RESEACH PAPER

How research institutions can make the best of scandals – once they become unavoidable

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ABSTRACT
We posit that, once scandals become unavoidable, they can be considered for transformation into opportunities for research institutions, scientific communities and science regulators to implement in-depth changes and policies they would otherwise oppose. Research institutions and scientific communities can take advantage of scandals by participating proactively in constructing their consequences. We develop four mechanisms by which scandals can be used to bring positive change in research institutions and scientific communities. These are nullifying the high-status protection of almost untouchable researchers, 'resetting' the system that was conducive to scandals, changing the reference point upon which the entity is judged to emphasize progress and offering a learning opportunity to involved parties.

Never let a good crisis go to waste.
Winston Churchill

Introduction

Scandals are pervasive in various domains and science is no exception. Research-related scandals can be of two broad types, either of a scientific nature (e.g., data fabrication or falsification, and plagiarism) or involving the personal lives of scientists (e.g., sexual harassment and discrimination). Here, we focus on the former, where research activities are at the core of scandals. Of course, this convenient distinction can be challenged in various situations where the two scandal types interact.[1]

Scientific misconduct as a necessary but insufficient element for a scandal eruption has been studied extensively, notably to characterize, categorize and quantify it (e.g., Fanelli, 2009; Shibayama and Baba, 2015; Hall and Martin, 2019; Horbach *et al.*, 2019). For instance, plagiarism is frequently considered less serious than an ethical breach in data collection or data falsification. Indeed, although plagiarism deprives researchers of the rewards they deserve for their participation in science advancement and constitutes an offence against the community of scientists, it does not undermine the knowledge-building project of science itself (Pimple, 2002).

Numerous contributions explore how to avoid such behavioors or contain them once they occur, identify the circumstances that made them possible and describe the detrimental and

[1]For instance, Michael Katz, a former professor at the University of Washington, famous for his studies of ebola and the flu, was entangled in a scandal related to sexual harassment and misuse of public resources (Ghorayshi, 2016).

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multidimensional consequences scandals have for the individuals and organizations implicated. Research scandals lead to a loss of knowledge (except, probably, in the case of plagiarism) and public trust and a waste of research resources, with direct and indirect detrimental consequences, such as reduced reputation and attractiveness (see e.g., Michalek *et al.*, 2010; Lacetera and Zirulia, 2011; Gammon and Franzini, 2013). In most cases, the personal (e.g., losing one's position, being jailed or even committing suicide) or societal costs exceed the personal or societal benefits (Azoulay *et al.*, 2017; see also Azoulay *et al.*, 2015; Hussinger and Pellens, 2019). The direct costs for an involved institution or scientific community (fellow colleagues, students, research institutions, scientific publishers, funding agencies) can be substantial. For instance, Duke University paid a US$112.5 million fine to the US government to settle accusations that it submitted bogus data to win federal research grants (US Department of Justice, 2019). Given the huge costs of scandals, we argue that concerned actors can act proactively and leverage the situation to drive change that would otherwise be very difficult to make.

Our approach radically departs from the usual perspective, emphasizing the detrimental side of scandals, by considering, instead, how implicated institutions and scientific communities can make the best of them. There is an important research gap on whether and how scandals can ultimately serve institutions and scientific communities, which would seem at first glance to be collateral victims of unscrupulous researchers. We address this issue by exploring several mechanisms by which implicated institutions can attempt to exploit the scandal in a constructive fashion.

Let us be clear, we do not advocate scandals. It is evident that research-related scandals destroy reputation and trust, which are crucial assets in science (Jamieson *et al*., 2019). Recovering from a scandal is far from easy, but we argue that, once a scandal becomes unavoidable, it can possibly be transformed into an opportunity for research institutions, scientific communities and science regulators to implement in-depth changes and policies that would otherwise have been opposed. Such reluctance to change can be attributable to conservatism, herd behaviour and simply maintaining the *status quo*. The manifest threat conveyed by the scandal may be necessary to provoke change. Understanding the cognitive and behavioural roots of the situation (e.g., overreliance on dehumanizing metrics, perverse incentives, superstar culture, addiction to spectacular findings) can help to build a better future (see Hall and Martin, 2019 on business school research; Horbach *et al.*, 2019).

Put differently, rather than denying the misbehaviour, hiding it, minimizing accusations, containing consequences, transferring responsibility or even attempting to recast it as 'honest errors', or similar strategies, research institutions could learn from corporations that have made the best of scandals (e.g., Jory *et al*., 2015; Grolleau *et al*., 2020; see also Berggren and Karabag, 2019). Of course, we are aware of the many companies that have suffered and even disappeared because of scandals. Minimizing a scandal may seem appropriate if it is of moderate severity and existing regulations in the institution or scientific community can address it, but if it is severe and/or pervasive, more proactive actions could lead to a better outcome.

We add to the existing literature in several ways. First, we characterize research-related scandals in a constructivist framework, where scandals and their consequences result from a social construction. This social construction requires a publicized norm transgression that can be approached proactively by concerned institutions and scientific communities. Second, we explicitly consider that research institutions and scientific communities can take advantage from scandals once they become inevitable. As collateral victims, they can notably participate in the social construction of scandal consequences. We exploit insights from a nascent literature on scandal-driven opportunities in the corporate realm and consider its application to research institutions and scientific communities. Third, we go beyond the traditional recommendations on how to manage scandals and restore trust. Rather, we develop four mechanisms by which scandals can be used to bring positive change (Grolleau *et al.*, 2020; Septianto, 2020) in research institutions and scientific communities. These scandal-driven mechanisms remove the high-status protection of almost untouchable researchers, reset the system that was conducive to scandals, change the reference point upon which the entity is judged to emphasize progress and offer a learning opportunity for the

involved parties. A better understanding of these mechanisms equips research institutions with a scandal management plan that also considers how to leverage scandals to serve the long-term interests of institutions and scientific communities.

We address *whether* and *how* issues rather than how many or how often issues, and establish the existence of some unsuspected mechanisms to exploit the power of scandals. We mobilize examples and anecdotal evidence to support the existence of the proposed rationales and deliver preliminary insights on how they occur in real-world circumstances (see Eisenhardt and Graebner, 2007). At first glance, this approach is surprising because it does not fit conventional categories of contributions in the scholarly literature, but there is convincing evidence that it can initiate path-breaking advances in unsuspected directions (e.g., Earl, 2011; Thaler, 2018; see also Frey, 2021). Let us, however, stress two important points. First, there are many examples of scandals not being managed to bring positive change. From a quantitative viewpoint, we posit that the number of these scandals exceeds by far the number of scandals that have been used to generate positive change. Given that our goal is not to present a complete figure of how research institutions and scientific communities manage scandals, we focus on the much rarer situations (usually overlooked) in which institutions and scientific communities made (or attempted to make) the best of scandals. Second, while the examples and anecdotal evidence cited do not always satisfy all the criteria of the mechanism under consideration, they still support its existence and/or back up important arguments. We now characterize conceptually the interplay between research institutions or scientific communities and scandals. We then develop the above-mentioned mechanisms to transform scandals into opportunities.

Research-related scandals in a constructivist perspective

Research-related scandals frequently involve four actors (Grolleau *et al.*, 2020):

(*i*) a scandal target corresponding to one or several transgressors who provoke moral outrage – this moral outrage is a response to a perceived violation of accepted societal norms and moral codes (e.g., a researcher or a team fabricating or falsifying drug results);
(*ii*) scandal victims (e.g., people taking drugs that have no health benefits but may have side effects, research institution or scientific communities with a tarnished reputation, peers who built on falsified data);
(*iii*) media that channel attention to the scandal (without sufficient media coverage, a scandal is unlikely); and
(*iv*) a public at large that is scandalized and demanding exemplary sanctions and measures to enforce a 'never again' promise – indeed, even if the media do publicize questionable conduct, if the audience does not perceive the conduct as moral transgression and is not outraged, the scandal will not erupt.

For the sake of clarity, we consider mainly scandals 'caused' by individual or research team misconduct where research institutions and scientific communities are collateral victims. Of course, this approach would reflect better the complexity of the real world if it made allowance for institutional or systemic influences often being the invisible roots of visible scandalous behaviours. The identification of these four actors is an oversimplified version of the grouping and the reality is much more complex. For example, while institutions or peers are classified as victims, they can also be considered as sharing a responsibility in the scandal. Indeed, since they are using taxpayers' resources and serve as gatekeepers of the scientific process, they are to some extent responsible for eliminating misconduct. They do not systematically act to maintain scientific integrity in a neutral fashion, although they are supposed to. They might act according to other priorities, such as safeguarding their reputations. Similarly, although we paint the media as a disinterested group, in certain cases they boost the ego of researchers and contribute to misconduct and the emergence of scandals.

Unlike the objectivist perspective positing that scandals result mainly from the severity of the transgressions, we adopt a constructivist framework, in the sense that scandals and their consequences are socially constructed, notably driven by media and other powerful groups (e.g., peers, research institutions, politicians) (Thompson, 2000; Entman, 2012; Baugut, 2017). Norm violations constitute a fundamental and necessary but not sufficient condition for scandal eruption. Indeed, many serious transgressions do not lead to research scandals while trifling ones can provoke them. For instance, Necker (2014) states that "94% of surveyed economists report having engaged in at least one unaccepted research practice", but most of these serious violations do not generate scandals.

All transgressors are not created equal and a violation by a high-profile researcher is more likely to feed the scandal process than the same violation by an unknown researcher (see several relevant arguments in Graffin *et al*., 2013). For instance, a Chinese scientist, He Jiankui, broke ethical boundaries by creating the world's first gene-edited babies in 2018, perhaps to generate something similar to 'success from scandal' in the artistic or corporate worlds (Grolleau *et al.*, 2020). While the outcome was a disastrous scandal, Cohen (2019) argues that peer disapproval was not so firm and clear before the scandal eruption as claimed after the event. The reconstructed post-scandal story, involving a rogue scientist, differs from the reality before the scandal.

While the social construction of research scandals can involve fellow scientists who blow the whistle for various self- and other-interested reasons (e.g., retaliation, science advancement), other research institutions and then the media decide whether to publicize the behaviour, trigger public outrage and pressure institutions to react (Baugut, 2017; Clemente and Gabbioneta, 2017; see also Matus and Bernal, 2020, about the impact of the media on shaping public policy related to chemical hazards). To become a scandal, a researcher's misconduct (or just an unfounded rumour) has to be widely publicized (Adut, 2008). As the common saying goes, 'no media, no scandal' (Graffin *et al.*, 2013). The media have their own agenda and making an event scandalous can serve their vested interests in some circumstances while the same transgression would remain inconsequential in other circumstances (e.g., scandal fatigue makes an additional scandal less relevant).

Instantaneous communication frequently deprives targets of time to react appropriately and worsens the situation. By mobilizing powerful social forces, scandals can be catalysts to profound changes that are almost unattainable otherwise (e.g., rethinking the incentive system to promote good research rather than only good publications). Once a scandal erupts, we posit that research institutions can make the best of it by participating proactively in the construction of its consequences. From a containment strategy, a research institution can disclose its own failures and those of the scientific process, propose and implement changes to address them, and build a better future. In what follows, we develop four mechanisms by which research institutions can embrace scandals.

Scandals cancel the immunity afforded the high-status researcher and offer an opportunity for others to speak up

High-status researchers or institutions frequently benefit from power and networks that preserve them from being challenged or questioned. Because of these advantages, would-be reformers are prevented from even initiating actions (such as allegation investigations) let alone introducing sanctions and preventive measures likely to bring the changes necessary for science integrity and advancement. Scandals offer potent opportunities to 'break the wall of silence' and challenge these high-profile individuals and institutions that are otherwise untouchable (Dewan and Jensen, 2020). By removing this obstacle, scandals can allow agents responsible for making change to speak up and challenge the established order. For instance, Diederik Stapel enjoyed untouchable status within Tilburg University that protected him even as he faced serious allegations. Once the scandal erupted, there was a shock wave, evidenced by more than 55 paper retractions (see Borsboom and Wagenmakers, 2013; Zwart, 2017) and several recommendations followed (Van Lange *et al.*, 2012).

Nevertheless, safeguards are necessary, given that the hidden agenda of many individuals or groups (e.g., retaliation, envy) is not necessarily compatible with the advancement of science.[2]

For instance, the 2014–17 scandal involving Paolo Macchiarini shocked the Karolinska Institute, a renowned and almost untouchable research-led medical university in Stockholm. The medical scandal contributed to the disclosure of several failures of the research institution, which first attempted to silence whistleblowers and minimize the accusations, ultimately leading to several resignations in top management (Enserik, 2016; Berggren and Karabag, 2019). Media attention frequently plays a major role in exposing status-based protection and forcing regulators to act on the basis of the information disclosed. Scandals combined with institutional courage (rather than betrayal) offer research institutions and scientific communities favourable circumstances to overcome status-related barriers (Smith and Freyd, 2014; see also Horbach *et al.*, 2019).

Scandals open an opportunity window for pressing the reset button

Once scandals occur, the involved institutions and scientific communities may have knowledge advantages regarding the preventive steps and corrective actions that are necessary to prevent other scandals (Grolleau *et al.*, 2021). These research institutions can erect better informed and more effective detection mechanisms and safeguards. Thanks to a better knowledge and understanding of what happened, scandals can facilitate pressing the 'reset button' and implementing profound changes at the research institution level, maybe by an institutional introspection examining the steps (e.g., incrementalism, euphemistic language or slippery slope) that led to the disastrous situation and by considering what must be changed. Resetting the system does not mean that the system can be rebooted and returned to a pure original state (that may never have even existed). Rather it means that the scandal opens a window of opportunity, where barriers to change are weaker, to redesign the system that has been conducive to the scandal.

Rather than attempting to defuse legitimate scandals or reframe them to minimize their impact, research institutions and scientific communities might consider the possibility of embracing them. They may even prolong a sense of crisis to catalyse important institutional changes. Indeed, scandals create moments where agents are more open to change. Scandals attract attention that can be channelled to publicize the efforts made to enforce a 'never again promise'. Interestingly, in the corporate realm, Jory *et al.* (2015) find that the operating performance of companies entangled in scandals became better than that of other similar but unaffected firms in the years following the scandal. They argue that corrective actions (e.g., replacing unethical individuals, changing unethical practices, setting safeguards) can, in the long run, give tarnished entities an advantage to outperform similar organizations that have been scandal free. In short, scandals, if they are well managed, can act as catalysts and pave the way to creating better environments and processes to prevent and detect early misconduct.

As an illustration, the scandal related to Piero Anversa, a former giant in stem cell research, led to the retraction or calling into question of more than 30 papers. The scandal shattered not only his employing institution (Harvard Medical School), but also the whole stem cell research community, leading Thomas Lüscher, the editor-in-chief of the *European Heart Journal* to conclude: 'We have to push the reset button and evaluate how to revive the dream of regenerative medicine.' (Lüscher, 2019). The scandal brought more stringent rules and a higher level of scrutiny, but the outcomes remain slow and uncertain.

Scandals as an opportunity to switch from an always-good reputation to a bad-to-good reputation

A research institution (or a scientific community) with an always-good reputation is eager to retain this reputation, given that it takes much longer to (re)build reputation than to damage it. Science has

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[2]Even if the Stapel scandal caused a strong shock in the system, it is difficult (and maybe too early) to check whether the actions implemented by Dutch universities created a more sustainable research culture and saved (or even improved) their reputation.

a long memory. Once a scandal becomes unavoidable, it damages the reputation of involved individuals and institutions and may even contaminate whole areas of science. Rather than taking for granted that the loss of reputation is irretrievable, research institutions can invest to rise from their ashes. Observers may admire a research institution with a bad-to-good reputation because of a previous scandal for the effort it has put into developing positive attitudes and behaviour. They may even rate such an institution more highly than institutions with an always-good reputation (see Septianto, 2020, for an investigation on non-governmental organizations). The scandal changes the reference point (Kahneman and Tversky, 1979), at least for some observers, from which progress can be evaluated. The scandal makes more salient the progress accomplished, especially in the light of the circumstances that led to the initial transgression. Although the context is not research institutions, Lee *et al.* (2004) argue that claiming responsibility for negative events makes organizations appear to be more in control, leading to more positive impressions. For instance, the Fritz Lipmann Institute, after two scandals (in 2016 and 2017), hired integrity inspectors to vet their papers and screen them for errors before they were submitted to journals. Despite the cost, the Institute plans to continue the arrangement with the verification company and posits that the checks will 'make the institute more attractive in competing for the best scientists' (Abbott, 2019). Of course, these actions divert money from other uses and do not automatically produce the expected outcomes at the right time.

Seeing scandalous behaviour as a learning opportunity

Scandals imply the disruptive publicity of a violation of social norms (Adut, 2008). This transgression can be voluntary or involuntary, perceived or real. Even in the worst case, we argue that transgressions can ultimately constitute learning opportunities for institutions and scientific communities – if they are handled constructively. Errors, voluntary or involuntary, are inevitable and error avoidance at all costs can seem unrealistic or excessively costly. Scandals may lead to the adoption of a strong error management culture, where minor deviations are spotted early and addressed quickly and properly (see Keith and Frese, 2008). This learning process, where integrity is more a journey than a destination, can lead to the promotion of a more transparent and responsible system where actors learn to talk the talk and walk the walk. Scandals can unveil some unsuspected cause–effect relationships. For instance, well-intentioned incentives and metrics aimed at increasing research outputs can inadvertently push researchers into deviant behaviour (Asselineau *et al.*, 2021). Scandals can lead research institutions to implement constant monitoring of their incentive systems to detect early side effects and consider corrective actions.

Applied to research institutions and scientific communities, this rationale suggests that erecting excessively burdensome safeguards to prevent any deviant behaviour or transgression at all can be counterproductive (Derksen and Rietzschel, 2013). In-house cases of misconduct can be collected over time and mobilized to educate researchers on integrity issues through examining the initial steps and circumstances that led to the violation. Scandal narratives involving real researchers and real consequences can complement the message and make it more convincing than abstract principles and dehumanized statistics. This characterization can produce internal red flags or help to revise the incentive system. Encouraging replication research, reserving explicit space in top journals for negative results and taking these science-promoting activities into account in promotion decisions would be a promising approach. Another strategy might be to see scandalous transgressions not only as learning opportunities, but also as a way to prove the willingness of the institution or scientific community to address them early, quickly and properly for the betterment of society and science.

Conclusion

Let us reiterate an important caveat: we do not endorse scandals, given that in most cases their negative and detrimental effects usually exceed their positive effects. Nevertheless, we argue that, even if they are detrimental for research institutions, once they become inevitable, they can contribute to

the reform of science. Rather than simply seeing them as unavoidable evils, we advocate in favour of an approach where involved research institutions behave proactively and constructively. Beyond conventional strategies such as attempting to sweep the scandal under the rug, deny it or contain it, we invite research institutions to make the best of scandals by considering their long-term effects and their ability to bring good news to the advancement of science and society. More precisely, scandals might be used by research institutions and science regulators to nullify the high-status protection of otherwise untouchable individuals or institutions, reset the system that was conducive to the scandal, change the reference point upon which progress could be emphasized and offer a learning opportunity. At the same time, we are not naïve, given that research institutions are not systematically interested in walking the walk of research integrity and may well prefer only to talk the talk. Detailed studies of research scandals where the above-mentioned mechanisms have been used should help identify the circumstances that allow these mechanisms to operate and lead to a more sustainable research environment. A rigorous case study methodology (Meyer, 2001) can be applied to prominent scandals that did initiate institutional change. Even if these cases represent only the tip of the iceberg, they might show both researchers and research institutions how to make the best of scandals.

We suggest that a third way is possible. Research institutions could be equipped with a scandal management plan that explicitly considers the positive sides of scandals. For instance, research institution executives might prepare for scandals by planning for working with media in a constructive fashion. Time management is a crucial issue in scandal management. When a scandal is likely to arise, being perceived as the first to cancel status-related protection and disclose it can allow the research institution or scientific community to keep control over the situation and to benefit from the truth captured in the old adage that 'a fault confessed is half redressed'. Scandals can act as vaccines by offering a kind of immunity. Recovering from a research scandal and emerging even stronger is not an easy row to hoe, but we believe that the long-term rewards make the effort worthwhile.

Given that research scandals are not created equal, a one-size-fits-all approach is unlikely to be successful. Beyond the usual defensive strategies (e.g., scapegoat, deflect) to manage a scandal, we argue that organizational responses can be reform-oriented. Pursuing this alternative is demanding, but can also be rewarding. Scandal management plans should include built-in flexibility to adapt to the real path of events. Although a natural tendency in most scandals is to focus on bad apples, there is a pressing need to explore interaction with bad barrels and bad systems (Hall and Martin, 2019).

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References

Abbott, A. (2019) 'The science institutions hiring integrity inspectors to vet their papers', *Nature,* 575, pp.430–3.

Adut, A. (2008) *On Scandal*, Cambridge University Press, Cambridge.

Asselineau, A. Grolleau, G. and Mzoughi, N. (2021) 'A good servant but a poor master: the side effects of numbers and metrics', *Administration and Society*, 54, 5, pp.971–91.

Azoulay, P., Furman, J. L. and Murray, F. (2015) 'Retractions', *Review of Economics and Statistics*, 97, 5, pp.1118–36.

Azoulay, P., Bonatti, A. and Krieger, J. (2017) 'The career effects of scandal: evidence from scientific retractions', *Research Policy*, 46, 9, pp.1552–69.

Baugut, P. (2017) 'Moralism, constructivism, relativism: identifying and describing the approaches of research on scandal', *Journal of Mass Communication and Journalism,* 7, 3, pp.1–7.

Berggren, C. and Karabag, S. (2019) 'Scientific misconduct at an elite medical institute: the role of competing institutional logics and fragmented control', *Research Policy*, 48, 2, pp.428–43.

Borsboom, D. and Wagenmakers, E. (2013) 'Derailed: the rise and fall of Diederik Stapel', *Observer*, 26, 1, available from https://www.psychologicalscience.org/issue/january-13, accessed September 2022.

Clemente, M. and Gabbioneta, C. (2017) 'How does the media frame corporate scandals? The case of German newspapers and the Volkswagen diesel scandal*', Journal of Management Inquiry,* 26, 3, pp.287–302.

Cohen, J. (2019) 'The untold story of the "circle of trust" behind the world's first gene-edited babies', *Science,* 1 August, available from https://www.science.org/content/article/untold-story-circle-trust-behind-world-s-first-gene-edited-babies, accessed September 2022.

Derksen, M. and Rietzschel, E. (2013) 'Surveillance is not the answer, and replication is not a test: comment on Kepes and McDaniel, "How trustworthy is the scientific literature in I–O psychology?"', *Industrial & Organizational Psychology,* 6, 3, pp.295–8.

Dewan, Y. and Jensen, M. (2020) 'Catching the big fish: the role of scandals in making status a liability', *Academy of Management Journal,* 63, 5, pp.652–78.

Earl, P. (2011) 'From anecdotes to novels: reflective inputs for behavioural economics', *New Zealand Economic Papers,* 45, 1–2, pp.5–22.

Eisenhardt, K. and Graebner, M. (2007) 'Theory building from cases: opportunities and challenges', *Academy of Management Journal*, 50, 1, pp.25–32.

Enserik, M. (2016) 'Karolinska Institute fires fallen star surgeon Paolo Macchiarini', *Science,* 23 March, available from https://www.science.org/content/article/karolinska-institute-fires-fallen-star-surgeon-paolo-macchiarini, accessed September 2022.

Entman, R. (2012) *Scandal and Silence: Media Responses to Presidential Misconduct,* Polity Press, Cambridge.

Fanelli, D. (2009) 'How many scientists fabricate and falsify research? A systematic review and meta-analysis of survey data', *PLoS One*, 4, 5, e5738.

Frey, B. (2021) 'Backward-oriented economics*', Kyklos*, 74, 2, pp.187–95.

Gammon, E. and Franzini, L. (2013) 'Research misconduct oversight: defining case costs', *Journal of Health Care Finance*, 40, 2, pp.75–99.

Ghorayshi, A. (2016) '"He thinks he's untouchable": sexual harassment case exposes renowned ebola scientist', *Buzz Feed News*, 29 June, available from https://www.buzzfeednews.com/article/azeenghorayshi/michael-katze-investigation, accessed September 2022.

Graffin, S., Bundy, J., Porac, J., Wade, J. and Quinn, D. (2013) 'Falls from grace and the hazards of high status: the 2009 British MP expense scandal and its impact on parliamentary elites', *Administrative Science Quarterly*, 58, 3, pp.313–45.

Grolleau, G., Marciano, A. and Mzoughi, N. (2020) 'The strategic use of scandals', *Kyklos,* 73, 4, pp.524–42.

Grolleau, G., Marciano, A. and Mzoughi, N. (2021) 'Scandals: a "reset button" to drive change?', *Organizational Dynamics,* 50, 2, 100783.

Hall, J. and Martin, B. (2019) 'Towards a taxonomy of research misconduct: the case of business school research', *Research Policy*, 48, 2, pp.414–27.

Horbach, S., Breit, E. and Mamelund, S. (2019) 'Organisational responses to alleged scientific misconduct: sensemaking, sensegiving, and sensehiding', *Science and Public Policy*, 46, 3, pp.415–29.

Hussinger, K. and Pellens, M. (2019) 'Guilt by association: how scientific misconduct harms prior collaborators', *Research Policy,* 48, 2, pp.516–30.

Jamieson, K., McNutt, M., Kiermer, V. and Sever, R. (2019) 'Signaling the trustworthiness of science', *Proceedings of the National Academy of Science,* 116, 39, pp.19231–6.

Jory, S., Ngo, T., Wang, D. and Saha, A. (2015) 'The market response to corporate scandals involving CEOs', *Applied Economics*, 47, pp.1723–38.

Kahneman, D. and Tversky, A. (1979) 'Prospect theory: an analysis of decision under risk', *Econometrica*, 47, pp.263–92.

Keith, N. and Frese, M. (2008) 'Effectiveness of error management training: a meta-analysis', *Journal of Applied Psychology,* 93, 1, pp.59–69.

Lacetera, N. and Zirulia, L. (2011) 'The economics of scientific misconduct', *Journal of Law, Economics, and Organization*, 27, 3, pp.568–603.

Lee, F., Peterson, C. and Tiedens, L. (2004) '*Mea culpa*: predicting stock prices from organizational attributions', *Personality and Social Psychology Bulletin*, 30, 12, pp.1636–49.

Lüscher, T. (2019) 'Back to square one: the future of stem cell therapy and regenerative medicine after the recent events', *European Heart Journal,* 40, 13, pp.1031–42.

Matus, K. and Bernal, M. (2020) 'Media attention and policy response: 21st century chemical regulation in the USA', *Science and Public Policy*, 47, 4, pp.548–60.

Meyer, C. (2001) 'A case in case study methodology', *Scientific Methods*, 13, 4, pp.329–52.

Michalek, A., Hutson, A., Wicher, C. and Trump, D. (2010) 'The costs and underappreciated consequences of research misconduct: a case study', *PLoS Medicine*, 7, 8, e1000318.

Necker, S. (2014) 'Scientific misbehavior in economics', *Research Policy*, 43, pp.1747–9.

Pimple, K. (2002) 'Six domains of research ethics', *Science and Engineering Ethics*, 8, 2, pp. 191–205.

Septianto, F. (2020) 'Do past scandals influence the present performance? The moderating role of consumer mindset', *Journal of Business Research,* 106, pp.75–81.

Shibayama, S. and Baba, Y. (2015) 'Dishonest conformity in peer review', *Prometheus*, 33, 3, pp.215–33.

Smith, C. and Freyd, J. (2014) 'Institutional betrayal', *American Psychologist*, 69, 6, pp.575–87.

Thaler, R. (2018) 'From cashews to nudges: the evolution of behavioral economics', *American Economic Review*, 108, 6, pp.1265–87.

Thompson, J. (2000) *Political Scandal: Power and Visibility in the Media Age*, Polity Press, Cambridge.

US Department of Justice (2019) 'Duke University agrees to pay US $112.5 million to settle false claims act allegations related to scientific research misconduct', press release 19-268, 25 March, available from https://www.justice.gov/opa/pr/duke-university-agrees-pay-us-1125-million-settle-false-claims-act-allegations-related, accessed September 2022.

Van Lange, P., Buunk, A., Ellemers, N. and Wigboldus, D. (2012) 'Sharpening scientific policy after Stapel', available from https://kli.sites.uu.nl/wp-content/uploads/sites/426/2019/09/Sharpening-Scientific-Policy-After-Stapel.pdf, accessed September 2022.

Zwart, H. (2017) 'The catwalk and the mousetrap: reading Diederik Stapel's derailment as a misconduct novel', in *Tales of Research Misconduct*, Library of Ethics and Applied Philosophy, 36, Springer, Cham, Switzerland.