefing, 50% of the VM patients said that they knew that they should have drawn from the safe decks.

Of course, this post-experimental self-reporting may seem akin to my saying, "I knew it would rain today," when I really only thought that it might rain and am now soaked and regretting not having acted as if it were true. This self-reporting is thus not very strong evidence that these VM patients wholeheartedly judged, at the time of their trials, that they should have drawn from the safe decks. But even when speaking loosely in this way, we do not typically say, "I knew that p," unless earlier we believed p to some degree: I wouldn't say, "I knew it would rain today," if earlier I hadn't had any credence at all that it would rain. The VM patients' self-reporting thus suggests that they at least judged to some degree during their trials that they ought to pick from the safe decks. And since MI concerns normative judgments of any strength, whether these VM patients were motivated by these judgments is relevant to the truth of MI.

But Roskies argues, secondly, that the skin-conductance response (SCR) data gathered on VM patients shows that they are entirely unmotivated by their normative judgments. Damasio *et al.* (1990) first performed a study in which VM patients, normal controls, and brain damaged controls were shown 40 images, 10 of which were "value-laden" pictures (e.g. pictures of a social disaster, mutilation, or nudity) and 30 of which were "neutral" pictures, in two different response conditions:

a *passive* condition, in which subjects viewed the images, but gave no verbal or motor response, and an *active* condition, in which subjects were asked to verbally describe and comment on the images shown. Citing this study, Roskies claims:

Normal subjects produce [SCRs] to emotionally charged or value-laden stimuli. In contrast, VM patients do not generally produce SCRs when presented with such stimuli. However, other tests produce normal SCRs in VM patients, demonstrating that the autonomic nervous system itself is undamaged.<sup>18</sup>

And after the experiment, some VM patients reported lacking the sort of affect that they thought they should feel in response to the value-laden stimuli.<sup>19</sup> Moreover, when Bechara *et al.* (2000b) repeated the Iowa Gambling Study and measured VM patients' and normal controls' SCRs during the task, they found that normal subjects began to produce SCRs in anticipation of choosing a card as they became experienced with the task and began to shift toward choosing cards from the safe decks. But when VM patients shifted toward choosing from the risky decks, they did not produce any anticipatory SCRs.

Roskies argues that a measurable SCR is indicative of the presence of motivation, and a lack of a measurable SCR is indicative of a complete lack of motivation:

The SCR is absent in cases in which VM patients fail to act as they judge they ought to, but is present in those cases in which they do act accordingly (Adolphs, personal communication). The evidence points to the fact that if an SCR is elicited, then motivation is present, and this provides some defeasible support for the converse: that if one is motivated, one produces an SCR.<sup>20</sup>

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<sup>18</sup> Roskies (2003) p. 57.

<sup>19</sup> Damasio *et al.* (1990) p. 89.

<sup>20</sup> Roskies (2008) p. 199-200

And since Damasio *et al.* (1990) found that normals produce SCRs to value-laden stimuli regardless of whether they *act* (i.e. in the *passive* condition), Roskies claims that the absence of SCRs cannot be merely an indication of a failure to act in accord with one's normative judgments, but must be an indication of a failure to be motivated at all by those judgments.<sup>21</sup>

Roskies thus takes the fact that VM patients produced no SCRs in response to the value-laden photos in the Damasio's study to show that VM patients fail to have the appropriate motivational response to such stimuli even though they seem to make normal normative judgments about them. And she takes VM patients' lack of anticipatory SCRs in the Iowa Gambling Task to suggest that VM patients are entirely unmotivated to choose from the safe decks, despite judging that they ought to do so.

The problem with Roskies's argument, however, is that, since motivation is necessary for any action, SCRs cannot be correlated with motivation. Consider the following three cases:

- (1) I knock a cup of coffee over because I want to stain the carpet.
- (2) I knock a cup of coffee over because I moved my leg in order to get comfortable and I didn't notice the cup in the way.
- (3) I knock a cup of coffee over because someone taps my knee with a hammer, which causes my leg to kick the cup.

My knocking over the cup in (1) is an intentional action, and my knocking over the cup in (2) is an unintentional action. But my knocking over the cup in (3) is not an action at all; it's more aptly described as an event that involves my body parts. And the relevant difference between the cases, which explains why cases (1) and (2) involve an action, but (3) does not, seems to be that in (1) and (2) my knocking over the cup is caused by some motivation that I have. In (1) I am motivated to knock over the cup, which causes me to do so, and in (2) I am motivated to move my leg, which

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<sup>21</sup> Roskies (2003) p. 59.

causes me to knock over the cup. But in case (3) my knocking over the cup is not caused by any motivation that I have; it's simply caused by an automatic response that my body has to the hammer. So, in order for some movement to be an action it must be caused by some motivation of the agent. But if motivation is necessary for any action, even in cases where VM patients act contrary to their normative judgments, they must be motivated to do so. For example, when VM patients draw from the risky decks in the Iowa Gambling Task despite judging that they ought to draw from the safe ones, they are nonetheless acting, and thus must be motivated. So, if SCRs were correlated with the presence of motivation, SCRs would be present whenever one acts, including when VM patients draw from the risky decks. But VM patients do not produce any anticipatory SCRs at all in the Iowa Gambling Task. So, SCRs are not correlated with motivation. Roskies's argument against MI thus fails because the neuropsychological evidence that she appeals to does not actually support her claim that VM patients are unmotivated by their normative judgments.

Nonetheless, Roskies's claim that VM patients form the same normative judgments as normals, but are unmotivated by those judgments, is at least compatible with the evidence. And it provides an explanation for why VM patients continually make poor decisions, despite retaining high intellect and performing well on practical reasoning tests. Moreover, one might think that Roskies's externalist explanation provides a better explanation of VM patients' behavior than any internalist explanation. The internalist may attempt to explain VM patients' behavior by claiming, as Cholbi (2006a/b) does, that VM patients do not form genuine normative judgments. But since MI concerns normative judgments of any strength, this requires claiming that VM patients do not even form very weak normative judgments. This seems implausible, given VM patients' self-reporting in the Iowa Gambling Task. Alternatively, the internalist may admit that VM patients do make normative judgments and that they are motivated by those judgments, but insist that this motivation is very weak and overridden by competing motivations. But without some account of why VM patients'

motivation to act in accord with their normative judgments is systematically weak and what their overriding motivations are, this internalist explanation seems *ad hoc*. So, VM patients may nonetheless seem to be a likely counterexample to MI.

My aim in the next section, however, is to show that this latter internalist explanation is much more plausible than it initially seems.

#### **4. Defending the Internalist Explanation**

In what follows, I defend the internalist explanation of VM patients' behavior according to which the reason why VM patients often fail to do what they judge that they ought to do is that they are only weakly motivated by their normative judgments and that this motivation is thereby easily overridden by competing motivations. In doing so, however, I do not provide any direct empirical evidence that VM patients are somewhat motivated by their normative judgments. This is because the empirical evidence seems completely silent on this issue. In fact, because motivation is necessary for any action, I doubt any empirical evidence could confirm this claim. Since motivation is necessary for any action, even if we knew what the neuropsychological correlates of motivation are and thus could detect when motivation is present, we would detect motivation even when VM patients act contrary to their normative judgments. And it's unclear how we could ever determine whether some of that measurable motivation includes at least some small amount of conflicting motivation to act in accord with the relevant normative judgment.

The best I can do to defend the internalist explanation of VM patients' behavior, then, is provide some plausible explanation for why VM damage causes VM patients to be only weakly motivated by their normative judgments, and provide a plausible account of what their overriding motivations are. So, that is what I do in this section: I argue (a) that the leading neuroscientific account of VM patients' defect, proposed by the Damasio and their colleagues, affords the

internalist with a plausible explanation for why VM damage causes VM patients to be only weakly motivated by their normative judgments, and (b) that this motivation is thereby easily overridden by VM patients' standing desires for greater and more immediate rewards.

The Damasio and their colleagues, like Roskies, take the SCR data gathered on VM patients to be crucial to understanding their defect. But, unlike Roskies, the Damasio *et al.* do not take SCRs to be correlated with motivation. Rather, they take SCRs to be indicative of a somatic state, which is “an emotional signal that helps bias the selection of an advantageous response from among an array of possible options”(Bechara *et al.* 2000a: 2199). According to the Damasio's *somatic marking hypothesis*, once a normal subject repeatedly experiences some positive or negative emotions in response to certain outcomes, the subject begins to produce autonomic somatic states (in the ventromedial prefrontal cortex) while deliberating amongst actions with similar expected outcomes. And these somatic states, the Damasio claim, serve as emotional cues that mark an action-outcome pair as having some positive or negative value during one's decision-making process, thereby making it more efficient:

When this process is overt, the somatic state is alerting you to the goodness or badness of a certain option-outcome pair. The device produces its result at the openly cognitive level. When the process is covert the somatic state constitutes a biasing signal. Using a non-conscious influence, e.g. through a non-specific neurotransmitter system, the device influences cognitive processing.

Certain option-outcome pairs can be rapidly rejected or endorsed, and pertinent facts can be more effectively processed. The hypothesis thus suggests that somatic markers normally help constrain the decision making space by making that space manageable for logic-based, cost-benefit analyses (Bechara *et al.* (2000b: 297)).

Importantly, the Damasio and their colleagues are not claiming that somatic marking enables us to make judgments about the goodness or badness of action-outcome pairs during deliberation in the first place. Rather, their hypothesis is that somatic marking is the brain's way of providing additional emotional cues that reinforce such judgments, and thereby help us sort through alternative action-outcome pairs during deliberation more quickly, by guiding our attention toward the best action-outcome pairs (and away from the worst ones).

The somatic marker hypothesis is supported by the fact that, in the Iowa Gambling Task, as normal subjects become experienced with the task, they begin to produce SCRs in anticipation of drawing cards from both the safe and the risky decks. Moreover, normal subjects produce higher amplitude SCRs in anticipation of choosing cards from the risky decks than they do in anticipation of choosing cards from the good decks. This provides further support for the Damasio's hypothesis because, if somatic states signal the value of a given outcome, we would expect that normal subjects would experience a more intense somatic state in anticipation of choosing from the risky decks, since these decks yield higher rewards and higher penalties.<sup>22</sup>

The Damasio and their colleagues thus take the fact that VM patients fail to produce anticipatory SCRs during the Iowa Gambling Task to show that VM patients fail to somatically mark possible action-outcome pairs during decision-making. That is, they take the SCR data to show not that VM patients are unable to form judgments about the value of outcomes during practical deliberation, or that they are unmotivated by those judgments, but that they fail to have the emotional responses that ordinarily accompany one's judgments about the goodness or badness of potential outcomes when engaging in practical reasoning.

Importantly, if the Damasio's account of VM damage is correct, we should expect VM patients to be less confident than normals in the normative judgments that they form during

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<sup>22</sup> The somatic marker hypothesis is based on much more research than this. Here I am just showing how their hypothesis is supported by studies already discussed.

practical deliberation. This is because, when engaging in practical reasoning, our emotional responses seem to play an important role in making us more confident in our judgments about the values of different outcomes. For example, when you consider whether to lie to a friend in order to avoid doing an annoying favor, you may experience pangs of guilt at the prospect of lying, which makes you more confident that lying would be worse than just doing the favor; when you consider whether it's permissible to torture someone in order to get valuable information, you may experience sympathetic feelings of fear and anguish that make you more confident that torturing someone is worse than not having the valuable information; or when you consider whether incest is morally wrong even when both parties fully consent and no offspring are produced, you may experience feelings of disgust that make you confident that incest is bad, even in those circumstances. So, if VM patients' somatic marking deficit causes them to lack these ordinary emotional responses that typically occur during deliberation, they should be less confident than normals in what the relative values of different action-outcomes when they deliberate. And if VM patients are less confident about the relative values of different action-outcome pairs when engaging in practical deliberation, VM patients' should also be less confident than normals in their judgments about what they ought to do.

Indeed, this is precisely what we see in Saver and Damasio's (1991) study of EVR. Saver and Damasio note that EVR only delivered a normative judgment about the Heinz dilemma after being repeatedly pressured to do so by the interviewer, and that, in the post-experimental debriefing, EVR claimed that he still would not know what to do.<sup>23</sup> This suggests that, although EVR eventually asserted some normative judgment during the experiment, he was not very confident in that judgment.

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<sup>23</sup> Saver & Damasio (1991: 1246).



So, I take the Damasio's account of VM damage to suggest that VM patients' defect is not that they are unmotivated by their normative judgments, but that they form less confident normative judgments during practical deliberation. Importantly, this claim is compatible with both a cognitivist or a non-cognitivist view. Cognitivists and non-cognitivists simply offer different interpretations of what it means for VM patients to have less confident normative judgments. The cognitivist claims that this means that VM patients form lower credences than normals in normative propositions. Whereas the non-cognitivist claims that this means that VM patients form weaker desires regarding what to do. In order to remain neutral between these views, I will simply claim that, on my account, VM patients form *weaker normative judgments* than normals during practical deliberation.

My account of VM patients' defect is also entirely neutral with respect to the internalism vs. externalism debate. It does not entail anything about whether VM patients are motivated by their weak normative judgments. But, importantly, my account is internalist-friendly because it affords the internalist with an explanation for why VM patients are only weakly motivated by their normative judgments. As discussed in §2, non-cognitivist internalists take the strength of one's normative judgment to be necessarily correlated with, and constituted by, the strength of one's corresponding motivation. So, according to non-cognitivist internalists, if VM patients form weaker normative judgments than normals during practical deliberation, they will necessarily be less motivated by such judgments. And cognitivist internalists at least claim that how strongly one is motivated by one's normative judgment will be proportionate to the strength of the normative judgment, if one is rational. So, since VM patients retain normal intellect and practical reasoning skills, and thus appear no less practically rational than normals, the cognitivist internalist too will claim that we should expect VM patients to be less motivated by their normative judgments than normals. My account of VM patients' defect thus provides the internalist (of both cognitivist and non-cognitivist stripes)

with an explanation for why VM patients are systematically only weakly motivated by their normative judgments.

All the internalist needs in order to have a fully satisfying explanation of VM patients' behavior, then, is a plausible account of what VM patients' overriding motivations are. For this, the internalist needs to identify certain motivations that are (a) universal enough so that it's plausible that all VM patients have them, and (b) the sorts of motivations that often conflict with the motivation supplied by one's normative judgments.

Standing desires for greater and more immediate rewards seem to fit this bill. These desires are fairly universal: when given the choice between one or two cookies, and having them now or later, most people want two cookies now. And they often conflict with our motivation to do what we judge that we ought to do. For example, we often judge that our long-term goals or moral obligations would be better served by choosing options that involve lesser or less immediate rewards: for example, we may judge that having one cookie later would be better for our health or allow for a fairer distribution of cookies. Indeed, the reason why we often choose options that involve less, or a less immediate, reward is that we form strong judgments that we ought to do so, which then motivates us to choose that option enough so that it outweighs our standing motivation to seek greater and more immediate rewards. So, if VM patients are less motivated by their judgments about what they ought to do than normals, but nonetheless have the same motivations that normals have for greater and more immediate rewards, then we should expect VM patients' motivations to do what they judge they ought to do to be more easily outweighed by their motivation for greater and more immediate rewards, whenever the two conflict.

In sum, then, the internalist may offer the following explanation for VM patients' behavior: due to their somatic marking deficit, VM patients form weaker normative judgments than normals during practical deliberation and are thus less motivated by such judgments. This allows their

decision-making to be overruled by the ordinary sorts of self-interested motivations that most of us have: desires for greater and more immediate rewards. This explains why VM patients systematically choose options that have a chance of yielding greater or more immediate rewards, even when they judge that they ought to choose some other option that better serves their more important long-term goals or moral obligations. For example, in the Iowa Gambling Task, even though many VM patients judge (to a weak degree) that they ought to choose cards from the safe decks, this only weakly motivates them to do so, and their stronger motivation to obtain greater rewards causes them to draw from the risky decks.<sup>24</sup>

In the following section, I argue, moreover, that my internalist-friendly account of VM patients' defect that I have offered here also explains some additional behavioral data that Roskies's account fails to explain. This shows that the internalist actually has a better explanation of VM patients' overall behavior than Roskies.

## 5. Further Behavioral Data

Poor decision-making is not the only odd behavior that VM patients exhibit. Recall Saver & Damasio's (1991) note that EVR seemed very hesitant to make normative assertions in their study: when EVR was presented with hypothetical moral situations and asked to deliver a judgment about what one ought to do in that situation, he was very reluctant to do so, and had to be continually

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<sup>24</sup> In a further study, Bechara *et al.* (2000a) created a modified version of the Iowa Gambling Task that involved immediate and delayed reward and punishment: in this task, the good decks were decks that contained cards that yielded immediate costs, but higher delayed returns, while the bad decks contained cards that yielded immediate returns, but higher delayed costs. Bechara *et al.* found that normal controls shifted toward choosing almost exclusively from the good decks, while VM patients failed to shift toward the good decks. Moreover, they repeated this experiment, but gradually increased the ratio of delayed costs to immediate returns in the bad decks, and the ratio of delayed returns to immediate costs in the good decks, throughout the trials. VM patients still failed to shift toward choosing from the good decks. The internalist explanation that I offer here gives a similar account of VM patients' behavior in this modified gambling task: VM patients judge to a weak degree that they ought to choose cards from the good decks, and are thus weakly motivated to do so, but this motivation is overridden by their motivation to have more immediate rewards.

pressed by the experimenter. Eslinger & Damasio (1985) also report that EVR was extremely hesitant in making ordinary daily decisions:

[EVR] needed about 2 hours to get ready for work in the morning... Deciding where to dine might take hours, as he discussed each restaurant's seating plan, particulars of menu, atmosphere, and management. He would drive to each restaurant to see how busy it was, but even then he could not finally decide which to choose. Purchasing small items required in-depth consideration of brands, prices, and the best method of purchase.<sup>25</sup>

And there is some evidence that hesitation in decision-making is a common problem amongst VM patients.<sup>26</sup>

My account of VM patients' defect can explain these observations simply by appealing to norms of assertion and action:

*Assert*      Don't assert that p if you are not very confident that p.

*Act*          Don't use p as a premise in your practical reasoning if you are not very confident that p.<sup>27</sup>

If EVR's failure to somatically mark outcomes causes him to be less confident regarding the value of possible outcomes and what he ought to do, *Assert* requires that EVR not assert his normative judgments, and *Act* requires that EVR not use his normative judgments as premises in his practical

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<sup>25</sup> Eslinger & Damasio (1985) p. 1732.

<sup>26</sup> Clark *et al.* (2008) conducted a study in which VM patients, brain-damaged controls, and normal controls were shown 10 boxes, some of which were red and some of which were blue; the subjects were told that an item was hidden in one of the boxes and they were asked to make a prediction as to whether the item was hidden in a red box or a blue box. Clark *et al.* found that VM patients took a significantly longer time to make a choice than normal controls. Because they found a similar difference between the response latency of brain-damaged controls and normal controls, though, Clark *et al.* claim that VM patients' long response time is probably due to a "non-specific psychomotor slowing" as a result of brain injury (Clark *et al.* (2008) p. 1317). However, Cato *et al.* (2004) found that the response latency of VM patients on many intellectual tasks that do not involve decision-making is comparable to that of normal controls. So, VM patients' long response times in Clark *et al.* (2008) seem to be indicative of hesitation in decision-making in particular. This is the only study involving VM patients in which the response latency of VM patients and normal controls in decision tasks is reported, though.

<sup>27</sup> Many philosophers think that the norms for assertion and action are stronger than this: that one should assert p or use p as a premise in practical reasoning only if one *knows* that p. For example, see Fantl & McGrath (2002), Stanley (2005), and Williamson (2000). My argument here would go through equally well, though, if the norms for assertion and action are this strong.

reasoning. Indeed, if EVR only has a low confidence regarding the value of possible outcomes when he deliberates, EVR does exactly what he should do: take more time to reflect and acquire more information before deciding what to do. Assuming that EVR is simply acting in accord with these norms of assertion and action, then, my account explains why EVR is hesitant to assert his normative judgments and to make minor daily decisions.

One might worry, though, that the internalist cannot help herself to this explanation for why EVR is hesitant to assert his normative judgments and make daily decisions. This is because one might think that the reason why people act in accord with the above norms is that they judge that they ought to do so. But if VM patients are only very weakly motivated by such judgments, and thus systematically fail to act in accord with those judgments, as the internalist claims, then we shouldn't expect EVR to follow these norms of assertion and action.

But this wrongly assumes that someone reliably abides by some norm only if she judges that she ought to do so. We often abide by certain norms not because we judge that we ought to, but because doing so is an ingrained habit that we form as a result of taking part in certain social practices. *Assert* is the sort of norm that we implicitly abide by in order to participate in a linguistic practice, and *Act* is the sort of norm that we implicitly abide by in order to avoid criticism from others. So, in assuming that EVR is acting in accordance with *Assert* and *Act*, we need not assume that EVR does so because he judges that he ought to and is motivated by this normative judgment. We need only assume that EVR follows these norms because by habit. And this is a reasonable assumption because, while the studies on VM patients indicate that VM patients repeatedly make poor decisions in their relationships, careers, and finances, they do not indicate that VM patients flout social norms like basic rules of etiquette.

In fact, my account explains why VM patients make poor relationship, career, and financial decisions, but do not flout social norms. On my account, VM patients' defect is that they form

weaker normative judgments during practical deliberation. This explains why VM patients make bad financial investments and poor choices in their relationships and careers: these are the sorts of decisions that one typically makes on the basis of some practical deliberation (though not always conscious deliberation). But when we follow norms like *Assert* and *Act*, or rules of etiquette, we typically do not do so on the basis of any practical deliberation. So, my account suggests that VM patients should have no trouble following such norms.

Roskies, on the other hand, cannot explain why VM patients are hesitant to assert their normative judgments and make daily decisions. This is because Roskies claims that VM damage does not impair one's normative judgments at all, but only severs the connection between those judgments and motivation. She thus takes VM patients to have equally strong normative judgments as normals, but to be unmotivated by them. But if EVR has strong normative judgments, *Assert* and *Act* do not require that EVR not assert his normative judgments or act on the basis of them. And Roskies's claim that VM patients are not motivated by their normative judgments does not explain EVR's behavior either. Even if EVR is not motivated to act in accord with his normative judgments, this should not affect his willingness to assert those judgments, given that they are sincere. Nor should it affect EVR's ability to make ordinary decisions: if EVR is unmoved by his normative judgments, we would not expect him to have trouble making decisions altogether, but would expect him to make decisions based purely on his current desires or impulses. The internalist explanation for VM patients' behavior that I have offered here thus explains more of the behavioral data gathered on VM patients than Roskies's.

As I mentioned earlier, though, my account of VM damage is compatible with both internalism and externalism. An externalist may thus accept my claim that VM patients only form weak normative judgments during practical deliberation, but insist that VM patients are not motivated by such judgments. This alternative externalist account of VM patients, unlike Roskies's,

can explain EVR's behavior by appealing to norms like *Assert* and *Act*, while also offering an externalist explanation for why VM patients fail to act in accord with their normative judgments. So, the internalist explanation that I offer above, while better than Roskies's externalist explanation, is not better than any externalist explanation.

But recall that in order to defend MI against proposed counterexamples, the internalist need only show that she has an equally good explanation of the relevant agent's behavior in those cases as the externalist. So, my showing that the internalist has at least as good of an explanation of VM patients' behavior as any externalist alternative suffices to defend internalism.

## 6. Conclusion

VM patients thus do not constitute straightforward counterexamples to internalism, nor do they provide abductive grounds for rejecting it. Contrary to what Roskies's claims, the neuropsychological data is silent as to whether VM patients are motivated by their normative judgments. That data does suggest, however, that VM patients only form weak normative judgments after their injury. And this affords the internalist with an explanation for VM patients' behavior that is at least equally good as any externalist explanation.

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