

***Transgressions and the Scientific Knower***  
**Fabien Medvecky, University of Otago**

Let's begin with three uncontroversial assumptions about science. Firstly, science is a knowledge creating activity; science is fundamentally about creating knowledge (explanations, facts, etc) of the empirical world around us. Secondly, science is the socially dominant epistemic framework; the knowledge created by science is regarded as the best, most reliable knowledge we have. Lastly, science aims to be as objective as it can be; science, in its method and culture, attempts to minimize the effect of subjective bias on its explanations and findings. This aim of bias-minimizing is all-important as it is one of the justifications for science's epistemic dominance.

Science is also a deeply social enterprise, and that sociality creates its own forms of bias (Latour and Woolgar, 1979; Kuhn, 1996). Science has its own social norms and scientists are also subject to the norms of the broader society they belong to. The question I want to consider is: how do social transgressions—acts that cut against the grain of socially acceptable behaviours and practices (from data fabrication, to socially inappropriate behaviour, to acts of criminality)—co-exist with the bias-minimizing aims of science? In this paper, I offer a preliminary typology of transgressions and consider some key questions about the interaction between these transgressions and the aims of science as reliable, bias-minimizing knowledge-creating activity.

**Norms and Transgressions**

Much of our lives are governed by social norm, from norms about alcohol and drug consumption to norms about sexual practice to norms about professional practice. Norms are “customary rules that govern behaviour in groups and societies” (Bicchieri and Muldoon, 2014). Such customary rules are useful for a number of reasons. At a personal level, norms guide our behaviour, with regard to what is permissible and what is not. Socially, norms help us predict the likely behaviour of others. both in the acts they chose to perform and in their reaction to our acts (Brauer and Chaurand, 2010). Fundamentally, norms are concerned with constraining an individual's behaviour; a large part of the constraining force of norms comes from sanctions transgressing individuals will suffer as a result of their transgression (Bicchieri and Muldoon, 2014; Linke, 2012). By setting boundaries on behaviour, norms tell us what is acceptable and what is not acceptable. For example, the social norm with sexual behaviour in western countries is that sexual interaction between consenting adults is acceptable (subject to further constrains on fidelity, gender preferences, etc), but also that sexual interaction between an adult and child is not. In science, the norm with regard to creativity in research is that creating theories is acceptable, but creating data is not.

Acts that breach social norms are often referred to as transgressions (Abrams, Randsley de Moura and Travaglino, 2013). These transgressions come in many shapes and sizes. Some transgressions are breaches of social norms with relatively little moral significance (wearing the wrong outfit at a wedding), while others are substantial challenges to our moral norms (rape, murder, etc). Transgressions can be episodic (a one-off faux-pas), or they can be (or be considered) a reflection of a more fundamental personality trait

(Manstead and Semin, 1981). Some transgressions may be punishable by law, such as sexual relations with a minor, but not all are (expressions of racism is not usually illegal, but it is often considered a breach of social norms) (Abrams, Travaglino, Randsley de Moura and May, 2014). Whether transgressions are punished by law or not, transgressions do generate a social reaction. This reaction is socially determined not only on a macro-scale—how the transgression is judged because of the nature of the transgression (Brauer and Chaurand, 2010)—but it is also social on a micro-scale—how the transgressor is judged according to the context in which the transgression occurred and the relationship the transgressor has with the other individuals involved (Linke, 2012). So what happens when a scientist transgresses? More specifically, what happens to the scientific findings of a scientist who transgresses, given science’s bias-minimization aims? Clearly, the nature of the transgression will have some bearing on the reaction, so let’s begin by scaffolding a broad-brush typology of transgressions scientists might commit.

### **A Typology of Transgressions**

One obvious form for transgression is the breaching of scientific norms; carrying out ‘bad science’, such as data fabrication, plagiarism and fraud. Such cases are perceived as being both methodologically dubious and unethical (Resnik, 1998). David Wakefield’s fraudulent paper about MMR vaccine is an exemplar case of such transgressions (Dyer, 2008).

A slightly less overt form of transgression is the breaching of scientific etiquette, such as reporting one’s results in press conferences before presenting them to one’s peer at conference or in publication, or showing a seeming disregard for the seriousness and importance of science. For example, James McConnell publishing his “The Worm Runner’s Digest”, a half scientific, half satirical journal (eventually split in two, the satirical half retaining the original title and printed upside-down on the back end of the more traditionally scientific “The Journal of Psychological Biology”) was seen by some as showing disrespect for the institution of science (Collins and Pinch, 1993).

A third form of transgression is breaches of broader social norms, from adultery to murder to expressions of racism. James Watson, who was awarded the Nobel Prize in 1962 for his work on the structure of DNA, sold his Nobel medal in 2014 as a result of being pushed to the side both socially and professionally following comments considered racist; namely suggesting that race was a determinant of intelligence (Malloy, 2008).

These are three idealized types of transgressions and real-world transgressions will often (usually? always?) be a combination of two or more of these. Cases of ethical breach, such as the Tuskegee Syphilis Study, where contaminated patients were left untreated in order to be able to follow the disease’s course “in nature” (Crenner, 2011), are clearly transgressions of social norms, but they are also breaches of scientific norms. While transgressions will not always fall neatly into this typology, it is epistemically useful to distinguish between various types of transgressions as this will, or maybe should, have a bearing on how the transgression affects the way the transgressor’s science is received, perceived, and distributed. In this paper, I want to open up a discussion on the tension

between the effect of transgressions and the bias-minimizations aims of science, and what this means scientists as knowers.

### **Transgressions and the Scientific Enterprise of Knowledge Creation**

Thinking of transgressions raise an obvious set of empirical questions: how do transgressions affect our perception of the transgressor's findings; how is a transgressor's body of knowledge affected by the transgression; and so on. Transgressions also raise an obvious set of normative questions: how should these transgressions affect our perception of the findings; should a transgressor's body of knowledge be affected by the transgression and so forth. But the questions I'm more interested in are epistemic in nature: how do transgressions relate to our ideas about knowledge creation and communication? And, relatedly, how does the transgressor, as a knower, alters due to the transgression?

When a scientist transgresses, the acceptance, distribution and profile of their knowledge is often negatively affected. In some cases, such as data fabrication, this may seem well warranted. But what of the cases where the transgression is (seemingly) unrelated to the scientists' field of work. Take a fictional case of a scientist working on astronomy found guilty of a terrible murder, or consider the afore-mentioned case of James Watson (his research on the structure of DNA seems unrelated to his expressed views about the intellectual inferiority of black people, the latter being a breach of social norms) (Malloy, 2008). The scientific ideal of bias-minimization and of being as objective as possible should lead us to ignore (or set aside) transgressions unrelated to the findings. Yet scientists are more than knowing machines; they are part of our social fabric, and their knowing, their capacity, their rights as knowers, are intrinsically linked to this sociality. Indeed, science's privileged place as the epistemically dominant framework is inherently social. So how do we read these transgressors' work and how do we interact with them as knowing agents?

Some recent contributions to this collective have discussed the relationship between personal change and our capacity to know (West, 2104; D'Agostino, 2014). Basbøll, for example, suggests that "[w]e have to become certain kinds of people in order to know certain kinds of things" (2014). In these discussions, the concern is with individual's capacity to pursue knowledge in new and challenging directions, but something more is entailed in the argument in these articles. By tying the capacity to further knowledge with personal change, we are tying the capacity to further knowledge with the character of the knower; we move from 'knowing as the result of an action' (or set thereof) to 'knowing as the result of a character trait' (being courageous, being risk-taking, and so forth). Thinking of the relationship between character, personal change and knowledge suggests a way forward on how to think of transgressions and the role of science as a knowledge creating activity by inviting reflections on what kind of character is required of scientist as a knower; what kind of person must a scientists be to know the kind of things a scientist aims to know. Conversely, transgressions suggests some further questions on the relationship between personal change and social epistemology; not only do we want to ask "what kind of people do we need to become in order to know certain kinds of things", but also "what kinds of things can we still know when we stop being certain kinds of

persons”. This makes transgressions a rich avenue for exploring the relationship between personal change and social epistemology.

**Contact details: [fabienmedvecky@gmail.com](mailto:fabienmedvecky@gmail.com)**

## References

- Abrams, Dominic, Georgina Randsley de Moura, Giovanni A. Travaglino. “A Double Standard When Group Members Behave Badly: Transgression Credit to Ingroup Leaders.” *Journal of Personality and Social Psychology*, 105, no. 5 (2013): 799-815.
- Abrams, Dominic, Giovanni A. Travaglino, Georgina Randsley de Moura and Philip J. May. “A step too far? Leader racism inhibits transgression credit.” *European Journal of Social Psychology*, 44, no. 7 (2014): 730-735.
- Basbøll, Thomas. “I, Social Epistemologist.” *Social Epistemology Review and Reply Collective* 3, no. 4, (2014): 14-15. <http://wp.me/P1Bfg0-Y9>
- Bicchieri, Cristina and Ryan Muldoon. “Social Norms.” In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta (2014). <<http://plato.stanford.edu/archives/spr2014/entries/social-norms/>>. Retrieved 14/1/2015
- Brauer, Markus and Nadine Chaurand. “Descriptive Norms, Prescriptive Norms, and Social Control: An Intercultural Comparison of People's Reactions to Uncivil Behaviors.” *European Journal of Social Psychology* 40, no. 3 (2010): 490-499.
- Collins, Harry and Trevor Pinch. *The Golem: What You Should Know About Science*. Cambridge: Cambridge University Press, 1993.
- Crenner, Christopher. “The Tuskegee Syphilis Study and the Scientific Concept of Racial Nervous Resistance.” *Journal of the History of Medicine and Allied Sciences* 67, no. 2 (2011): 244-280.
- D’Agostino, Fred. “How Can We Collectivize a Set of Visions about Social Epistemology?” *Social Epistemology Review and Reply Collective* 3, no. 8 (2014): 5-9. <http://wp.me/P1Bfg0-Y9>
- Dyer, Owen. “Wakefield Admits Fabricating Events When He Took Children’s Blood Samples.” *British Medical Journal* 336, no. 7649 (2008): 850-850.
- Kuhn, Thomas. *The Structure of Scientific Revolutions* (3<sup>rd</sup> edition). Chicago: University of Chicago Press, 1996.
- Latour, Bruno and Steve Woolgar. *Laboratory Life: The Construction of Scientific Facts*. London: Sage, 1979.
- Linke, Lance H. “Social Closeness and Decision Making: Moral, Attributive and Emotional Reactions to Third Party Transgressions.” *Current Psychology* 31, no. 3 (2013): 291-312.
- Malloy, Jason. “James Watson Tells the Inconvenient Truth: Faces the Consequences.” *Medical Hypotheses* 70, no. 6 (2008): 1081-1091.
- Manstead, A. S. R., and G.R. Semin. “Social Transgressions, Social Perspectives, and Social Emotionality.” *Motivation and Emotion* 5 no. 3 (1981): 249-261.
- Resnik, David. *The Ethics of Science*. Routledge: New York, 1998.

West, Mark. “Doxastic Involuntarism, Attentional Voluntarism, and Social Epistemology.” *Social Epistemology Review and Reply Collective* 3, no. 5 (2014): 37-51. <http://wp.me/P1Bfg0-Y9>