Csiszar Alex (2018) The Scientific Journal: Authorship and the Politics of Knowledge in the Nineteenth Century. Chicago: University of Chicago Press. 368 pages. ISBN: 9780226752501

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Social sciences, humanities and STS scholars have for some time been attending to the circulation of popular science and vulgarisation periodicals in the nineteenth century. *The Scientific Journal* argues that, paradoxically, we still know relatively little about how a certain format, periodicity, discourse of propriety and standard of publication congealed as such a thing as a scientific journal to oppose to popular science periodicals in the first place. The book's purpose is to examine how across the century the genre emerged as a canon and token of scientific knowledge, as a locus of expert exchange and as a public endeavour, producing in the process different kinds of authorial, scientific and public legitimacy.

The first chapter examines how the proliferation of increasingly frequent publications opened up routes of circulation of odd findings, miscellanea and renditions of learned societies' minutes. The moral legitimacy of the latter's annals - infrequent, expensive and aimed at the conservation and monopolization of canonized knowledge created by elites unpreoccupied by funding and employment concerns - was now besieged by briefer, faster and sleeker knowledge claims, perhaps apocryphal but embodying the democratic, progressive and radical élan of cheap diffusion and popular debate. Initially recalcitrant, learned societies eventually launched their own journals. Chapter two shows how scientific knowledge became enrolled in remarkably literal battlegrounds concerning the politics of knowledge:

publics emerged across Europe as the site of a sovereign, enlightened reason whose political right to the public science it needed fused with the demands for a free press, the whole incarnated exceptionally well in these periodicals. The third chapter examines how the referee's emergence as a reader charged with examining the soundness of increasingly specific claims consolidated a sense of expertise, scientific credibility and learned authority that would only much later take on the character of gatekeeping. Through the fantastic controversies regarding the originality of Galileo's claims and the discovery of Neptune, chapter four examines how particular publishing practices and venues became viable and legitimate sites of adjudication, verification and authority over such a thing as an established and scientific fact. The fifth chapter analyzes how the efforts to catalogue the cacophony of publications, genres and formats in existence in order to hierarchize and standardize claims, nomenclatures and scientific knowledge had to ask the question of what was to be included and how: considerations spanning availability, originality, provinciality and periodicity informed what effectively counted as a valid scientific outlet where knowledge claims would count. The last chapter returns in a way to the public politics of knowledge, examining national and international efforts to streamline, tame and index a science growing so far beyond anyone's curatorial capacities that it was quickly becoming inaccessible to scientists themselves.

The Scientific Journal is a resounding success and timely, too: it was released as the anthropology journal HAU, pioneer in a much hyped, selfconscious experiment in open access, succumbed to a scandal concerning exploitative and abusive managerial practices, recasting the question of the place of journals in the politics of scientific knowledge today. Csiszar's sobering point to all sides of this debate is that such spirited, self-reflexive and highly politicized experimentation with alternative technologies of publication, accountability, diffusion and access, grand and lowly, is not only as old as the concept of the journal, but arguably precedes and catalyzed the stabilization of such a thing as a scientific journal to begin with (p.287). Certainly, this particular historiography might be enhanced by the authorial decision to focus on the UK and France, two societies where revolutionary politics were lived in an exceptionally experimental, radical and volatile way. Yet, Csiszar's argument that the triangulation between democratic freedoms, socialist utopianism and a will to public knowledge (p.87-100, p.207) is precisely why scientific societies around the world turned to British cataloguing efforts and the ground breaking Comptes Rendus in France is rendered expertly and convincing.

Beyond the strict subject matter in itself, of particular interest to STS scholars will be the author's examination of how parallels between property in inventive ideas and priority in scientific ideas provided a technical, stable grammar to the scientific question of discovery sequencing and adjudication (p.168-169). Similarly, the analysis through competing historiographies of Galileo's work of the opposition between a legalistic approach to claim adjudication prioritizing evidence, broad diffusion and a kind of openness - who said it, signed it, wrote it, proved it first - and a historical approach prioritizing interpretivism, quiet meticulousness and a kind of introspection - where and when was the essence of this claim first formulated and passed on - is particularly sophisticated (p.170-184).

The whole book also intervenes diagonally in questions certain quarters of the STS and performative branches of social sciences are now asking: who are the publics of scientific, not popular, knowledge and how should "non-experts" and their concerns be included in the production of

canonical scientific knowledge. Csiszar retrieves these publics from the somewhat exalted interpretations of reformist and revolutionaries. Publics (occasionally merged narratively with "public opinion") have moved from an unruly mob to the site of representative consensus (p.39), the site of a nec-plus-ultra sort of reason (p.87) who by virtue of belonging to a certain commune, a certain terroir, is best placed to adjudicate and make reasoned judgements (p.103) and safeguard science (p.106). One could argue that except for a passing description of the public sphere as an eminently middle class reading audience commercially oriented to the press (p.121), The Scientific Journal tells us less about whether these democratic, republican, utopian publics actually materialized, or how, and how they could have concretely faced the increasingly specialized languages and sites of growing scientific knowledge. Csiszar's point, if slightly implicit, is that those revolutionaries and radicals were precisely those writing and doing what came to be canonised as science; it was less their, or any, actual publics than revolutionaries and reformists' imaginations thereof that consolidated the shift away from "oracular" decisions to a more standardised and accountable mechanism of refereeing (p.152). The imagination of those publics catalyzed the shift from an academia with a collective singular research agenda writing for itself to an aggregation of individual research interests scattered in a market place of circulating, continually tested ideas across cheaper and more frequent publications (p.210) and who, via that marketplace, freed the cultural capital of the scientific persona from elite savants who did not need their books to be read or engaged, let alone challenged (p.47). We return in this sense to this book's main argument: from the crucible of political, technological and economic stakes in the production of knowledge the scientific journal emerged as a profoundly self-conscious project, both contingent and utopian.

Encyclopaedic in intensity yet accessible across disciplines, *The Scientific Journal* will be of interest to most social sciences with any STS components. Pitched perhaps slightly above the reach of general audiences, it would work well as course reading either as a whole or broken down in chapters.