Teaching scientific thinking using recent archival revelations about the Stanford Prison Experiment

Richard A. Griggs & Jared M. Bartels

Although the Stanford Prison Experiment (SPE) has been challenged on methodological, theoretical, and ethical grounds, these criticisms have been largely ignored by teachers and textbook authors. Recent revelations arising from an analysis of the SPE archival materials, however, not only strongly support these past criticisms but also question the scientific validity of the SPE and the accuracy of Zimbardo’s published and media accounts of it. These revelations have led some psychologists to call for the removal of SPE coverage in psychology courses and textbooks. We agree with this call but recommend that coverage of the SPE in light of the archival revelations replace it in order to teach psychology students about science and scientific thinking, critical elements in the psychology curriculum. We provide examples of how this can be done to teach the critical role of falsification in science and the negative influence of careerism on scientific research.

Keywords: scientific thinking; Stanford Prison Experiment; Philip Zimbardo.

The Stanford Prison Experiment (SPE) conducted in 1971 at Stanford University by Philip Zimbardo is one of the most famous studies in psychology and has remained in the public eye since the early 1970s until the present. During that time, however, its scientific validity has been questioned on ethical, methodological, and theoretical grounds (e.g. Banuazizi & Mohavedi, 1975; Banyard, 2007; Carnahan & McFarland, 2007; Fromm, 1973; Gray, 2013; Haslam & Reicher, 2017). For a summary of these criticisms, see Griggs (2014). Strangely, given this substantial body of criticism, few, if any, of these criticisms are ever mentioned in introductory psychology textbooks (Bartels, 2015; Griggs, 2014) or introductory social psychology textbooks (Griggs & Whitehead, 2014). If any are mentioned, it is typically those concerned with the ethics of the SPE. If methodological criticisms are mentioned, the discussion is typically minimal and sometimes a reference is not even cited. Kulig et al. (2017) found similar results for coverage of the SPE in criminology/criminal justice journals. Articles were widely accepting of the SPE and supportive of its message even when concerns were voiced, as if its findings were beyond question. Kulig et al. speculated that this message (unquestioned deference to the SPE) was also likely being taught in classrooms and concluded that if this were the case, ‘we are probably teaching it wrong’ (p.79). Moreover, Bartels et al. (2016) actually surveyed introductory psychology teachers and found that such coverage seems to be the norm in introductory psychology courses.

Why would psychology textbook authors and teachers choose to cover the SPE in this manner, essentially ignoring all of the criticisms and leaving intact Zimbardo’s situationist, ‘creative evil’ narrative? They likely chose this type of coverage because this narrative provides a very compelling storyline that appeals to students (see Griggs & Whitehead, 2014, for more details) and purportedly shows the relevance of psychology in explaining real world events, such as the Iraqi prisoner abuse at Abu Ghraib. This narrative argues that the abusive behaviour shown by the guards in the SPE (and hence the prisoners’ ‘breakdowns’) flowed naturally and inevitably from their assignment to roles in the prison setting. For Zimbardo, then, the SPE serves as a demonstration of
how situational forces can drive ordinary people to engage in uncharacteristically malevolent behaviour.

Clearly, this narrative is compelling and pedagogically expedient, but at what cost? In an interview with Blum (2018), introductory psychology textbook author Kenneth Carter said about the SPE:

Even if the science is quirky... or there was something wrong about the way that it was put together, I think at the end of the day, I still want students to be mindful that they may find themselves in powerful situations that could override how they might behave as an individual. That's the story that's bigger than the science.

Incidentally, Blum’s rhetorical response to Carter was, ‘But if Zimbardo’s work was so profoundly unscientific, how can we trust the stories it claims to tell?’ Likewise, if we continue to tell such stories, aren’t we devaluing science in the eyes of our students?

Recently, a thorough content analysis of the SPE archives located at Stanford University and the University of Akron conducted by French researcher Thibault Le Texier revealed serious inconsistencies between the archival materials and Zimbardo’s published and media accounts of the SPE that clearly negate Zimbardo’s situationist, ‘creative evil’ narrative (Le Texier, 2019).1 Le Texier’s archival findings along with those of other recent critics of the SPE (e.g. Blum, 2018) have led Simine Vazire, the co-founder of the Society for the Improvement of Psychological Science, to declare that the SPE was anti-scientific (Lapin, 2018) and that it is time to kick the SPE out of the psychological canon (Knowles, 2018). The revelations have also led to calls to remove discussion of the SPE from textbooks because of its lack of scientific validity and the inaccuracy of Zimbardo’s accounts of it (e.g. Lapin, 2018; Olson, 2018). We agree that current coverage should be removed, but we think new coverage of the SPE that describes its flaws and shortcomings based on Le Texier’s archival analyses should replace it because such coverage constitutes an excellent tool for teaching students about the scientific process in psychological research. Scientific thinking is an important objective of undergraduate psychology education (APA, 2016), especially in the midst of psychology’s replication ‘crisis’ (e.g. Open Science Collaboration, 2015). Recent research indicates that psychology textbook authors and teachers could do a better job of achieving this objective. For example, O’Donohue & Willis (2018) reviewed 30 undergraduate psychology textbooks for coverage of how science is defined, psychology’s relationship to science, and the key controversies regarding the structure and methods of science (e.g. distinguishing good science from bad science) and found that authors’ coverage on all three of these topics was lacking. In sum, there seems to be a definite need for more coverage of science and scientific thinking in both psychology textbooks and courses.

The revelations by Le Texier (2019) on how the SPE came to be, how it was executed, and how it has been described and defended by Zimbardo for almost five decades compose a compelling cautionary tale and thus should serve as a vivid story that adds some flesh to the rather dry bones of discussions of science and scientific thinking. These revelations may be used to address many aspects of the scientific process, including the value of the falsification principle, the negative impact of careerism, the necessity of replicability, ethical behaviour in research, and responsibly disseminating one’s research findings. To help interested teachers and textbook authors get

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1 Le Texier’s findings were originally published in his 2018 book, *Histoire d’un mensonge: Enquête sur l’expérience de Stanford*. However, his book is presently only available in French. Hence, we used Le Texier’s paper, ‘Debunking the Stanford prison experiment,’ which is currently in press in *American Psychologist* and details his archival research and findings, as the source for our study.
started in this endeavor, we proffer two examples of using some of the recently revealed faults with the SPE and Zimbardo’s accounts of it to do so. Specifically, we describe how Le Texier’s archival findings can be used to illustrate the critical role of falsification in science and the negative influence of careerism on research. Teachers and textbook authors should be easily able to modify these examples to fit their individual class and text needs and to use them as a guide to create illustrations of other aspects of the scientific process that are lacking in the SPE, utilising Le Texier’s archival findings to do so. Lastly, it is important to point out that there are several findings (e.g. that the guards were led to believe that they were not participants but rather part of the research team) which we do not use in our examples but that teachers and authors can use to address other aspects of the scientific process. We begin with a discussion of how Le Texier’s findings can be used to illustrate the critical role that falsification plays in science by distinguishing good from bad science.

Falsification: Distinguishing good science from bad

In their review of psychology textbooks, O’Donohue and Willis (2018) reported that less than one-third of the 30 textbooks they reviewed differentiated good science from bad science (or what is probably better termed, non-science). What differentiates good science from bad science? Good science challenges its claims and looks for evidence that would falsify them. Bad science insulates its claims and seeks evidence that would confirm them. So was the SPE good science or bad science? Le Texier (2019) archival revelations indicate that it was bad science in that Zimbardo protected his belief about the toxicity of prisons, and hence, did not subject it to possible falsification. We will begin our discussion of how the archival revelations indicate this with a consideration of the nature of the SPE data records.

Zimbardo has often claimed that he maintained very systematic, unbiased data records (e.g. Zimbardo, 1975), but the archival materials revealed just the opposite – they were not systematic, unbiased, or complete (Le Texier, 2019). Le Texier found that no data were even collected on the third day of the experiment, and only about 10 per cent of the 150 hours of the experiment (including the guard orientation day) were recorded by either video (six hours) or audio (eight hours) tapes, making these recordings clearly unrepresentative of the entire experiment. The archival materials also revealed that Greg White, the student in charge of studying the video recordings, told Zimbardo a few months after the SPE ended that these recordings were not representative of the experiment and were incredibly biased toward dramatising the SPE to be a far more powerful experience than it actually was. In line with this assessment, Craig Haney, a graduate student who presided over the running of the SPE, wrote in an archival report that any statements made about the experiment had to be equivocal because the goals of filming had been primarily cinematic. This meant that only dramatic or unusual events were filmed. He went on to say that the mundane events which provide a more accurate depiction of the SPE were sparsely recorded, rendering the video tapes unrepresentative of the totality of participant behaviour in the study. Even Haney et al. (1973b) acknowledged that the video recording sampling was ‘selective’ and ‘tended to be focused upon the more interesting, dramatic events which occurred’ (p.78). In sum, the data collected via the video recordings definitely do not provide an accurate depiction of the SPE and are biased toward events that confirm what Zimbardo wanted to show (i.e. that prisons are bad).

In addition, Le Texier’s (2019) archival revelations about the coaching of guards with respect to their behaviour demonstrates further that Zimbardo wanted to confirm his belief that prisons were toxic and avoid falsification of this belief. Zimbardo has maintained that the guards and prisoners did not receive ‘any specific training in these roles’ (e.g. Haney et al., 1973b, p.69). Supposedly, the guards themselves created a series of
ways to mistreat the prisoners. Archival documents, however, reveal that the guards were essentially told how to behave. How was this accomplished?

It is well-documented that Zimbardo and colleagues communicated expectations for prisoner abuse during the guard orientation (for example, see Banyard, 2007; Bartels, 2019; Gray, 2013; Haslam & Reicher, 2017), but Le Texier’s (2019) archival analysis shows that such undue influence of the experimenters was not just present during the guard orientation but throughout the study. Numerous prison rules were provided by prison warden David Jaffe, based on his Toyon Hall mock-prison student experiment and the background research on prisons that he had conducted prior to his study (Jaffe, 1971). Jaffe spelled out in detail what was to happen at the reception of the prisoners; for example, bringing the prisoners in blindfolded and stripping and searching them completely. Jaffe also read a list of what the guards should do to further create a dehumanising experience for the prisoners; for example, guards were never to use prisoner names, only their numbers, and never make requests to the prisoners but rather order the prisoners around.

Zimbardo also gave the guards a ‘suggested daily schedule,’ which was copied directly from Jaffe’s earlier Toyon Hall study (see Le Texier, 2019, Supplemental Material B, for a direct comparison of the Toyon Hall daily schedule and the SPE schedule). This schedule included acts such as the middle-of-the-night counts that Zimbardo has used to substantiate his situationist, ‘creative evil’ narrative, but it is clear that the guards did not create these counts. Jaffe even provided specific, detailed recommendations from his Toyon Hall study about how to conduct the counts. Le Texier also found that Zimbardo and Jaffe determined the number of counting sessions per day, the number of visits to the toilet that prisoners were allowed, the maximum time prisoners could spend in the toilet, and punishments, such as chanting, push-ups, shoe shining, and blanket cleaning. In sum, the guards were following the instructions and guidelines provided by Zimbardo and his research staff and not role-based expectations about how they thought guards in a prison should act.

Other key elements of the SPE, such as most of the prison rules, were also taken directly from the Toyon Hall study. Counter to Zimbardo’s assertion that the guards made up the SPE prison rules, 11 of the 17 were almost exact quotes of the Toyon Hall experiment rules (see Le Texier, 2019, Supplemental Material A for a direct comparison of the two sets of rules). The remaining six rules were mainly adaptations to the particular space where the SPE was conducted. Thus, the prison rules were given to the guards, and the guards clearly did not make them up.

As if the guard training and instruction was not enough to tell the guards what they were to do, the research staff intervened directly during the study to give the guards specific directions on how to act, to help them to recall the purposes of the experiment, or to give them direction as to what they should do (Le Texier, 2019). As Blum (2018) points out, warden Jaffe worked to foster the abusive guard behaviour that

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2 You have likely never heard of Jaffe’s Toyon Hall study. Zimbardo has seldom mentioned it, and when he has alluded to it (e.g. Zimbardo, 1975), he has never pointed out that it was essentially the blueprint for the SPE. Zimbardo has led people to think that the SPE was his idea, a product of his past research. However, the SPE seems to be clearly modeled after the Toyon Hall study, a mock prison experiment that took place in Toyon Hall, a Stanford University dormitory, on a weekend in May, 1971, about three months before the SPE. It was designed and conducted by Stanford University student, David Jaffe, who lived in Toyon Hall, and some fellow students in one of Zimbardo’s spring undergraduate classes as a class project. Jaffe (1971) provides a complete account of his Toyon Hall study. Thus, it seems highly likely that Zimbardo assigned Jaffe to be the warden in the SPE given his Toyon Hall study experience.
Zimbardo would later argue had arisen organically. For example, there is an archival audio tape in which warden Jaffe attempted to convince a guard, who had been reluctant to act abusively, to change his behaviour and adopt the role of a tough guard. 3

In sum, the archival materials make it clear that the guards did not follow their instincts or impulses about how to behave but rather followed the specific directions of Zimbardo and his research staff, and when they did not, the research staff intervened to attempt to change their behaviour. The actions of Zimbardo and the research staff were thus directed at confirming Zimbardo’s belief about the toxicity of prisons and avoiding the falsification of this belief.

Careerism
Careerism also seems to have played a role in Zimbardo’s behaviour during the SPE and afterward in promoting it. Careerism, according to Pratkanis (2017), occurs when the importance of gaining publicity supersedes the accuracy of one’s findings. In other words, it is the strategy of selling a research study and oneself to such an extent that it takes precedence over the scientific goal of searching for the truth. According to Le Texier (2019), from the start Zimbardo sought media attention for the SPE. He allowed a local television station to film the mock arrests of the prisoners. Zimbardo disseminated a press release on Day 2 of what was planned to be a two-week study that said that the SPE would make people aware of the need for prison reforms at a psychological level so that prisoners were not made into ‘dehumanised’ objects by their prison experience. On the last day of the experiment (Day 6), Zimbardo sent out another press release stating that the SPE ‘has a message for prison reform. It shows the need for a change in psychological conditions, which won’t cost the taxpayer any money... People should be aware of the power of the social situation over individual behaviour’ (Le Texier, 2019). Communicating one’s findings to the media is certainly appropriate, but Zimbardo attempted to popularise the study before it was even complete, before any analyses had been conducted, and before subjecting the findings to true peer review scrutiny (which it seems he never did). All of these actions indicate the presence of careerism on Zimbardo’s part.

Careerism also seems to be at work in how Zimbardo went about disseminating the SPE findings after the study ended. They were presented in the mass media for two years before Zimbardo and his fellow researchers published any academic articles on them. For example, the SPE findings first appeared in an October 1971 *Life* magazine article on the SPE, ‘I almost considered the prisoners as cattle’ (Faber, 1971). It was a two-page article, and more space was devoted to negative images from the SPE than actual text about the SPE. The SPE was then featured on a television episode of *NBC Chronolog* in November 1971 in which Zimbardo was the narrator (Zimbardo et al., 1971; available at https://purl.stanford.edu/qr804nv5425). The first article that Zimbardo authored on the SPE was in *Society* (another media outlet) in 1972, which was then followed by three articles the following year. One appeared in the weekend magazine of the *New York Times* (Zimbardo et al., 1973); Zimbardo again choosing media over academia. According to Zimbardo (2018), this was ‘not to bypass peer review, but to reach a large national audience and use the opportunity to frame the SPE as a Pirandellian Prison.’ The other two articles were the first academic articles on the SPE, but they were not in peer-reviewed psychology journals. They appeared in *Naval Research Reviews*.

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3 This audio tape can be accessed directly online at http://purl.stanford.edu/wn708sg0050, and there is a complete transcription of the tape available in the Supplemental Material to Haslam, Reicher and Van Bavel (2019).
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(Haney et al., 1973a) and the *International Journal of Criminology and Penology* (Haney et al., 1973b). According to Zimbardo (2018), the Office of Naval Research insisted that the SPE be documented in their journal, *Naval Research Reviews*, because they had funded the research. He also pointed out that the second article was at the invitation of the journal editor. Thus, given that the article was invited, it is likely that it was not reviewed in the same manner as a regular journal submission. Regardless, Zimbardo still could have submitted a more complete account of the SPE to a peer-reviewed psychology journal, but he did not. There was certainly more to be told, as he pointed out in *The Lucifer Effect* (2007, see p.20) 30 years later.

In sum, careerism seems to have clearly been involved in how Zimbardo initially disseminated the SPE story – in mass media outlets (magazines, newspapers, and television) and not in mainstream, peer-reviewed psychology journals. For a detailed journalistic analysis of how Zimbardo communicated information about the SPE through mass media over the past five decades and not through the academy’s normal channels (peer-reviewed journal articles), see Perry (2016; Chapter 2, ‘Lucifer let loose’).

Zimbardo’s extremely negative response to the BBC prison study (Reicher & Haslam, 2006; also see Haslam & Reicher, 2009) is also comprehensible in the light of careerism. Briefly, Haslam and Reicher’s BBC prison study was a blow to the SPE’s credibility. It was an attempt to replicate the SPE in a mock prison but the guards received no coaching or directions as in the SPE and the prisoners were allowed to quit at any time. The results were different than in the SPE. There was no guard abuse, and the prisoners did not break down. In response, Zimbardo questioned the validity of the study when Haslam and Reicher attempted to publish it (see Zimbardo, 2006). For example, Zimbardo said that the BBC prison study was fraudulent and ‘does not merit acceptance… anywhere except in media psychology’ and that it was a ‘scientifically irresponsible’ ‘made-for-TV-

study’ (p.47). Ironically, in reading Zimbardo’s commentary, his criticisms of the BBC prison study seem far more applicable to the SPE, which had little, if any, scientific validity, and was covered extensively in the media and not in peer-reviewed psychology journals. Despite Zimbardo’s efforts, the *British Journal of Social Psychology*, a peer-reviewed psychology journal, published the article on the BBC prison study (Reicher & Haslam, 2006).

In his interview with Blum (2018), BBC prison study author Stephen Reicher noted that, ‘what we discovered was that we weren’t in a scientific debate, which is what we thought we were in. We were in a commercial rivalry. At that point he [Zimbardo] was very keen on getting the Hollywood film out.’ It appears that Zimbardo did not want any articles on the BBC prison study to be published, fearing that they might negatively impact the making of the film. It is also worth noting that his SPE coda, *The Lucifer Effect*, was to be published the following year so it is possible that he didn’t want publications on the BBC prison study to negatively impact the success of his book. Haslam et al. (2018) insightfully noted that when Zimbardo responds to his critics ‘… he insists that his work is a moral crusade, aimed at promoting social justice. And that therefore those who threaten to derail his position need to be swatted aside for the sake of the cause.’

Zimbardo seemingly attempted to do this when he posted an online response to his recent SPE critics in June 2018, but he did not address Le Texier’s numerous criticisms. Because Le Texier’s 2018 book was mentioned in the beginning of his response, readers might think that these criticisms were addressed because they would not be familiar with them. Except for a few that were briefly alluded to in Blum’s 2018 article, Le Texier’s many criticisms were only discussed at that time in his book, *Histoire d’un mensonge*, which was in French. This, however, was not the case for Zimbardo. As pointed out in Knowles (2018), Le Texier sent Zimbardo an early version of his paper (in English) summarising his SPE criticisms.
in April 2018. Thus, he was aware of the criticisms but did not address them in his online response, likely because it would be difficult, if not impossible, to rebut Le Texier’s findings which are based on the SPE archival materials, such as video and audio recordings and contemporaneous documents, and corroborated by interviews with SPE participants. Lastly, Knowles (2018) reported that she contacted Zimbardo while doing research for her article and asked him to comment on Le Texier’s criticisms, and he did not respond.

Conclusions
Since the early 1970s, critics have noted numerous problems with the methodology, ethics, and Zimbardo’s interpretation of the SPE. Yet, the SPE has somehow endured. To ignore the serious inconsistencies discovered by Le Texier (2019) and Blum (2018) between the SPE archival materials and Zimbardo’s published and media accounts of the SPE and continue to propagate the myth of the situationist, creative evil narrative for the SPE to psychology students, however, would be regrettable. We recommend that the present textbook and course coverage of the SPE be abandoned and that the recent archival revelations about the SPE and the problems with Zimbardo’s accounts of the study be used to teach psychology students about science and scientific thinking, increasingly important and essential elements of the psychology curricula.

Howard Kurtzman, acting director for the Science Directorate at the American Psychological Association, recommended the following in response to Blum’s (2018) article: The article ‘raised important questions about the Stanford Prison Experiment, many of which have been raised before.’ He noted that psychology textbook authors who cover the SPE ‘would be well advised to place it in context, including the controversies around its methods and what it teaches us about the importance of institutional review boards, peer review and replicability’ (Toppo, 2018). Exposing the many flaws and shortcomings of the SPE and Zimbardo’s accounts of it would not only correct students’ views about the SPE but also work to show students that psychology has the capacity to be a self-correcting science. As teachers we must acknowledge the costs associated with perpetuating the faults of classic studies, however pedagogically and politically expedient they may be. In failing to correct the record, we do a disservice to our students and undermine the status of psychology as a science. We must be honest with ourselves about our willingness to ignore shoddy science in order to preserve the story. The story cannot be bigger than the science.

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