



Self-Fulfilling Prophecies: Mechanisms, Power, and Links to Social Problems

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Abstract

A core theme of social psychology is that perceivers can shape targets' future behaviors through self-fulfilling prophecies. Self-fulfilling prophecies occur when perceivers' false beliefs about targets initiate a sequence of events that ultimately cause targets to exhibit expectancy-consistent behaviors, thereby causing perceivers' initially false beliefs to become true. This article reviews theory and research relevant to self-fulfilling prophecies with particular foci on the underlying mechanisms that produce self-fulfilling prophecies, the power of self-fulfilling prophecies to alter behavior, and the extent to which self-fulfilling prophecies contribute to social problems.

Psychology has long emphasized the power of beliefs to shape reality (e.g., Klein & Snyder, 2003; Merton, 1948; Rosenthal & Jacobson, 1968; Snyder, 1984, 1992; Snyder & Stukas, 1999). The emphasis on the construction of social reality has roots in *New Look in Perception* research of the 1940s and 1950s which promoted the idea that perception is heavily influenced by people's goals, needs, fears, and motives. The self-fulfilling prophecy is central to this theoretical perspective because it involves the behavioral confirmation of false beliefs (Merton, 1948). In this article, we discuss the self-fulfilling prophecy, beginning first with its definition followed by a brief discussion of its history within the social sciences. We then discuss three issues that have driven much of the research in the area. These issues pertain to underlying mechanisms of self-fulfilling prophecies, the power of self-fulfilling prophecies to alter behavior, and the extent to which self-fulfilling prophecies contribute to social problems.

Definition

A self-fulfilling prophecy is a false belief that leads to its own fulfillment. This process involves three, core events (Darley & Fazio, 1980; Harris & Rosenthal, 1985; Jones, 1986; Jussim, 1986; Snyder, 1984). First, one person (a perceiver) must hold a false belief about another person (a target). For example, a teacher may underestimate a student's ability, believing that the student is less capable than the student truly is. Second, the perceiver must treat the target in a way that matches her or his false belief. A teacher who underestimates a student's ability would have to treat the student as if she or he lacked ability, perhaps not calling on the student, spending little time with the student, and tracking the student into a low ability group (Rosenthal, 1973; Smith et al., 1998). Third, the target must respond to the treatment she or he receives by confirming the originally false belief. The student who is treated as if she or he lacks ability must learn less than other students in the class, thereby

confirming the teacher's originally false belief. Thus, a self-fulfilling prophecy occurs when a perceiver's false belief influences how she or he treats a target which, in turn, shapes the target's subsequent behavior in the direction of the initially false belief.

History

The foregoing example highlights the fact that social psychology has typically conceptualized the self-fulfilling prophecy as an interpersonal process involving two people. Historically, however, this was not always the case. The self-fulfilling prophecy was introduced to the social sciences by sociologist Merton (1948). Consistent with sociological perspectives, Merton proposed that the self-fulfilling prophecy was capable of creating large-scale social problems that involved many people. As an illustration, Merton described how early in the twentieth century, African Americans were barred from joining labor unions on grounds that they were strikebreakers. As a result of this practice, African American laborers had few job opportunities; a situation that forced them to take any work that presented itself, including work that became available when White union laborers went on strike. Thus, according to Merton, the shared belief that African Americans were strike breakers caused them out of necessity to become strike breakers, thereby creating a self-fulfilling prophecy.

Despite the importance of Merton's analysis, empirical tests of the self-fulfilling prophecy did not flourish until 20 years later when Rosenthal and Jacobson (1968) published the results of a groundbreaking experiment showing that teachers' expectations had self-fulfilling effects on students' IQs. Though Rosenthal and Jacobson's experiment emphasized Merton's proposition that self-fulfilling prophecies can create social problems, their research took a social psychological approach in the sense that it conceptualized the self-fulfilling prophecy as an interpersonal process involving two people; a conceptualization that continues to dominate research on self-fulfilling prophecies within social psychology.

Rosenthal and Jacobson (1968) hypothesized that one reason disadvantaged students may perform more poorly in school than their more advantaged counterparts is because that is what their teachers expect of them, and they wondered if disadvantaged students might perform better if their teachers expected them to improve academically. To test this, they told elementary teachers that Harvard researchers had created an IQ test that could identify 'intellectual blooming'. They then told the teachers which students had been identified by this test as one of these late bloomers, students who would have substantial gains in their IQs during the school year. In reality, there was no special test to measure intellectual blooming. Students had simply been administered an IQ test, and random assignment determined which students would be labeled as the late bloomers. Because the late bloomers were randomly chosen, they were no different from any other students except for their teachers' expectations for them. Therefore, any difference between their IQs at the end of the school year could only be attributed to a self-fulfilling prophecy, which is what Rosenthal and Jacobson found. By the end of the school year, the late bloomers had significantly greater IQ gains than other students.

Rosenthal and Jacobson's experiment was a landmark study. Not only did it provide early empirical support for the idea that beliefs can shape reality via self-fulfilling prophecies, but it also generated important questions that continue to drive much of the theoretical and empirical work in the area. We focus next on three questions that we believe have been particularly instrumental in furthering the field's understanding of self-fulfilling prophecies.

What are the Mechanisms through Which Perceivers Create Self-Fulfilling Prophecies?

Rosenthal and Jacobson's (1968) research supported the idea that perceivers can shape targets' behaviors through self-fulfilling prophecies, but it did not specify the mechanisms underlying these effects. Thus, their findings ignited a strong interest in understanding the behaviors through which perceivers transmit their beliefs to targets. The findings of this literature have been the focus of several reviews. Rosenthal (1973) and Brophy (1983) reviewed mediators of teachers' self-fulfilling effects on students' academic outcomes. Rosenthal focused on broad dimensions of behavior that transmit teachers' false beliefs to students including the degree to which teachers (1) create a warm and friendly environment for students, (2) provide students with opportunities to develop their skills, (3) provide students with opportunities to practice their skills, and (4) provide students with performance-based feedback. Brophy (1983) listed 17 specific behaviors that had been identified by previous studies as mediators of teachers' self-fulfilling effects. These included waiting less time for low versus high expectancy students to answer a question, and giving low expectancy students less praise relative to high expectancy students. In addition, Harris and Rosenthal (1985) performed a meta-analysis of 136 studies relevant to the mediation of self-fulfilling prophecies. They identified 15 behaviors exhibited by perceivers during interactions with targets that were significantly related to targets' behaviors. These included a positive climate, praise, eye contact, smiles, speech rate, and frequency of interactions, among others. Thus, the literature addressing mediators of self-fulfilling prophecies has advanced the field by virtue of delineating both specific behaviors and broad dimensions of behavior that operate as mediators of self-fulfilling prophecies.

However, this literature has also been criticized on grounds that many of the identified mediators apply only to a single context, such as the classroom. Indeed, over 75% of research addressing the mediation of self-fulfilling prophecies focused exclusively on behaviors that mediate teachers' self-fulfilling effects on students' achievement (Harris & Rosenthal, 1985). This fact has led some self-fulfilling prophecy researchers to call for a more theoretically driven approach to the study of mediation, one that aims to explain how self-fulfilling prophecies operate across a broad spectrum of life situations (Harris, 1993; Harris & Rosenthal, 1985).

In an attempt to answer this call, Madon et al. (2008) examined whether self-verification processes mediated self-fulfilling prophecies. Self-verification theory (Swann, 1987) posits that people have a basic desire to confirm their self-concepts. According to the theory, confirming one's self-concept – even when it is negative – is both existentially pleasing because it provides a stable sense of self and pragmatically advantageous because it creates a more predictable social environment (e.g., McNulty & Swann, 1994; Swann, 1987; Swann, Rentfrow, & Guinn, 2002). Madon et al. examined whether self-verification processes mediated self-fulfilling prophecies with longitudinal data obtained from nearly 500 mothers and their adolescent children, using adolescents' alcohol use as the outcome. Their findings supported the hypothesized mediational process by showing that adolescents first internalized their mothers' false beliefs about their likelihood of drinking alcohol and then self-verified those beliefs through their subsequent alcohol use. On average, self-verification processes accounted for 40% of mothers' total self-fulfilling effect on adolescents' subsequent alcohol use.

Although Madon et al. (2008) observed their results with respect to adolescent alcohol use, self-views are often regarded as causes of important outcomes across contexts (Swann, Chang-Schneider, & Larsen McClarty, 2007). Accordingly, it is possible that the

tendency for self-verification processes to mediate self-fulfilling prophecies could affect a range of outcomes (Snyder, 1984; Snyder & Swann, 1978). Recent research by Scherr, Madon, Guyll, Willard, and Spoth (2011) investigated this idea by testing whether self-verification processes mediated self-fulfilling prophecies within a different context and with a different belief and outcome than had been used by Madon et al. Scherr et al. examined whether mothers' false beliefs about their adolescents' educational outcomes altered their adolescents' subsequent beliefs about the amount of schooling they expected to obtain, and whether those altered self-views influenced adolescents' postsecondary educational attainment. Their results, which were based more than 300 mothers and their adolescent children, provided strong support for the hypothesized mediational process. Across a 6 years span, adolescents internalized their mothers' false beliefs about how much schooling they would likely attain and then self-verified those beliefs through their actual educational attainment. In these data, too, self-verification processes mediated 40% of mothers' total self-fulfilling effects.

The results reviewed above are important for several reasons. First, they support the long-standing hypothesis that perceivers can alter targets' outcomes by virtue of changing targets' self-views (Brophy, 1983; Darley & Fazio, 1980; McNulty & Swann, 1994; Snyder, 1984; Snyder & Swann, 1978). Second, they demonstrate that this process can have enduring effects. Third, and most importantly from a theoretical standpoint, these results suggest that self-verification may function as a general mediational process of self-fulfilling prophecies that operates in a variety of contexts and social relationships. Despite these advances, however, very little is known about general psychological processes that mediate self-fulfilling prophecies, thereby underscoring the need for future research to examine this issue.

How Powerful are Self-fulfilling Prophecy Effects?

Rosenthal and Jacobson's (1968) findings were interpreted by some as powerful (see Jussim & Harber, 2005; for a review). However, as Jussim and Harber (2005) discuss in their review of the teacher expectation literature, closer examination of the findings reveals that the effects Rosenthal and Jacobson observed are more appropriately characterized as modest. Although it can be argued that teachers did have sizable self-fulfilling effects on the youngest students (1st and 2nd graders), teachers' overall self-fulfilling effects were considerably smaller when all elementary grades were considered. Across all six grade levels (1st through 6th), the late bloomers showed only a four point IQ advantage over the other students by year's end. This is a small effect, corresponding to .15 in terms of a correlation coefficient (Rosenthal, 1985). Further, it turned out that the small effects that emerged in Rosenthal and Jacobson's research was not anomalous. Experimental, correlational, and meta-analytic investigations have converged on the same conclusion (for reviews, Jussim, Eccles, & Madon, 1996; Rosenthal, 2002, 2003).

One factor that limits the power of self-fulfilling prophecies is perceptual accuracy (Jussim et al., 1996; Madon et al., 1998). Perceivers in naturalistic settings typically have access to valid information about targets that enable them to develop relatively accurate beliefs at the outset (Madon, Guyll, Spoth, Cross, & Hilbert, 2003; Madon et al., 2001). Because only false beliefs can be self-fulfilling (Merton, 1948), the availability of valid information limits the power of naturally occurring self-fulfilling prophecies (Jussim, 1991; Madon et al., 2001). For example, teachers' access to students' grades and standardized test scores at the beginning of the year enables them to develop highly accurate expectations about students' future achievement, thus reducing their self-fulfilling

influence. Nonetheless, this does not mean that self-fulfilling prophecies are always small. Effect sizes are averages. Under certain conditions, and for certain targets, self-fulfilling prophecies may be more powerful than average effect sizes indicate (e.g., Jussim et al., 1996; Madon, Jussim, & Eccles, 1997; Snyder, 1992).

Accordingly, much of the work addressing self-fulfilling prophecies has focused on moderators. This literature, which includes both naturalistic and experimental studies, has identified myriad factors that influence the power of self-fulfilling prophecies. For example, favorable expectations typically have stronger self-fulfilling effects on targets' behaviors than unfavorable expectations (Madon et al., 1997, 2003; Madon, Guyll, Spoth, & Willard, 2004; Willard, Madon, Guyll, Spoth, & Jussim, 2008; but see Alvidrez & Weinstein, 1999; Sutherland & Goldschmid, 1974) and some targets are more susceptible to self-fulfilling prophecies than others. Susceptible targets include those with low self-efficacy (Willard et al., 2008) and unclear self-views (Swann & Ely, 1984), and those who are stigmatized because of their membership in stereotyped groups (Jussim et al., 1996; Madon et al., 1997; Smith et al., 1998). Targets are also more susceptible to self-fulfilling prophecies when they are motivated to get along with perceivers (Snyder & Haugen, 1995), want to affiliate with perceivers (Sinclair, Huntsinger, Skorinko, & Hardin, 2005), behave deferentially when interacting with perceivers (Smith, Neuberg, Judice, & Biesanz, 1997), desire to make a good impression on perceivers (Zanna & Pack, 1975), and perceivers control resources they want (von Baeyer, Sherk, & Zanna, 1981). Targets are less susceptible to self-fulfilling prophecies when they are motivated to defend their personal identities (Swann & Ely, 1984) or are aware of perceivers' expectations (Hilton & Darley, 1985).

Perceivers also influence the power of self-fulfilling prophecies. Perceivers create relatively powerful self-fulfilling prophecies when they are motivated to form predictable or stable impressions of targets (Snyder & Haugen, 1994) and have greater status than targets (Harris, Lightner, & Manolis, 1998), but are less likely to influence targets' behaviors via self-fulfilling prophecies when they are motivated to judge targets accurately (Neuberg, 1989), want targets to like them (Neuberg, Judice, Virdin, & Carrillo, 1993), or desire to get along with targets (Snyder & Haugen, 1994). Finally, self-fulfilling prophecies are rendered more powerful when they accumulate across perceivers (Madon et al., 2004) and over time (Madon, Willard, Guyll, Trudeau, & Spoth, 2006; Rosenthal & Jacobson, 1968), processes that we discuss at length later in this article. Thus, despite clear evidence that self-fulfilling prophecy effects are typically small, on average, there is also good evidence that these effects are considerably more powerful under some conditions and among some targets.

Do Self-Fulfilling Prophecies Contribute to Social Problems?

On the surface, Rosenthal and Jacobson's (1968) research addressed a straightforward question: Do teachers' false expectations have self-fulfilling effects on students' IQ? However, there was also a sub-text of their research that rang loudly. Echoing Merton's (1948) theoretical analysis, their research strongly suggested that false expectations perpetuate and contribute to group inequalities. We next consider three factors that have been proposed to produce these inequalities.

The power of negative beliefs to create self-fulfilling prophecies

Rosenthal and Jacobson's (1968) experiment demonstrated the power of positive beliefs to create self-fulfilling prophecies. Inducing negative beliefs in teachers would have been

unethical due to the potential for them to undermine students' IQs. Even so, an implicit assumption underlying their research was that if positive beliefs are helpful, then negative beliefs must be harmful, and that the self-fulfilling effect of negative beliefs may even be greater than those of positive beliefs. Consideration of social psychological research provides support for this prediction. People perceive negative information as more useful than positive information (Kanouse & Hanson, 1987), react more strongly to negative feedback than to positive feedback (Coleman, Jussim, & Abraham, 1987), and weigh costs more heavily than rewards when making decisions (Kahneman & Miller, 1986). If people are particularly sensitive to negative information, as these findings suggest, then negative beliefs may indeed create more powerful self-fulfilling prophecies than positive beliefs.

However, other research suggests that positive self-fulfilling prophecies may be more powerful than negative self-fulfilling prophecies. Self-enhancement theory, for example, proposes that people are motivated to view themselves favorably (Jussim, Yen, & Aiello, 1995; Sedikides, 1993; Sedikides, Gaertner, & Toguchi, 2003; Swann, Pelham, & Krull, 1989). In an attempt to enhance their self-views, individuals may attend more to positive messages than negative messages during interactions with perceivers. Such a tendency may cause targets to pay special attention to others' positive beliefs about them. If this is the case, then positive beliefs may create more powerful self-fulfilling prophecy effects than negative beliefs.

Five studies have examined the differential power of negative and positive self-fulfilling prophecies. Although four of these were performed in educational contexts, the results were not uniform. Three suggested that teachers' beliefs disproportionately undermined students' achievement (Alvidrez & Weinstein, 1999; Babad, Inbar, & Rosenthal, 1982; Sutherland & Goldschmid, 1974), whereas the fourth indicated that teachers' beliefs enhanced students' achievement (Madon et al., 1997). The fifth study, which addressed the differential power of negative and positive self-fulfilling prophecies within the family, also found that positive self-fulfilling prophecies were more powerful than negative self-fulfilling prophecies (Madon et al., 2003). The inconsistent nature of these findings may partly reflect the complexities that are intrinsic to the assessment and analysis of naturally occurring self-fulfilling prophecies. For example, in one study, negative beliefs were less accurate than were positive beliefs (Sutherland & Goldschmid, 1974), raising the possibility that the disproportionate effect of negative beliefs may have stemmed from their greater inaccuracy rather than from their inherently greater power. In another study (Madon et al., 1997), the tendency for positive beliefs to create more powerful self-fulfilling prophecies than negative beliefs failed to retain statistical significance after accounting for the moderating effect of students' previous achievement. The inconsistent nature of these findings highlights the need for additional investigation into the differential power of negative and positive beliefs to create self-fulfilling prophecies.

The self-fulfilling effect of social stereotypes

Rosenthal and Jacobson's (1968) research focused exclusively on target-based expectations – i.e., expectations that are derived from an individual target's personal attributes. However, a natural extension of their findings suggests that stereotype-based expectations – i.e., expectations that are derived from generalized beliefs about a social group (Ashmore & Del Boca, 1981) – could also have self-fulfilling effects on targets' behaviors. According to this idea, perceivers treat targets in line with inaccurate stereotypes, thus eliciting from them behavior that is stereotypic of their social groups. The self-fulfilling nature of stereotypes is a core interest in social psychology. Not only does it reflect the field's

emphasis on social construction, but it also offers an explanation as to how people's beliefs can contribute to inequalities between social groups (Jones, 1986; Klein & Snyder, 2003; Snyder, 1984). Past research has demonstrated that stereotype-based expectations can have self-fulfilling effects on targets' behavior (e.g., Anderson & Bem, 1981; Buchanan & Hughes, 2009; Frieze, Olson, & Russell, 1991; Jacobs & Eccles, 1992; Skrypnik & Snyder, 1982; Snyder, Tanke, & Berscheid, 1977; Word, Zanna, & Cooper, 1974; for a review, see Klein & Snyder, 2003). A classic illustration of this effect is Snyder et al.'s (1977) experiment on the attractiveness stereotype. This study showed that men elicited more sociable behavior from women who they falsely believed were attractive than from women who they falsely believed were unattractive. The differences in the women's behavior arose because of the way they had been treated by the men. The men were more warm and friendly toward the women who they falsely believed were attractive than toward the women who they falsely believed were unattractive. The women responded to this treatment in kind. Those who were treated in a warm and friendly manner behaved more sociably than those who were not treated in that manner. The findings of this, as well as the other relevant studies cited above, are theoretically important because they show how stereotypic beliefs can have self-fulfilling effects on targets' behaviors.

The accumulation of self-fulfilling prophecy effects

Another way that Rosenthal and Jacobson (1968) believed that self-fulfilling prophecies created social problems was by virtue of accumulating over time. Self-fulfilling prophecies accumulate over time when the magnitude of an individual perceiver's self-fulfilling effect becomes successively stronger across multiple time frames, such as across several years. These cumulative effects can occur when the false belief of one perceiver has a stronger self-fulfilling effect on a target's distal outcome than it had on the target's proximal outcome. For example, the false belief that a teacher holds about a student at the beginning of the 6th grade may have a stronger self-fulfilling effect on the student's 10th grade achievement than it had on the student's 7th grade achievement. This form of accumulation reflects the *single belief model* (Madon et al., 2008) because it involves the self-fulfilling effect of a single false belief on an outcome assessed at multiple future points in time.

Five studies have tested whether self-fulfilling prophecies accumulate via the single belief model (Madon et al., 2006; Rist, 1970; Rosenthal & Jacobson, 1968; Smith, Jussim, & Eccles, 1999; West & Anderson, 1976), but only one supported an accumulation effect. Rosenthal and Jacobson (1968) found that the tendency for teachers' false expectations to influence students' IQs became stronger as time passed, at least initially. Specifically, they compared the IQ gains of students who had been labeled as the late bloomers to the IQ gains made by other students 4, 8, and 20 months after the manipulation of teachers' expectations. At 4 months, the IQ scores of the late bloomers showed a marginally significant increase over the IQ scores of the other students. At 8 months, this difference was significant, thus demonstrating an accumulation effect. However, 20 months later, after students had switched teachers and almost completed the next grade level, differences between the IQ gains of the two groups of students had generally dissipated such that the late bloomers no longer showed an IQ advantage relative to the other students. Although this one study suggested that self-fulfilling prophecies can accumulate over time, the bulk of evidence indicates that self-fulfilling prophecies do not typically accumulate in this fashion, and that even when they do, those effects may be short-lived.

Another way self-fulfilling prophecies can accumulate over time is via the *repeated belief model* (Madon et al., 2006). This occurs when multiple false beliefs held at different points in time combine to have a stronger self-fulfilling effect on a target's outcome assessed at a single later point in time. For example, the false beliefs that a mother holds about her adolescent's alcohol use in the 7th and 8th grades may each uniquely contribute to her adolescent's 9th grade alcohol use through each belief's independent self-fulfilling effect. One study has tested whether self-fulfilling prophecies accumulate this way. Madon et al. (2006) found that mothers' self-fulfilling effects accumulated over time when their beliefs were similar in valence, such as when mothers repeatedly held negative beliefs about their adolescents across multiple years. Moreover, the accumulation of mothers' self-fulfilling effects over these years was found to exacerbate initial differences in the alcohol use of adolescents who were exposed to consistent histories of negative versus positive beliefs.

Madon et al.'s (2006) findings provided a theoretical framework with which to understand how the particular pattern of false beliefs encountered by a target can combine to have cumulative self-fulfilling effects on the target's behavior over time. Importantly, their results demonstrated that the later beliefs that perceivers developed about targets over the course of their on-going relationships mattered above and beyond the beliefs that perceivers developed earlier. Accordingly, their findings suggest that the self-fulfilling prophecy effects that have been reported in the literature may underestimate the true extent to which self-fulfilling prophecies influence some targets' outcomes because those findings have not accounted for the possibility that a perceiver's later false beliefs may also have self-fulfilling effects on top of the self-fulfilling effects caused by the perceiver's earlier false beliefs. Finally, their findings showed that, over time, the accumulation of self-fulfilling prophecies exacerbated initial differences in the outcomes of targets who were consistently exposed to positive versus negative false beliefs. That is, what began as small differences in the behavior of targets who were exposed to negative versus positive false beliefs gradually widened over time into larger differences. The tendency for perceivers' self-fulfilling effects to demonstrate this pattern is particularly important to psychological theory because it provides evidence that self-fulfilling prophecies can create and perpetuate social inequalities by widening the gap between advantaged and disadvantaged individuals and groups over time.

Thus far, our discussion of accumulation has focused on the accumulation of self-fulfilling prophecies over time. However, psychological theory also hypothesizes that self-fulfilling prophecies accumulate across perceivers. According to this idea, small self-fulfilling prophecy effects become powerful when the individual self-fulfilling effects of multiple perceivers combine. For example, in a typical day, a target may interact with many different perceivers, each of whom may hold a false belief about the target, and each of whom could potentially have a self-fulfilling effect on the target's behavior as a result. When multiple perceivers simultaneously hold similar, false beliefs about the same target, their separate self-fulfilling effects can accumulate such that their combined self-fulfilling effect may be more powerful than their individual self-fulfilling effects. The literature has advanced two distinct processes of accumulation across perceivers: concurrent accumulation (Jussim et al., 1996) and synergistic accumulation (Madon et al., 2004).

Concurrent accumulation occurs when the self-fulfilling effects of two or more perceivers combine in an additive fashion to impact a target's behavior (Jussim et al., 1996). Concurrent accumulation can occur when the false beliefs that different perceivers hold about the same target are similar in valence (e.g., all negative). By contrast, synergistic accumulation corresponds to the interaction of multiple false beliefs, such that the

self-fulfilling effect of two or more perceivers is greater than the sum of their individual self-fulfilling effects (Madon et al., 2004). Like concurrent accumulation, synergistic accumulation also requires that the false beliefs that different perceivers hold about the same target be similar in valence. However, unlike concurrent accumulation, synergistic accumulation is a multiplicative process. It occurs when the false beliefs held by different perceivers about a target at the same point in time moderate one another's self-fulfilling effects. That is, one perceivers' false belief has a stronger self-fulfilling effect on a target's behavior when another perceiver's false belief about the same target is similar in valence (e.g., also negative).

Although the literature has long recognized the potential for self-fulfilling prophecies to accumulate across perceivers, only one study has tested this idea. Madon et al. (2004) examined whether the false beliefs held by mothers' and fathers' about their adolescents' alcohol use potentiated each other's self-fulfilling effects when their beliefs were similar in valence (i.e., both negative or both positive). Their results were consistent with synergistic accumulation, but only with respect to negative beliefs. Results did not support synergistic accumulation effects for positive beliefs.

Madon et al.'s (2004) findings are theoretically and practically important. Theoretically, they provide the first empirical evidence that the self-fulfilling effects of different perceivers can accumulate, thereby confirming decades of speculation. Second, their findings suggest that there is an asymmetry in the accumulation of self-fulfilling prophecy effects, with the effects caused by negative beliefs accumulating across perceivers to a greater extent than the effects caused by positive beliefs. Their findings also have practical implications. Most notably, they raise the possibility that the self-fulfilling prophecy effects reported in the literature may underestimate how much targets are harmed by others' negative beliefs because that literature has focused exclusively on dyadic relations, and has not considered the possibility that harmful self-fulfilling prophecy effects may accumulate across perceivers more than helpful ones.

Although Madon et al.'s (2004) research focused on target-based beliefs, the accumulation process they identified is also relevant to social stereotypes. Because social stereotypes are consensual, members of stereotyped groups face similar beliefs from many different perceivers (e.g., Jews are shrewd, Turks are rebellious, and Chinese are disciplined; Madon et al., 2001), and encounter these beliefs across many years and in many contexts. To the extent that these stereotypes are inaccurate for a target, each perceiver has the potential to exert a self-fulfilling effect that may combine with the self-fulfilling effects of other perceivers to ultimately have a powerful and harmful impact on the outcomes of stereotyped individuals. Indeed, such a process is a primary way that self-fulfilling prophecies are thought to generate and perpetuate inequities (Jussim et al., 1996; Klein & Snyder, 2003; Snyder, 1992; Snyder & Stukas, 1999). To date, however, no research has tested whether the self-fulfilling effects of social stereotypes accumulate across perceivers, thereby making this an important question for future research to address.

Conclusion

The self-fulfilling prophecy has a long and rich history in psychology. Our goal in this article was to identify key themes that have guided and transformed research and theory relevant to this process. Toward this end, we reviewed 60 years of research with a particular emphasis on Rosenthal and Jacobson's (1968) seminal research which inspired many of the themes that continue to motivate contemporary self-fulfilling prophecy research. Because of the vastness of the self-fulfilling prophecy literature, our review emphasized

research that we believe has advanced the field's understanding of three issues of particular importance to social psychological theory: the mechanisms underlying self-fulfilling prophecies, the power of self-fulfilling prophecies to alter behavior, and the way that self-fulfilling prophecies may contribute to social problems. The current review highlights the interest and impact that the self-fulfilling prophecy has had within the social psychological literature, as well as its relevance to society at large by virtue of its ability to potentially affect important outcomes for individuals, particularly those of stigmatized and stereotyped groups.

Short Biographies

Stephanie Madon received her Ph.D. in social psychology from Rutgers – The State University of New Jersey in 1998. She is an Associate Professor of psychology at Iowa State University. Her research has examined how false beliefs influence people's outcomes through self-fulfilling prophecies. She has addressed this issue among parents and their adolescent children, examining how parents' false beliefs about their adolescents' likelihood of drinking alcohol shape their adolescents' subsequent alcohol use, and among teachers and students, examining how teachers' false beliefs about their students' academic ability shape their students' subsequent standardized test scores. She has also developed an interest in issues related to the intersection of psychology and law with a particular focus on false confessions. Within this content area, Madon has examined the underlying psychological processes that cause criminal suspects to confess to crimes during police interrogation. Madon's research has been funded by the National Science Foundation, the American Psychological Foundation, and the Society for the Psychological Study of Social Issues.

Jennifer Willard received a Ph.D. in social psychology from Iowa State University in 2008. She is currently an Assistant Professor of Psychology at Kennesaw State University. Broadly, her research in social cognition examines how people's beliefs and expectations shape social reality. Along these lines, she studies the circumstances under which self-fulfilling prophecies and perceptual confirmation exert their greatest influence. She has studied these effects using a diverse set of expectations, including parents' beliefs about their child's alcohol use, people's stereotypes about overweight individuals, and participants' expectations about others' hostility. Willard has published her research in the *Journal of Personality and Social Psychology*, *Psychological Science*, and the *European Journal of Social Psychology*.

Max Guyll is an Assistant Professor of psychology at Iowa State University. He received a Ph.D. in Clinical Psychology from Rutgers – The State University of New Jersey in 1998. His research broadly addresses topics related to health psychology, focusing on issues of prevention, economic analysis, stress, personality, and physiologic reactivity. Guyll's research has been funded by the National Institute on Drug Abuse.

Kyle C. Scherr received his Ph.D. in social psychology from Iowa State University in 2011 and is an Assistant Professor of psychology at Central Michigan University. His research has examined the influence of false beliefs on people's outcomes via self-fulfilling prophecies. The majority of this research has focused on the influence of mothers' false beliefs on their adolescents' alcohol use and educational attainment. He has recently developed a research interest centering on the psychology and law topic of police interrogations. This research has looked at various psychological causes for why suspects offer confessions during police interrogations and also psychological factors that influence suspects' comprehension of and willingness to waive their *Miranda* rights.

Endnote

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