

# An end to ‘God-like’ scientific knowledge? How non-anonymous referees and open review alter meanings for scientific knowledge

Joanne Gaudet<sup>1</sup>

<sup>1</sup>Department of Sociology, University of Ottawa, Ottawa ON K1N 6N5

## Abstract

In this paper I reflect on changing journal peer review practices and relations, and more particularly, on anonymity for referees and openness of review practices and relations. I explore how non-anonymity for referees and open access to journal peer review editorial judgements and decisions contribute to reshaping meanings for scientific knowledge. Anonymous referees and closed access to editorial documents had, until now, helped shape a meaning of objective and ‘God-like’ absolute knowledge. In contrast, more recent non-anonymous referee and open access dynamics have contributed to a new meaning of situated and partial scientific knowledge. I draw from scholarship on peer review, in legal studies, in the sociology of secrecy, and in the sociology of knowledge. I conclude that non-anonymous referees and open review practices and relations challenge ‘God-like’ scientific knowledge in secretive pre-publication journal peer review that, until now, has been instrumental for natural scientific and medical journal publication models that mostly sell scientific knowledge as news.

**AUTHOR’S NOTE:** This sociological preprint is one of a series in which I explore ignorance (re)production in journal peer review and journal peer review dynamics more generally. The main target audience is natural science researchers, publishers, and policymakers and a secondary audience is social scientists with an interest in journal peer review in the natural sciences. © 2014 The author (Joanne Gaudet). For any use, the original work must be properly cited: Gaudet, J. 2014. An end to ‘God-like’ scientific knowledge? How non-anonymous referees and open review alter meanings for scientific knowledge. uO Research. Pp. 1-12.

[Peer review is] a game. [...] [Making anonymous or non-anonymous referee judgements and editor’s judgements openly available to the scientific community] would be innovative, I think. And this would also kind of reveal the subjectiveness of peer review. With the 60 papers I’ve published so far, I have never had a paper where the two reviewers were absolutely consistent about what they complained about.

Anonymous Natural Scientist, 2013

## Introduction

The main goal in this paper is to explore how journal peer review practices and relations for referee anonymity and access to editorial document shape meanings for scientific knowledge<sup>1</sup>. To reach my goal, I draw from research on journal peer review (i.e., Biagioli, 2002; Gaudet, 2014a; Gaudet, 2014b), and from scholarship in legal

---

<sup>1</sup> Although I only refer to ‘scientific knowledge’, conceptually I include ‘scientific ignorance’ (Gaudet, 2013). I understand ignorance in science as the limits and the borders of knowing (Gross, 2010).

studies (i.e., Knoester, 1998; Waddams, 1992), the sociology of secrecy (i.e., Simmel, 1906), and the sociology of knowledge (i.e., Latour and Woolgar, 1986).

First, I delineate what this paper *does not* and *does* propose to do. The paper is not a quantitative or qualitative analysis of the *rise* in non-anonymous refereeing and in open access review. Though such work, I advance, is certainly needed. The paper is also not an analysis of *how* these practices and relations came to be, or were and continue to be shaped in historical and contemporary contexts. I will draw from, but not dwell on, historical (Gould, 2012, 2013; Gaudet, 2014b; 2014c; 2014d) and contemporary (Guédon, 2001; Gaudet, 2014e) shaping for journal peer review. Rather, the paper focuses on practices and relations for referee anonymity and openness of access to review documents and how these help shape meaning for scientific knowledge.

An underlying argument is that the transition from anonymity for referees and closed access to editorial documents in journal peer review to more open review with non-anonymous referees and open access to judgements and decisions has led to a change in meaning for scientific knowledge. The purported change is from objective and absolute ‘God-like’ knowledge to situated and partial knowledge. The first dominant meaning therefore, is one where anonymous referees and closed access to editorial judgements and decisions help shape supposedly ‘objective’ scientific knowledge. In contrast, non-anonymous referees and open access to judgements and decision have contributed to a meaning of situated and partial scientific knowledge where referees and editors hold multiple and sometimes conflicting relations of accountability (Gaudet, 2014a, 2014b, 2014e).

The opening quote from a natural scientist thus assumes that pre-publication journal peer review (*traditional* peer review) supposedly produces a meaning of ‘objective’ knowledge. The quoted scientist suggests that open review, in contrast, would reveal the ‘subjectiveness’ of editorial judgements and decisions. Another interesting aspect of the quote is that the scientist did not appear to be aware of open journal peer review (*public space* peer review). This is most likely owing to *traditional* peer review as a paradigmatic type of peer review used at journals – one that eclipses other types and makes them appear unnatural (see Gaudet, 2014a; 2014e).

That the scientist who shared these insights during an interview opted for anonymity reveals the recursive nature of peer review. Potential recursive negative career impact from other types of peer review (cf., for funding for research projects, promotions, and book publication) by anonymous referees who might learn of the anonymous scientist’s reflections lurks for those who challenge the dominant meaning of ‘objective’ peer review judgements. To take a contradictory stand against dominant meanings can hold dire consequences. I do not dwell on recursive dynamics for peer review here – but bring attention to them in order to frame the paper in a wider peer review context.

Open peer review refers to public review and discussion, performed after the open publication of original manuscripts submitted to journal peer review where editorial judgements (cf., from referees and editors) and editorial decisions are openly accessible and can be commented on – thus *public space* peer review. Open access is beyond the author, referees, and editors and extends to a wider scientific and non-scientific community – usually on Web-based journal platforms (see Copernicus suite of journals using *public space* peer review, Pöschl, 2010, 2012; Gaudet, 2014e).

I use the theoretical concept of social form to capture how individuals relate

around a particular content. For the social form of ‘boundary judgement’ (i.e., journal peer review), content refers to decisions from the judgement of scientific written texts held to account to an overarching knowledge system. In contemporary science, the overarching knowledge system is that of science. Given its roots in censorship with its function of bounding science, I frame journal peer review as following precursor boundary judgement forms of inquisition and censorship (Gaudet, 2014b, 2014c). In precursor forms, the overarching knowledge system was religion. Each social form encapsulates structural properties that include actor roles, anonymity, and relations (cf., economic, professional, power). I proposed a model for *traditional* peer review and performed a cursory comparison with *public space* peer review in Gaudet (2014a).

The paper proceeds in two phases. First, I lay the groundwork with a look at referee anonymity dynamics. Second, I explore the reader-manuscript relation through a judicial lens resting mostly on legal scholarship. I conclude that non-anonymous referees and open review practices and relations challenge ‘God-like’ scientific knowledge from secretive *traditional* peer review that, until now, has been instrumental for natural scientific and medical journal publication models that sell scientific knowledge as news.

### **Referee anonymity dynamics**

As I have explored elsewhere (Gaudet, 2014e:11-12), it is difficult to pinpoint where referee anonymity (single-blind peer review) became a widespread cultural practice in journal peer review. Anonymity might have become more widespread from 1832 onward (The Royal Society, 1912:163), though its uptake appears to have been heterogeneous. Single-blind peer review, where the name of the referee is not shared with the author (remains anonymous) and the author’s name is shared with referees (author as non-anonymous), has since become a naturalized practice in the paradigmatic form of *traditional* peer review in natural scientific and medical journals.

Change to reviewer anonymity relations does not seem to have rested on legal counsel, however, in contrast to changes with respect to anonymity of witnesses in the precursor form of inquisition that were expressly based on established legal procedure and where exceptions had to be extensively justified (Peters, 1988:59). Inquisition and censorship relations were also in keeping with Roman Law as established legal procedure (Peters, 1988: chapter one, 59). Contemporary self-regulating journal peer review, in contrast, holds no legal stance (see Biagioli, 2002:13).

#### *Holding no explicit relation of accountability*

What the absence of legal stance means for anonymity of referees is that an actor in a role that bestows judgement (cf., role of ‘judge’ much like the roles of inquisitor for inquisition or of relator for censorship) could potentially benefit from a relation of power over a manuscript and its author and hold no explicit and transparent accountability for the judgement. As discussed below, the accountability relation for an anonymous referee remains channeled through faith or through relation with an editor. A competing understanding is one where referees must be ‘protected’.

#### *Referee judgements as ‘true’ or ‘false’?*

Those who promote referee anonymity often argue fear of recrimination for referees who ‘speak their mind’. Such a fear seems to mirror the Middle Ages where

witnesses were rendered anonymous in inquisition in spite of legal obligations that required non-anonymity for witnesses (see Peters, 1988:chapter 1). Witnesses were rendered anonymous for fear of retaliation against those in the role. Yet anonymity for the role of witness hinged on an accusation eventually being revealed as ‘true’ or ‘false’. By justifying anonymity in the role of referee on the basis of recrimination, I advance that another meaning for referee judgements is therefore that of accusation that can be ‘true’ or ‘false’, triggering a need to *protect* the accuser (cf., referee). This is in stark contrast to well-documented and well-articulated editorial judgements that reflect a relation with a manuscript viewed through a judicial perspective of judging and engaging in rational decision-making. A related dynamic is of anonymous referee judgements holding a meaning of ‘absolute’ knowledge.

### *Absolute knowledge, trust, faith, and power relations*

I delve into the dynamic of texts ‘not making unacceptable claims’ (Biagioli, 2002:23) as borrowed not only from censorship (Biagioli, 2002) but also from inquisition. From the ‘founding charter of the inquisition’ in 1184 for example, the Latin Christian Church condemned “...the “insolence” of heretics and “their attempts to promote falsehood” (Peters, 1988:47). It is thus theoretically relevant that the assumption underlying the existence of unacceptable claims is an accountability relation to *absolute* knowledge (cf., religious knowledge in sacred texts). The latter confers quasi-absolute power to judgements and decisions as to what could be deemed scientific, or not.

When religious dominance receded in science, the role of editorial reader was disentangled from accountability to absolute religious knowledge (Gaudet, 2014b, 2014c). Editorial reader judgements appear to have nonetheless maintained quasi-absolute power owing in great part to structural secrecy and to the apparent naturalness of having one dominant ensemble of knowledge practices – now science. This harks back to the shift of authority from religious Divine Right to Nature (as investigated by science) that suppressed other ways of knowing (Zavarzadeh and Morton, 1991:68; see Laplante 2014). A closer analysis of the dynamics of absolute knowledge and related structural secrecy and anonymity starts with better understanding for underlying power and trust dynamics.

Simmel (1906) proposed that reciprocal knowledge of individuals engaged in relation (here through peer review) is a “...positive condition of social relationships” (1906:448). In anonymous peer review, this positive condition of relation cannot be met. Anonymity, or the lack of knowledge about the referee, would therefore make trust in the anonymous referee role and in his/her judgement in that role impossible<sup>2</sup> based on Simmel’s insights on secrecy (1906:450). Furthermore, the role in which the referee is engaged, once anonymous, is one that can inherently potentially exercise greater power over the manuscript and its author. Finally, structural secrecy meant that those outside of the editorial readers did not know who was engaged in review with the exception of the editor, leading to potential lack of trust.

One exception Simmel proposed however, was faith as another type of confidence

---

<sup>2</sup> Accounts of peer review rejection frequently highlight personal distrust of the anonymous peer with discourse related to individual bias and lack of relevant knowledge to engage in the role of referee (cf., related research and discussion of individual referee bias in Granville, 1830, Mahoney, 1977, Resch et al., 2000, Phillips, 2011, Steinhäuser et al., 2012).

where “[t]his condition of faith, in a perfectly pure form, detached from every sort of empirical consideration, probably occurs only within the sphere of religion” (1906:450). I argue that a similar type of faith, obtained by replacing absolute confidence in religion with absolute confidence in science, is another way of understanding peer review anonymous referees with structural secrecy of judgements only communicated between the editor and the author. Lack of knowledge about who is acting in the role of referee in such structural secrecy would therefore lead to trust based on faith in absolute scientific knowledge. Under these structural conditions, any referee judgement would reflect absolute knowledge. In addition, only editorial team members that know the identity of actors in the role of referees could pass further judgement on the value of referee reports. The manuscript author and the wider scientific community and beyond, in contrast, would have to have faith in the referee’s judgement based on absolute scientific knowledge.

What is more, insights into structural secrecy help frame such absolute knowledge understood within the dynamics of empiricism seeking ‘truth’, where knowledge is dematerialized and depoliticized (see related discussion in Walker, 2004:137). One of the knowers here, the actor in the role of anonymous referee, can therefore be constructed as offering objective anonymous knowledge in referee judgements, separate from the role of referee as a situated knowledge producer.

Anonymity and secrecy, combined with trust and epistemic dynamics help structure differences between single-blind and double-blind peer review (where the author (and manuscript) and the referees are rendered anonymous). Single-blind cultural practices acknowledge, although only implicitly, the meaning of contextualized knowledge and ignorance production when they uphold that the author’s identity *is* relevant for review. Editorial readers are effectively dealing with materialized and politicized knowledge for the manuscript and its author – and can engage in trust (or not). Anonymous editorial readers can, however, also engage in relations of increased power over the author.

In contrast, double-blind peer review maintains epistemological foundations of immaterial and apolitical knowledge production (see discussion in Walker, 2004:137) where all actors in the role of editorial readers and author(s) can fail to engage in trust. Finally, double-blind peer review allows for enhanced potential relations of power in the role of editor over all actors relating in the social form. One area of scholarship that has explored issues of trust and anonymity is legal studies – for the role of the judge.

### **The editorial reader-manuscript relation in judicial perspective**

I draw from legal scholarship for two reasons. First, precursor social forms of inquisition and censorship were founded on legal premises and enforced non-anonymity for the inquisitor and censors (with the exception of witnesses, as discussed above). Although the social form of *traditional* peer review functioned as a form of censorship from 1665 to the nineteenth century, authorities did not think scientists were particularly harmful therefore apart from Court/State appointed censors (mostly within the scientific community), the learned societies were granted privileges to oversee censorship (Biagioli, 2002; Gaudet, 2014b, 2014c). It would appear that deviations from legal premises of transparency crept into the social form where anonymity for referees and structural secrecy later became cultural practice (2014b; 2014c).

Second, I draw from legal scholarship because legal studies have attempted to grapple with what appear as similar dynamics to those of structural secrecy and anonymity in traditional peer review when dealing with ‘faceless courts’ (where the judge is anonymous) (Knoester, 1998; Nagle, 1999-2000).

Looking at editorial reader and manuscript relations in a judicial perspective, the referee engaging in review is author of a judgement based on a relation with a manuscript and a relation of accountability to the judgement. Non-anonymous judgements thus shed a meaning of ‘true’ or ‘false’ to become materialized and politicized in specific contexts. A non-anonymous referee is situated – in specific professional, disciplinary, and economic relations. Each of which can entail relations of accountability to potentially conflicting goals (i.e., economic relations of accountability to a funder versus professional relations of accountability to ethical standards). A new meaning for referee knowledge here is that of *situated* knowledge.

Still today, judges are only very rarely anonymous or ‘faceless’ because transparency is an underlying legal principle that requires a judge to be named and requires decision-making “...open to the scrutiny of the public” (Waddams, 1992:9). The spotlight Smith (1999; 2011) shone on ethical issues of anonymous referees and the related need for referee accountability and credit can therefore also be understood within this wider historical framework of legal obligations in boundary judgement social forms. To explore a judicial perspective deeper, I broach rationality.

#### *Rationality and relations to enhance rational decision-making*

Finally, I analyse a fundamental element in most theoretical contexts proposed to understand journal peer review: purported rationality in peer review<sup>3</sup>. I do so in order to theorize how and why structural properties can contribute to rational decision-making in boundary judgement. Rational decision-making here is understood as constructing editorial judgements based on individual cognitive reflection, logic, and analysis. The focus I make is not on rationality at a psychological level, rather it is on the social relations that can enhance or reduce potential for rational decision-making.

In Figure 1, I propose a theoretical spectrum for rational decision-making in function of peer review social forms. On the spectrum, *traditional* peer review is least likely to contribute to rational decision-making whereas *public space* peer review is most likely to contribute to rational decision-making.

To start, I recall Hirschauer (2010) who argued the “...[t]he implicit folly of [...] a normative focus on persons [in peer review research] is that it gives rise to an ideal of the ‘wise, prejudice-free’ individual – an expectation that is actually pre-democratic, if not theocratic” (2010:97). Furthermore, Horrobin (1982) who launched the journal *Medical Hypotheses* in hopes of increasing the production of new ideas in the biological sciences (Horrobin, 2004), argued that:

[t]he [peer review] system assumes perfect honesty and integrity and therefore gives a built-in advantage to the many scientists who fail to

---

<sup>3</sup> I deem it ironic that individuals who seek to protect referees who ‘speak their mind’ also advance that referees engage in rational decision-making. Why would there be a need to *protect* individuals who purportedly engage in rational decision-making?

meet those standards. Peer review is an open invitation to the crooked, which may be one reason why in many areas of the biological sciences there is a lack of substantial progress.

Horrobin (1982:218)

Assumptions of ‘perfect honesty and integrity’ and ‘a normative focus on persons’ are themselves based on an assumption of rational decision-making in boundary judgement.

I draw parallels, however, between the potential for corruption with structural secrecy for editorial judgements and decisions and anonymous referees in *traditional* peer review and the potential for corruption with ‘faceless courts’ where judges are anonymous. In Columbia, for example, where “[w]ith almost no public accountability, the faceless courts seemed to be designed as a cover for corruption” (Knoester, 1998). Like Knoester (1998) and Nagle (1999-2000) who argued that Columbian faceless courts might be exploited by American business interests, I argue that structural secrecy and anonymity shaping relational ties in *traditional* peer review might be more susceptible to abuse by unscrupulous publishers (Gaudet, 2014e:10-11), editors whose editorial judgements and decisions remain invisible (beyond the editor-author relation), and anonymous referees whose editorial judgements remain anonymous and invisible (beyond the editor-author relation).

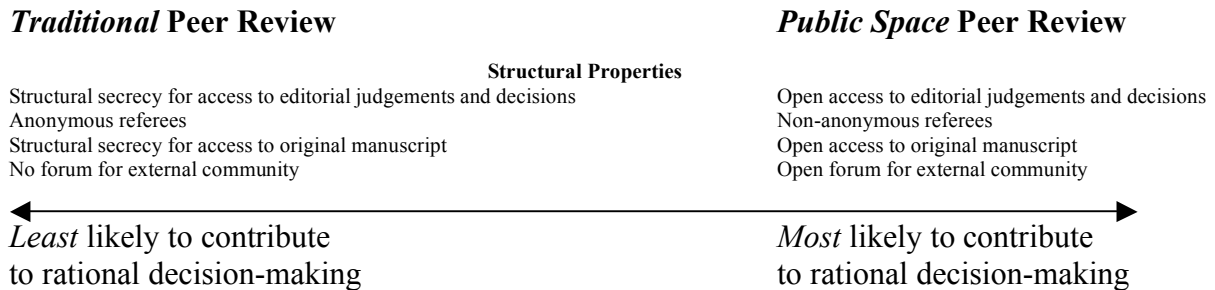
Moreover, existing theoretical contexts for editorial review construct actors engaged in editorial judgement making as doing so purely on a cognitive basis owing to rational analysis by individual editorial readers (Hirschauer, 2010:73; Biagioli, 2002:13; see Mulkay and Gilbert, 1982:181). However, extensive research into peer review does not support a ‘rational decision-making’ theoretical context for editorial review. Research reveals purported low inter-rater reliability (Bornmann et al., 2010), bias (Smith, 2011), conservatism (Campanario, 2009), and an inability to detect fraud or misconduct (Smith, 2011; Ioannidis, 2005). Researchers therefore typically engage in “asymmetrical accounting for error” (1982) in order to account for the discrepancy between expected rationality and non-rational peer review outcomes (cf., rejection of valuable knowledge).

To tackle the premise of rationality theoretically, I continue to draw from legal scholarship. Waddams (1992) argued that ‘justice’, ‘rule of law’, and ‘impartiality of the tribunal’ are idealized forms that in Western society have yet been attained (1992:9). With respect to impartiality of the tribunal, he further argued that “[n]o judge can free herself from her background and surroundings. In a sense no judge who is not an automaton can be completely impartial” (1992:9). In essence, this reaches sociological arguments I presented above where editorial readers are ‘situated knowers’ that construct politicized, partial and localized knowledge. Congruent with Hirschauer (2010), Waddams (1992) advanced that the idea of eliminating legal argument in order to allow individual judges to simply make sensible decisions is a form of ‘palm tree justice’. A solution, according to Waddams (1992), is to ensure transparency where “[t]here is no better guarantee of impartiality and rationality in decision-making than the requirement of reasons open to the scrutiny of the public” (1992:9; see Poirier and Debruche, 2005:333). Transparency includes naming those who engage in judgement (Foote, 2011) in order to ensure accountability for the role (Knoester, 1998).

In figure 1, therefore, I propose a theoretical spectrum of expected rationality in

editorial reader decision-making for social forms of journal peer review. I do not restrict the spectrum to referees, as editor judgements can also be held to account beyond a relation with authors.

**Figure 1:** Theoretical spectrum of expected rationality in editorial reader decision-making for social forms of journal peer review



At the far left of the spectrum is *traditional* peer review with structural secrecy for access to editorial judgements, anonymous referees, structural secrecy for original manuscripts, and no forum for input from an external community, that is least likely to contribute to rational decision-making much like ‘faceless courts’. Consequently, the social form is also more likely to contribute to decreased accountability for editorial readers. The associated dominant meaning for scientific knowledge is of objective, absolute, and God-like knowledge.

At the far right of the spectrum, *public space* peer review with quasi-maximal transparency in the form of open access to editorial judgements, open access to the original manuscript, opportunity for scientific and wider-community input, and non-anonymous referees, is most likely to contribute to rational decision-making. The opportunity for scientific and wider community input means the roles of editorial readers and their judgements can be held to account to a wider audience. The meaning of scientific knowledge here is of situated and partial knowledge held under continued public gaze for indeterminate review and potential conflict with competing knowledge.

Located between the two extremes along the spectrum would be social forms of peer review with variations on referee anonymity and open access to editorial documents. I conclude with implications and theoretical insights.

### **Concluding Remarks**

The main goal in this paper was to explore how journal peer review practices and relations for referee anonymity and access to editorial document shape meanings for scientific knowledge. I investigated a change from purported objective and absolute ‘God-like’ knowledge under *traditional* peer review relations to situated and partial knowledge under *public space* peer review relations. Intermingled were issues of trust, transparency, and accountability. I also proposed a theoretical spectrum of expected rationality in editorial reader decision-making for forms of journal peer review.

A first implication from this exploration is that understanding judgements as localized in *public space* peer review does not reproduce science as a ‘unified’ knowledge system – it can still be understood as ‘science’ – but a more humble science. By this, I mean that localized actors in the roles of editorial readers create local dynamics

for the scientific exchange of knowledge with politicized, situated and partial knowledge. Editorial readers are therefore *not* expected to construct identical judgements. Editorial readers hold situated economic, power, and political relations in addition to multiple relations of accountability that can contribute to the construction of judgements and decisions.

Anonymity for referees contributes to further theoretical insights for the role of referee. I construct two. First, anonymity in the role of referee can lead to reduced author trust in the role and its judgements as proposed by Simmel (1906) in the context of ‘knowing’ those with whom we interact. Lack of trust in the role and its judgements can in turn reshape understanding for judgements as owing to a referee’s psychological and social ‘faults’ as they purportedly construct absolute, God-like knowledge. Looking to psychological and social ‘faults’ detracts from structural properties for journal peer review and helps maintain the apparent naturalness of *traditional* peer review without questioning anonymity relations.

Second, anonymity in the role of referee not only shapes relations within the social form of *traditional* peer review, it also shapes relations outside of the form. For example, when Nobel Laureate Gell-Mann had an encounter in a classroom that resembled exchanges he had had with a referee, he thought “[h]ere we go again, just like the Physical Review. I only hope he isn’t the referee with whom I had all the trouble” (1982:C8-402). In a second example, the interviewee cited at the opening of this paper with only sixty publications at the time of the interview described how maintaining anonymity for his interview was paramount so as not to potentially impact future relations with anonymous referees and his career.

These referee relational dynamics bring attention to the continued power-imbalance between the roles of author and referee in *traditional* peer review. Conceivably, an anonymous referee can continue interacting with an author from a position of power after publication and outside of the form of *traditional* peer review. Such power relations might be difficult to relinquish for those engaged in the role of anonymous referee in *traditional* peer review (see Lips, 1991), therefore potentially contributing to further naturalization and reification of anonymity for referees.

I conclude that non-anonymous referees and open review practices and relations challenge ‘God-like’ scientific knowledge in secretive *traditional* peer review. Until now, invisibility of editorial judgements and decisions has been instrumental for natural scientific and medical journal publication models that might appear to sell scientific knowledge as news (see Gaudet, 2014a; Altman, 1986:1382). Invisibility for conflicting referee reports and for the ‘messiness’ of scientific exchange in *traditional* peer review with conflicting referee, author, and editor claims and counter-claims – away from a wider public gaze – has helped maintain purported objectivity and newsworthiness for scientific knowledge. *Public space* peer review, in contrast, reestablishes a public gaze and humility for science.

### **Acknowledgements**

I thank my doctoral supervisor for comments on related earlier drafts. Please note, however, that the ideas, arguments, and remaining errors in this work are solely mine. Research was supported in part by a Joseph-Armand Bombardier Canada Graduate Scholarship from the Social Sciences and Humanities Research Council of Canada.

## References

- Altman, L.K. 1996. "The Ingelfinger rule, embargoes, and journal peer review-part 1." *The Lancet* 347:1382-1386.
- Anonymous Natural Scientist. 2013. "Telephone Interview with Joanne Gaudet June 12, 2013." University of Ottawa.
- Biagioli, M. 2002. "From Book Censorship to Academic Peer Review." *Emergences: Journal for the Study of Media & Composite Cultures* 12:11-45.
- Bornmann, L., M. Ruediger, and D. Hans-Dieter. 2010. "A Reliability-Generalization Study of Journal Peer Reviews: A Multilevel Meta-Analysis of Inter-Rater Reliability and Its Determinants." *PLoS ONE* 5:e14331.
- Campanario, J.M. 2009. "Rejecting and resisting Nobel class discoveries: accounts by Nobel Laureates." *Scientometrics* 81:549-565.
- Foote, D.H. 2011. "The Supreme Court and the Push for Transparency in Lower Court Appointments in Japan." *Washington University Law Review* 88:1745-1763.
- Gaudet, J. 2013. "It takes two to tango: knowledge mobilization and ignorance mobilization in science research." *Prometheus: Critical Studies in Innovation*, 31:169-187. <http://www.tandfonline.com/doi/full/10.1080/08109028.2013.847604>
- . 2014a. How pre-publication journal peer review (re)produces ignorance at scientific and medical journals: a case study. uO Research. Pp. 1-67. <http://hdl.handle.net/10393/31198>
- . 2014b. Investigating journal peer review as scientific object of study: unabridged version – Part I. uO Research. Pp. 1-24. <http://hdl.handle.net/10393/31319>
- . 2014c. Investigating journal peer review as scientific object of study: unabridged version – Part II. uO Research. Pp. 1-20. <http://hdl.handle.net/10393/31320>
- . 2014d. Investigating journal peer review as scientific object of study. uO Research. Pp. 1-11. <http://hdl.handle.net/10393/31161>
- . 2014e. All that glitters is not gold: The shaping of contemporary journal peer review at scientific and medical journals. uO Research. Pp. 1-23. <http://hdl.handle.net/10393/31238>
- Gell-Mann, M. 1982. "Strangeness." *Journal de Physique-Colloque* C8-Supplement to #12 43:c8-395-c8-408.
- Gould, T.H.P. 2012. "The Church and Peer Review: Was 'Peer' Review Fairer, More Honest Than Than Now?" *Journal of Scholarly Publishing* 36-60.
- . 2013. *Do We Still Need Peer Review?* Toronto: The Scarecrow Press, Inc.
- Granville, A.B. 1830. *Science Without a Head; or, The Royal Society Dissected*. London: T. Ridgway.
- Gross, M. 2010. *Ignorance and Surprise: Science, Society and Ecological Design*. The MIT Press, Cambridge.
- Guédon, J.-C. 2001. "In Oldenburg's Long Shadow: Librarians, Research Scientists, Publishers, and the Control of Scientific Publishing." Pp. 1-69. Washington, D.C.: Association of Research Libraries.
- Hirschauer, S. 2010. "Editorial Judgments: A Praxeology of 'Voting' in Peer Review." *Social Studies of Science* 40:71-103.
- Horrobin, D.F. 1982. "Peer review: a philosophically faulty concept which is proving disastrous for science." *The Behavioral and Brain Science* 5:217-218.
- . 2004. "Ideas in biomedical science: reasons for the foundation of Medical

- Hypotheses." *Medical Hypotheses* 62:3-4.
- Ioannidis, J.P.A., L. Manzioli, C. De Vito, M. D'Addario and P. Villari. 2011. "Publication Delay of Randomized Trials on 2009 Influenza A (H1N1) Vaccination." *PLoS ONE*. 6:e28346.
- Knoester, M. 1998. "War in Colombia." *Social Justice* 25:85+.
- Laplante, J. 2014. "On Knowing and Not Knowing "Life" in Molecular Biology and Xhosa Healing: Ontologies in the Preclinical Trial of a South African Indigenous Medicine (Muthi)." *Anthropology of Consciousness* 25:1-31.
- Latour, B. and S. Woolgar. 1986. *Laboratory Life: The Construction of Scientific Facts*. Princeton: Princeton University Press.
- Lips, H.M. 1991. *Women, Men, and Power*. Toronto: Mayfield Publishing Company.
- Mahoney, M.J. 1977. "Publication Prejudices: An Experimental Study of Confirmatory Bias in the Peer Review System." *Cognitive Therapy and Research* 1:161-175.
- Mulkay, M. and G.N. Gilbert. 1982. "Accounting for error: How scientists construct their social world when they account for correct and incorrect belief." *Sociology* 16:165-183.
- Nagle, L.E. 1999-2000. "Columbia's faceless justice: A necessary evil, blind impartiality or modern inquisition?" *University of Pittsburgh Law Review* 61:881-954.
- Peters, E. 1988. *Inquisition*. New York: The Free Press.
- Phillips, J.S. 2011. "Expert bias in peer review." *Current Medical Research & Opinion* 27:2229-2233.
- Poirier, D. and A.-F. Debruche. 2005. *Introduction Générale à la Common Law*. Cowansville: Éditions Yvon Blais.
- Pöschl, U. 2010. "Interactive open access publishing and public peer review: The effectiveness of transparency and self-regulation in scientific quality assurance." *International Federation of Library Associations and Institutions* 36:40-46.
- . 2012. "Multi-stage open peer review: scientific evaluation integrating the strengths of traditional peer review with the virtues of transparency and self-regulation." *Frontiers in Computational Neuroscience* 6:1-16. 10.3389/fncom.2012.00033.
- Resch, K.I., E. Ernst, and J. Garrow. 2000. "A randomized controlled study of reviewer bias against an unconventional therapy." *J R Soc Med* 93:164-167.
- Simmel, G. 1906. "The Sociology of Secrecy and of Secret Societies." *American Journal of Sociology* 11:441-498.
- Smith, R. 1999. "Opening up BMJ peer review: A beginning that should lead to complete transparency." *BMJ* 318:4-5.
- . 2011. *The Trouble with Medical Journals*. London: The Royal Society of Medicine Press Limited.
- Steinhauser, G., W. Adlassnig, J.A. Risch, S. Anderlini, P. Arguriou, A.Z. Armendariz, W. Bains, and C. Baker. 2012. "Peer review versus editorial review and their role in innovation science." *Theoretical Medical Bioethics* 33:359-376.
- The Royal Society. 1912. *The Record of the Royal Society of London*. London: Oxford University Press.
- Waddams, S.M. 1992. *Introduction to the study of law*. Fourth Edition. Scarborough: Carswell.
- Walker, K. 2004. "'Double blind': peer review and the politics of scholarship." *Nursing Philosophy* 5:135-146.

- Young, N.S., J.P.A. Ioannidis, and O. Al-Ubaydli. 2008. "Why Current Publication Practices May Distort Science." *PLoS Med* 5:e201.  
doi:10.1371/journal.pmed.0050201  
<<http://www.plosmedicine.org/article/info:doi/10.1371/journal.pmed.0050201>>.
- Zavarzadeh, M.u. and D. Morton. 1991. *Theory, (Post)Modernity, Opposition: An "Other" Introduction to Literary and Cultural Theory*. Washington: Maisonneuve Press.