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A Note on Cognitive Dissonance and Malingering

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This paper proposes that malingered symptoms may become internalized due to the self-deceptive power of cognitive dissonance. Studies demonstrating how other-deception may turn into self-deception are briefly discussed, as are clinical notions about the overlap between malingering and medically unexplained symptoms. In our view this literature showcases the relevance of cognitive dissonance for research on malingering. A cognitive dissonance perspective may help to clarify how ambiguous sensations may escalate into subjectively compelling symptoms. This perspective suggests that malingered symptom reports are more than just a complication during psychological evaluation. It may generate new research avenues and may clarify practically relevant issues.

INTRODUCTION

Neuropsychological research on malingering is a burgeoning field. Berry and Nelson (2010) counted more than 1200 peer-reviewed papers on the topic over the past two decades. Likewise, Sweet and Guidotti Breting (in press) summarized the extant literature and concluded that with the steep incline in empirical studies on malingering, the number of literature reviews also increased. These authors identified 13 meta-analytic articles addressing tests that intend to detect malingering (i.e., symptom validity tests).

The keen interest that neuropsychologists take in symptom validity tests is understandable because ruling out malingering is one of their priorities during the forensic assessment of patients. As a result, many studies in this domain have focused on the development and refinement of symptom validity tests, while conceptual issues have been given less consideration (see also Berry & Nelson, 2010). One such issue concerns the nosological status of malingering. Is it a discrete class of behaviors that can be sharply differentiated from genuine clinical conditions? According to many authors (e.g., Rogers, 1990), malingering is not a clinical condition but rather behavior governed by a cost–benefit analysis.

The current paper takes a different approach. Its central idea is that, due to cognitive dissonance, malingered symptoms may become internalized, such that the symptoms are subjectively experienced as real. Our paper will take the following form. First we briefly canvass data on the prevalence of malingering and discuss

why cognitive dissonance is relevant for understanding the sequelae of malingering. We then summarize laboratory evidence for the continuity between fabricated and authentic experiences and sketch a cognitive dissonance interpretation of this continuity. Next we look at the clinical overlap between malingering and medically unexplained symptoms and argue that at least part of this overlap may reflect a transition from other-deception to self-deception propelled by cognitive dissonance. We conclude with the clinical implications and the research questions that flow from a cognitive dissonance perspective.

MALINGERING: WHY IT EVOKES COGNITIVE DISSONANCE

The steady growth in papers on malingering since the early 1990s is remarkable in light of the deep-rooted criticism that it represents a rare phenomenon (e.g., Drob, Meehan, & Waxman, 2009). Several research lines have rendered this criticism obsolete. For example, the much-cited survey by Mittenberg, Patton, Canyock, and Condit (2002; see for a replication, Sharland & Gfeller, 2007) found that experienced neuropsychologists estimate the prevalence of malingering in patient referrals from civil (e.g., personal injury cases) and criminal legal settings to be in the 10–30% range. Another indication for the non-trivial prevalence of malingering comes from studies that administered symptom validity tests to patients involved in some form of litigation or disability-related evaluation. Many of these studies concluded that the prevalence of suspicious performance on symptom validity tests exceeds the 10–30% range in compensation-seeking individuals who claim mild traumatic head injury (e.g., Armistead-Jehle, 2010), whiplash injury complaints (e.g., Schmand et al., 1998), attention deficit disorder (e.g., Sullivan, May, & Galbally, 2007), post-traumatic stress disorder (e.g., Merten, Thies, Schneider, & Stevens, 2009), or fibromyalgia (e.g., Gervais et al., 2001). Strikingly, these conditions share a number of non-specific complaints, like fatigue, headache, dizziness, blurred vision, and concentration difficulties, which overlap to a considerable degree with what has been dubbed *medically unexplained symptoms*. These symptoms have a high prevalence rate in primary care institutions (Hatcher & Arroll, 2008).

Even in non-forensic samples malingering is far more pervasive than typically appreciated. For example, Van Egmond and Kummeling (2002; see also Dandachi-FitzGerald, Peters, Ponds, & Merckelbach, 2011) interviewed psychiatric outpatients about their *hidden agendas,* a term that refers to incentives (e.g., disability compensation, study privileges, stimulant medication) that individuals associate with the patient status and of which their therapists are often unaware. The authors noted that 42% of the patients admitted to have such a hidden agenda. Van Egmond and Kummeling also observed that the treatment outcome for this group was worse than for patients without a hidden agenda.

People can be easily instructed to malinger symptoms. Furthermore, instructed malingerers have strong opinions about symptoms that are easy to fabricate in a convincing way and symptoms that are difficult to malinger and should therefore be avoided (Dandachi-FitzGerald & Merckelbach, in press). Clearly, diagnoses that heavily rely on non-specific symptoms lend themselves easily to malingering (Hall & Hall, 2006).

Although malingering is well within the range of healthy people's repertory, many of them view diagnostic labels that allude to malingering as offensive, and generally regard malingering as morally unacceptable (Stone et al., 2002). Neuroimaging studies have revealed that deceptive fabrication incurs cognitive and emotional processing cost, precisely because it is more cognitively demanding than truth telling (e.g., Spence, Kaylor-Hughes, Brook, Lankappa, & Wilkinson, 2008). Thus, given that it involves effortful withholding of the truth, malingering can be expected to produce cognitive dissonance.

The principle of cognitive dissonance was first described by social psychologist Leon Festinger (e.g., Festinger & Carlsmith, 1959). Its essential feature is that people strive for consistency. Whenever beliefs (e.g., "I'm an honest person"; "I'm a healthy person") that people hold are challenged by their actions (e.g., intentionally misreporting symptoms), a conflict-laden state occurs. Typically, people will attempt to resolve this state by changing their beliefs and this may amount to self-deception ("I really suffer from symptom X"). Festinger and Carlsmith (1959) demonstrated that other-deception may turn into self-deception, particularly when incentives are relatively modest. Self-deception is less likely to occur when there is an obvious justification for the conflict between behavior and beliefs (e.g., receiving a strong incentive for fabricating a lie or being told that one is not responsible for one's behavior; see for an extensive analysis: Bayer, 1985).

Importantly, the self-deceptive power of cognitive dissonance is not limited to beliefs. For example, Zimbardo, Cohen, Weisenberg, Dworkin, and Firestone (1966) paid volunteers high or low incentives to receive a series of shocks, while their performance on a secondary task was monitored. Participants who had been given low incentives reported less pain and shocks interfered less with their secondary task performance relative to high incentive and control participants. Apparently, the low incentive participants had deceived themselves into believing that the shocks were not that bad. The well-documented phenomenon that cognitive dissonance tends to induce self-deception may help to explain why and when fabricated experiences may develop into genuinely felt experiences.

CONTINUITY BETWEEN FABRICATED AND GENUINE EXPERIENCES IN THE LABORATORY

A telling example of how people may come to believe in the reality of their fabrications is provided by Polage (2004). This researcher had her participants evaluate the probability of several childhood events (e.g., having experienced a hospitalization overnight). Next they were instructed to fabricate stories about some of the events they previously had evaluated as unlikely. During a follow-up session 1 week later, participants were again asked to evaluate the likelihood of the childhood events. Polage found that a significant minority (i.e., 10–16%) eventually came to believe the autobiographical stories they had fabricated. Recent replications (Polage, 2012) speak to the robustness of this phenomenon and also documented that participants who said that they felt uncomfortable about their fabrications were eventually more likely to believe their self-generated lies than those who did not feel uncomfortable. This finding is perfectly in line with the notion that fabrication induces dissonance, which in turn escalates into self-deception.

More pertinent to malingered symptoms are studies that observed a memory undermining effect of fabricated amnesia. In these studies undergraduate students were asked to commit a mock crime. Next they were instructed either to malinger amnesia for the event or to respond honestly on a memory test about the staged crime. When instructed malingerers were asked 1 week later to give up their role as amnesiacs, they nevertheless performed worse on a memory test of the crime details compared with controls (Van Oorsouw & Merckelbach, 2004). A similar residual effect of fabrication was reported by Merckelbach, Jelicic, and Pieters (2011a), who instructed undergraduates to feign symptoms on a self-report instrument tapping a range of atypical symptoms. Participants who first feigned symptoms, but later—after 1 hour—were asked to report honestly, endorsed more symptoms at re-test compared with honest controls.

Collectively, these and a number of other studies (reviewed by Von Hippel & Trivers, 2011) indicate that some individuals become so deeply involved in their own fabrications—which may pertain to autobiographical fiction or false symptoms—that they lose sight of the conscious origins of their fabrications.

MALINGERING AND GENUINE SYMPTOMS

As noted before, the bulk of the neuropsychological literature on malingering addresses technical aspects of symptom validity tests. Authors often take it for granted that there exist sharp demarcation lines between malingering and somatoform symptoms (e.g., chronic pain, conversion phenomena, hypochondriasis). In doing so they follow the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV TR; American Psychiatric Association, 2000), which assumes that malingering and somatoform disorders are non-overlapping entities. Historically, this can be traced back to the days that somatoform symptoms were categorized as manifestations of hysteria and the dominant view was that hysterical patients truly suffer from their illness conviction, whereas malingerers pretend having symptoms and fully know that they pretend (Goetz, 2007).

Many pioneers in psychiatry, however, emphasized the continuity between malingering and hysteria. For example, in his *Manual of Psychiatry,* Rosanoff (1905, p. 314) wrote: "Opinions differ as to when a diagnosis of hysteria should be made and when one of malingering would be justified. Yet even those who hold opposite views are agreed as to there being a close similarity in the clinical manifestations of the two conditions and as to there being great difficulty in establishing the differentiation in practice" (for another example see Jones & Llewellyn, 1917).

More recent studies echo Rosanoff's position. For example, Jonas and Pope (1985) examined malingerers and patients who suffered from somatoform or factitious symptoms and observed that the symptoms reported by these groups had a similar age of onset, a similar chronic course, a similar comorbidity with other symptoms, and a similar insensitivity to therapeutic interventions. A study of Kemp et al. (2008) further underlines this point. These authors found that 30% of a sample of patients with somatoform symptoms failed on at least one symptom validity test, while 11% failed on two symptom validity tests (see for a similar finding: Boone & Lu, 1999). Other clinicians concur that individuals who fabricate symptoms can

often not be distinguished from patients with somatoform symptomatology (e.g., Boone, 2007; Krahn, Bostwick, & Stonnington, 2008; Merten, 2001; Turner, 1997).

Some authors have recommended *medically unexplained symptoms* as an etiologically neutral and therefore more appropriate label to capture the core symptoms involved in somatoform disorders. Although this label has been criticized for its imprecision (e.g., Creed et al., 2010), we will use it as an equivalent of somatoform disorders (see also Rief & Broadbent, 2007). The tendency to ruminate and catastrophize about benign, non-specific bodily sensations has been recognized as a key feature of medically unexplained symptoms (Brown, 2004). This tendency typically produces inflated symptom reports and as such, is difficult to distinguish from symptom exaggeration.

The most prevalent unexplained symptoms in primary care institutions involve complaints with a significant subjective component (e.g., pain, fatigue, dizziness; see Brown, 2004). A suggestive clue that some patients who seek professional help for these symptoms may have started their careers with intentional symptom exaggeration is provided by a follow-up study that looked at the prognosis of patients with medically unexplained motor symptoms. Pending litigation and financial benefits at the time of hospital admission were associated with poor outcome (Crimlisk et al., 1998). Also germane to this issue is a study by Schrag, Brown, and Trible (2004), who interviewed patients with medically unexplained symptoms and control patients about past medical diagnoses. Patients with medically unexplained symptoms not only reported larger numbers of previous medical diagnoses, but also reported diagnoses that were not substantiated by their medical records or were even contradicted by the files.

Taking the fluidity of malingering and medically unexplained symptoms as a starting point, many review papers have proposed fundamental revisions of the DSM-IV taxonomy (e.g., Bass & Halligan, 2007; Turner, 2006). They have failed, however, to raise the question where this fluidity stems from. We suggest that the self-deceptive power of cognitive dissonance may contribute to the overlap between malingering and medically unexplained symptoms. Malingering is as a form of other-deception. Its key element is an intentional attempt to mislead others with fabricated symptom so as to obtain benefits (Travin & Protter, 1984). Medically unexplained symptoms, on the other hand, contain an element of self-deception. The patient convinces herself that she suffers from symptoms—pain, fatigue, concentration difficulties, memory problems, and so on—while knowing that there is no medically plausible cause. Some authors have described these conditions as a form of pretending to be sick while forgetting at the same time that one is involved in make-believe (Jureidini & Taylor, 2002).

Clinicians have long noted that other-deception may develop into self-deception. Rosanoff (1905, p. 314), for instance, wrote that a case "may begin with conscious deception and end with unconscious self-deception." This observation was also made by Schneck (1970), who coined the term pseudo-malingering to refer to patients who start out to deliberately feign symptoms and then gradually begin to suffer from these symptoms. Somewhat similarly, Kopelman (2000) pointed out how difficult it is to differentiate between cases of feigned and hysterical amnesia. He argued that these categories can best be viewed as the end-points along a

dynamic continuum and that it is possible that people who initially malinger memory loss gradually come to believe in their own script.

Delis and Wetter (2007, p. 594) noted in their seminal paper that "some individuals may begin to feign symptoms intentionally and consciously in reaction to an external incentive (e.g., a lawsuit). However, these individuals may gradually, and perhaps unconsciously, assume a progressively worsening sick role due to (a) a prolongation in obtaining the external incentive and (b) increased skepticism and questioning on the part of family members, co-workers, or health providers about the authenticity of the individual's complaints." We would argue that the exacerbating factors identified by Delis and Wetter (2007) are the ones that intensify cognitive dissonance.

AMBIGUOUS SYMPTOMS AND MISINFORMATION

Arguably, ambiguous symptoms like pain, fatigue, concentration difficulties, and other subjective experiences that reflect general malaise are more sensitive to self-deceptive maneuvers than objectively identifiable symptoms that have little subjective concomitants (e.g., high blood pressure; air way obstruction; see Turner, 2006). Evidence for this comes from studies indicating that misinformation escalates ambiguous symptoms, but not objective symptom parameters. For example, false feedback of asthmatic wheezing sounds elicits reports of breathlessness in asthmatic children, although objective indices of lung functioning are not affected (Rietveld, Kolk, Prins, & Colland, 1997). Similarly, false heart rate feedback increases anxiety in panic patients, while their objective cardiovascular measures do not increase significantly (Ehlers, Margraf, Roth, Taylor, & Birbaumer, 1988). Experiments in our lab show that when healthy people are misled to believe that they previously scored relatively high on vague psychological symptoms (e.g., having intrusive thoughts, having memory difficulties, worrying too much, concentration difficulties), this will boost their ratings of these symptoms. However, such a misinformation effect only occurs when participants fail to notice the discrepancy between their original ratings and the misinformation (Merckelbach et al., 2011a). In this "blind" subgroup, the escalating effects of misinformation on symptom reporting are still present at 1-week follow-up testing (Merckelbach, Jelicic, & Pieters, 2011b).

These findings are reminiscent of the extensive research on how misinformation may create robust pseudo-memories. Thus confronting individuals repeatedly with false information about a fictitious event (e.g., as a child having had a skin sample removed as part of a medical procedure), leads many of them to develop detailed recollections of this event. Such false recollections are often retained when participants are confronted with contradictory evidence (Frenda, Nichols, & Loftus, 2011).

Even subtle misinformation might inflate reports of vague symptoms. For example, Castro et al. (2001) exposed a group of healthy adults to a placebo collision, in which biomechanical acceleration was nearly absent, while participants were led to believe (by presenting them with sounds and debris) that they had been involved in a serious rear-end collision. At a pre-test none of the participants had any whiplash-associated symptoms, but within 3 days of the collision almost 30% of

them had vague symptoms such as poor concentration, fatigue, headache, and neck pain. This study illustrates that it is relatively easy to induce people to overinterpret benign symptoms. If subtle cues given by others can have such an effect, one would expect cues that people give themselves also to be able to induce such overinterpretation.

Studies that looked at symptoms in people who are trained to play patient roles to medical students (i.e., simulated patients) are consistent with the self-deception scenario. A majority of simulated patients experience a raise in non-specific symptoms after they have been required to play a difficult role, and this increase in symptomatology sometimes lasts several days (e.g., Bokken, van Dalen, & Rethans, 2004). It has been argued that the stress implicated in enacting the patient role in front of students is responsible for this increase, but another distinct possibility is that cognitive dissonance and its self-deceptive effects may contribute to non-specific symptom reporting. This possibility should not too readily be dismissed given that many simulated patients feel that they are underpaid for their difficult job (McNaughton, Tiberius, & Hodges, 2009).

PRIMING AND FEEDBACK

For most neuropsychologists malingering is a rule-out option during the early phase of diagnostic decision making. They will not conceptualize it as a condition that requires some sort of intervention. However, the cognitive dissonance perspective suggests that malingering may be the first stage in what is going to be a significant health problem. To the extent that cognitive dissonance may turn other-deception into self-deception, trying to stop individuals from articulating their malingered symptoms serves an important therapeutic goal. Specifically, the cognitive dissonance framework implies that the more health care practitioners provide patients who invent or grossly exaggerate symptoms with opportunities to engage in other-deception—e.g., by ordering additional examinations, consultations, interviews, and diagnostic tests—the stronger the self-deceptive effects eventually will be, thereby producing a class of vague, non-specific complaints that the person comes to experience as subjectively compelling (see for a similar analysis see Page & Wessely, 2003).

How can self-deception and symptom escalation be avoided? Lab studies with instructed malingerers found that just warning simulators that feigned symptoms may be detected does not always deter malingering (e.g., Sullivan & Richer, 2002), but rather mitigates symptom reports and makes cognitive complaints less excessive (Gorny & Merten, 2005). From a cognitive dissonance point of view, this is understandable: warning has limited relevance to people's self-concept and therefore its effects can be expected to be modest. A more effective strategy might be to remind potential malingerers of their self-concept of being honest people, such that they anticipate massive dissonance if they would engage in malingered symptom reports. Priming with honesty standards would therefore be expected to reduce manifestations of malingering. The work of Mazar, Amir, and Ariely (2008) demonstrates that priming might be a promising pre-testing intervention. These authors found in a series of experiments, in which participants could earn money by cheating, that priming participants with a moral code decreased levels of cheating

relative to those in no-prime control groups. An initial attempt to eliminate malingering tendencies through priming with moral codes—i.e., by having participants fill out a questionnaire about their virtues—yielded mixed results (Merckelbach & Collaris, 2012), but more systematic lab studies with instructed simulators are warranted to explore this issue more fully.

Pre-test priming might be helpful when deterrence of malingered symptom reports has priority. Once individuals have been found to exhibit excessive symptomatology on symptom validity tests, certain feedback interventions may be able to reduce the self-deceptive effect of cognitive dissonance. There is not much literature on how to provide feedback to persons who present with malingered symptom reports, and the papers that have been published are based on clinical intuition rather than empirical evidence. Some practitioners have suggested that with some malingerers, a confrontational approach may work (Berlin, 2007). Other experts have recommended a more diplomatic approach that is based on data and facts and that avoids an accusatory tone (e.g., Carone, Iverson, & Bush, 2010). It is the diplomatic approach that would seem to be most consistent with a cognitive dissonance analysis. Confrontational feedback will probably increase the emotionally laden dissonance that the person experiences, thereby fuelling self-deceptive effects. Other ideas about how feedback can be shaped on the basis of cognitive dissonance principles can be found in Bayer (1985), who noted that dissonance and its self-deceptive effects will be strongest when the person has a sense of control and anticipates relatively modest incentives. Thus, to the extent that malingered reports can be reframed as a form of involuntary behavior for which the person is less responsible, one expects a reduced need to justify the behavior and, accordingly, small or no self-deceptive effects. Likewise, feedback that stipulates the large incentives that can be obtained with malingered symptom reports would be predicted to reduce the need to justify malingering by engaging in self-deceptive maneuvers (Ludwig, 1981; but see Bianchini, Curtis, & Greve, 2006).

CONCEPTUAL ISSUES

Clearly the cognitive dissonance framework is too simple to explain each and every aspect of the overlap between fabricated and medically unexplained symptoms. To begin with, in the spirit of Ockham's razor—explanatory simplicity should be preferred—we have posited a single spectrum of self- and other-deception. However, it might well be the case that there are two independent dimensions: one reflecting degrees of other-deception and a second dimension reflecting degrees of self-deception. By this view, pure malingering would involve high other-deception and low self-deception, whereas the opposite pattern would characterize pure medically unexplained symptoms. In a thoughtful chapter Boone (2007) has elaborated on this two-dimensions conceptualization and looked at its ramifications for diagnostic decision making. Future research is needed to evaluate the merits of a one-dimension versus two-dimensions account of the overlap between malingering and medically unexplained symptoms. Such research could benefit from older papers describing paradigms to elicit and measure other- and self-deceptive tendencies (e.g., Gur & Sackheim, 1979).

Second, the cognitive dissonance framework predicts that patient careers shift from malingering to medically unexplained symptoms. Evidently, this can be only part of the story. (Eisendrath 1996; Eisendrath & McNiel, 2002), for example, commented on the porous boundaries between malingering, factitious disorders, and somatization and presented case vignettes of patients with abnormal illness-affirming behavior who entered the civil litigation arena (e.g., malpractice litigation against physicians) and from that point onwards started to exhibit malingering tendencies. The different trajectories that patients who exaggerate symptoms might follow merit more sustained and systematic research.

Third, the self-deceptive power of cognitive dissonance may help to create medically unexplained complaints, but research has made it clear that there are other, and perhaps more important, antecedents involved in the etiology of these complaints. Brown (2004) has pointed out that an overattentive focus on normal bodily sensations or minor physical ailments contribute to medically unexplained symptoms. In line with this, experimental studies have found that anxious affect, through the attentional bias for potentially threatening information that it creates, is associated with overreporting of momentary symptoms (Suls & Howren, 2012). Boone (2009) coined the term neurocognitive hypochondriasis, which can be viewed as a clinical analogon of anxious inflation of symptom reports. In sum, then, it is likely that there are several etiological pathways to medically unexplained symptoms and research has only just begun to unravel the basic mechanisms that operate in these pathways.

CONCLUSION

Individuals who fabricate symptoms will have to make an investment of time and effort in order to convince doctors or lawyers of the authenticity of their symptoms. The dissonance that these individuals experience, and that centers on the conflict between their fabrications and their self-definition of being honest people, creates opportunities for self-deceptive effects (e.g., Bayer, 1985). Inflated symptom reports may set into motion invasive investigations, overdiagnosis, and excessive treatments, which all have the power to further increase dissonance and, in its wake abnormal illness beliefs (e.g., Gunstad & Suhr, 2004).

However, the cognitive dissonance framework does not claim that all medically unexplained symptoms start as malingered symptom reports. Rather it describes how malingering may develop into medically unexplained illness behavior that involves vague and ambiguous complaints. It has been recognized that the iatrogenic potential for such symptoms is high (Hatcher & Arroll, 2008). Hence it would seem that neuropsychologists have an important role to play not only in detecting malingered symptom reports, but also in intervening such that self-deceptive effects are minimized. The cognitive dissonance framework may provide a basis for developing an articulated research agenda on how priming and feedback interventions may help to avoid self-fulfilling prophecy effects of malingering.

Laboratory research with instructed simulators may be a first step in evaluating the merits of these interventions. Yet the cognitive dissonance framework has an important message for experimental psychologists too. The typical paradigm that experimentalists in this research field employ is one in which participants are

given a case vignette about a disorder (e.g., mild brain injury) and then are instructed to simulate this disorder in a convincing way, after which they are given symptom validity tests. Cognitive dissonance, however, will only emerge when individuals are under the impression that they are personally responsible for their malingered reports (Bayer, 1985). Thus it would seem paramount that experimentalists employ a paradigm in which participants can freely choose whether or not they want to engage in excessive symptom reporting. There are good examples of such paradigms in the lie detection literature (e.g., Carrion, Keenan, & Sebanz, 2010). These studies indicate that intentional lying produces other patterns of results than forced lying.

In our view the cognitive dissonance framework has heuristic value and might inspire new research lines addressing malingering and its consequences. We anticipate that this research will conclude that there is much truth in Ludwig Wittgenstein's remark that "nothing is so difficult as not deceiving oneself".

FUNDING

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