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Review Essay:


Abstract: I claim that what is called "open access" is actually a transformed form of traditional ("closed") access, and is "open" only by its obviously appealing label. As a re-organizational move of institutionalized kind, it benefits the economically powerful—usually "first world" based—research groups and corporations, and leads to new economic limits for the publication of innovative research emanating from less affluent researchers and laboratories. By shifting the costs of scientific publication from the recipients (journal subscribers) to the authors of published articles, "open access" creates a social scenario of one-sided information flow rather than a new form of "openness" in scholarly communication. By monopolizing the sources of scientific communication the "open access" initiative defeats its stated purpose. The articles in the reviewed Special Issue of Historische Sozialforschung have productively outlined a whole range of specific issues related to this rapidly developing social movement in scientific communication, but have failed to analyze the wider sociological nature of the ongoing negotiations of the control over scientific communication channels of which the "open access" movement is a part.

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¹ An earlier version of this review essay was published under the title "Opening-and closing-of knowledge fields: new technologies and reconstructing the 'social capital' within science" in Culture & Psychology, 10(4), 497-508. The present text is an updated version, re-published by the permission of the Editor.
1. On Knowing

Scientific publication is at a crossroads. The avalanche of new technical possibilities for scientific communication leads to new ways of organizing our basic knowledge in all sciences. But the desire for knowing—*Wissenschaft*—has a longer history than the value of scientific publications at any given time. Knowing transcends the forms of communication. Yet communication is central to progress in science, which has always been special because of its true openness for the sake of knowledge. Ironically, that openness is changing into its opposite—closing through patenting and economic access barriers—precisely at the time when new information technology allows for speedy and unlimited access. [1]

2. The Utopia of "Being in Touch"

We seem to be constantly involved in trying to communicate—in order to be understood, or appreciated, or just for the sake of playing artificial academic evaluation games like "publish-or-perish." These are competitive—rather than cooperative—games. Publishing a result ahead of a colleague brings social benefits, or a convenient illusion of such benefits. This is, at least, the case in the natural sciences; the social sciences may be more "chatty"—the communication is often about finding out what others' social-theoretical positioning is like. Many discussions here are oriented towards joining different positions or avoiding others. For example, a discussion on "the value of an X perspective for the social sciences" (where X might be "Vygotskian" or "Freudian" or whatever) is not expanding the theoretical productivity of the particular X in itself, but rather creates social valuation around the X. So "being in touch" is not so simple an activity in science. [2]

The speed and accessibility of the Internet gives all these activities a new and exaggerated form. It also sets new social access rules, and the old rules are replaced by new ones. The issues of "open access" are those of who sets up (and controls) this rule system in the scientific publication world that is radically altered by the new technologies. [3]

Scientists as individual actors have little power in the re-organizing of the existing social system of social value construction within the scientific enterprise. It is an institutional game—the participation of the social institutions that use these values in their control over knowledge takes new forms. Any social system undergoes organizational transformation from one "steady state" to another. In that transition process there may exist periods of relative disarray of the system—the previous organizational form no longer works, and the new one has not yet become established. This temporary de-differentiation of the social organization is a transitory phase. All "freedom" in any social organization is defined by constraints on its borders, and flexibilities of changing them—in short, is a case of

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[1] The whole history of the Internet shows the move of business interests to take over a new technological device that was originally meant for free and open scholarly communication. Control of Internet access (by providers) creates a new opportunity for centralized and absolute control over the "world of accessibility" of individual users. Commercialization of the Internet indicates its power as recognized by profit-oriented social institutions.
bounded indeterminacy (VALSINER, 1984). New technologies are catalysts for the re-organization of the boundary system of scientific communication, and through it the creation of social values. [4]

In terms of how technological innovations bring scientific publication into a transition state between the "established" and "not yet created" organizational forms we may be participant observers of a naturalistic experiment in developmental sociology of science. It may be an opportune time to study the mechanisms of transformation of these social control mechanisms—seeing their action in the process of change may allow us a glimpse into how social processes in societies transform the roles of sciences in the increasingly mass-media dominated world. Hence the phenomena described in the reviewed collection of papers goes beyond a local issue of "paper or Internet" kinds of publication practices. What is being revealed is a major re-organization of the scientific enterprise as a whole—under challenges provided by dramatic changes in technology. [5]

3. A Testimony of New Opportunities

The Special Issue of Historische Sozialforschung—an international journal (based in Germany) dedicated to the application of formal methods to history—powerfully summarizes how the social sciences are irreversibly moving towards electronic media of publication. The increased speed and worldwide distribution of electronically published materials in contrast to "traditional" (print) medium makes open exchange of ideas and research results flexibly available. National boundaries disappear in the face of the speed of the Internet, librarians create virtual data bases and catalogues, and the users of all of our knowledge challenge their memory by remembering all the many passwords one needs for survival in our present world, as well as challenging their intellect as to what combination of keywords is needed for the next search of the unimaginably large virtual universe. [6]

Heike ANDERMANN and Andreas DEGKWITZ provide a thorough overview of how electronic publishing transforms the structure of bringing knowledge from researchers to the public sphere. In the traditional publishing model doing so has been accompanied by rapidly increasing journal prices—the costs of natural science journals has skyrocketed between 1995 and 2001 by 60% to 98% (p.12), reaching in some cases prices between US$ 3,501 and $17,444 (ibid.). No surprise, then, that the "open access" movement in scientific publishing finds its supporters in the basic sciences. Clearly annual subscription rates of over $10,000 per year for just one (albeit major) journal is prohibitively high in the European and North American academic contexts of ever-shrinking library budgets—to say nothing of universities in Africa and elsewhere (GRAF, p.68). [7]

The authors show how the raising of journal prices coincides with corporate consolidation of the scientific publications market—small publishers are disappearing and conglomerate giants are dividing the market into big, and hence easily manipulated, parts. Fortunately for the exercise of openness of knowledge
such manipulations cannot succeed—the publishing giants cannot control the open-access web-based distribution of information. [8]

The new electronic publishing allows both scientists and their readers to create an alternative to traditional publishing. It is in effect a "desktop" publishing option, one whose products move immediately to the Internet distribution domain. Positive examples exist in different areas of science, ranging from physics (New Journal of Physics) to the social sciences with Forum Qualitative Sozialforschung / Forum: Qualitative Social Research (FQS) as a forerunner of open access e-journals. The "open access" movement has led to coordination of journals of the kind and the development of new e-publishers. The new Internet journals carefully preserve the peer review system while making extensive use of peer commentaries possible. [9]

The reality of two sub-cultures in science—"hermeneutic" and "empiricist"—leads Stefan GRADMANN in his contribution to outline how the new publishing technologies can (and do) differentially fit the needs of both. Klaus GRAF shows how "open access" is a solution to the contemporary crisis in scholarly communication. The handling of "permission barriers" promises to revolutionize the construction of scientific knowledge. Gerhard SCHNEIDER looks at the socio-economic process of freeing the scientific publishing system from its dependence on the profit motives of the commercial publishers. [10]

It is interesting to look back into the general history of scientific journals. Winfried SCHULZE brings to our attention that journals specifically dedicated to the accumulation and distribution of knowledge came into being in the 17th century (Philosophical Transactions of the Royal Society in Britain, 1665, Acta eruditorum in Germany in 1682). History seems to move in dialectical helical loops—if early journals were objectified means of correspondence between a few learned scholars and subsequently became collections of communicative messages between authors and wide—mostly anonymous—readership, then the new technologies of our last decade make the "open access" on Internet very similar to these early times of journals. The Internet allows scholars to restore their direct communication and become engaged in continuing scholarly disputes. Günter MEY (the main book review editor of FQS) shows how, in the case of book reviewing, the new technologies allow for many innovative ways of promoting the exchange of ideas through reviewer-reader-author dialogues, many of which are being implemented in FQS. The assumption is that more interactive treatment of ideas is beneficial for their growth—an ideal way for researchers to function. However, various barriers—of institutional access or of fixity of traditional print media—have previously limited the achievement of such ideals. [11]

From the publishers' point of view, new technology provides new opportunities—as well as new problems (KLOSTERMANN). Access to constantly changing and institutionally controlled Internet addresses is balanced by the speed of electronic access. In other words, if some "barriers of access" are eliminated by the new media, new ones—in a different location—emerge. In this case ease of access to the needed published source is enhanced for researchers worldwide (provided, of
Thus granting "open access" to information through technical devices and social removal of "access limits" leads to re-construction of such barriers within the individual. There is no alternative: in order to use his or her intellectual capacities to their best, the reader needs to move from having access to using the access. Researchers are increasingly developing strategies for not paying attention to uninteresting or currently unusable sources and may block access to the external sources that try to persuade them that something new is of interest. Thus, the socio-economic result of the "open access" to scientific knowledge may give way not to more uses of that availability but to new forms of elimination of the functional uses of the materials. Instead of not having funds to subscribe to all relevant journals the inaccessibility comes out of one's own mental processing capacity and its limitations. Here of course new technologies cannot help—and need not—since the issue at stake is not the number of articles read but new ideas generated by reading and thinking. [13]

4. A Basic Change in the Culture of Knowledge Construction

Our new technologies allow researchers to advance to a new way of coordinating knowledge that breaks the habitual "linear sequence" of dependence of knowledge on certification by peers and control by publishing institutions. The traditional linear sequence of the social roles involved in publishing (ANDERMANN & DEGKWITZ, 2004, p.8) has been as follows:

   Author -> Publisher -> Reviewer -> Publisher -> Agency -> University -> Reader. [14]

This linear sequence is broken in our times: it becomes non-linear, and can in principle eliminate all links in the chain between the author and the reader. The author enters into direct contact with the reader, albeit through the seemingly invisible total control by the web provider, rather than through the act of operation of a printing press in some location chosen by the publisher. [15]

The non-linearity of the communication chain from author to reader introduces a flux into the control sequence—except for the new centrality of the provider
The role of the reviewers is maintained, since they produce the consensus-based symbolic value of the messages, but the other previously important gatekeepers of the linear sequence model (publisher, agency, university) are functionally by-passed. [16]

What are the likely outcomes of such a social revolution in science—liberation from institutional canalization? As long as scientific communication has social value, the "players" of the social-institutional "game" of capturing scientific knowledge are likely to re-capture the "liberated" author <-> reader interaction. The question of who provides economic resources for the "open access" journals remains crucial here. Knowledge in our "copyright age" is no longer free-flowing information but is carefully watched and appropriated (through patenting) by different social interest groups. The fight for "open access" is a fight for takeover (from the publishers) of the central role in control over the flow of the knowledge. What is obvious (in Figure 1) is the new central role of the Internet providers (and their subscription conditions), and of the makers of computer printers (assuming that most downloaded "free access" papers end up printed on paper—locally, and at the expense of the recipients).

![Figure 1: A non-linear model of scientific communication in the Internet age](image)

Furthermore, the institutions currently left to one side of the communication process—publishers, distribution agencies, and universities—may move back into their roles by buying control over access routes. When that happens, all the original "players" of the linear sequence will re-establish themselves in the Internet world. [3] How it will happen is not yet fully clear in the developing system of technology-speeded scientific communication but we may see it after some time. [18]

To summarize: new technologies lead to the re-organization of power relations between various social institutions that participate in the transfer of knowledge from authors to readers. The access-provider emerges as the central institution of

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3 As an example of the role expected from publishers in the Internet era: "The only essential service still provided by journal publishers … is peer review itself." (HARNAD, p.81)
social power, similar to the power of the owners of printing machinery in the immediate post-Gutenberg era. At that point in history, of course, the "movement of printed materials" from the printer to the reader was mediated by the social institution of the publisher. [19]

In the present time this has all changed in a radical way. We are all becoming owners of printing presses—dependent upon our computer-linked printers (personal ones, or those of some office networks). Yet what we can print in our "home presses" becomes fully dominated by what we can "download" from the "virtual world"—given that we have access to the access provider. The latter monopolizes the technological side of access, and is thus taking over from traditional publishers the key function of maintaining control over the messages in its hands. The current "open access" debates need to be seen in light of this transition of collective monopoly—what is "opened" for scientists all over the world in terms of overcoming the financial barriers of access to subscription journals is taken over by the monopolizing of technical access control to the "open materials" by the providers of technological access. The latter of course have their own subscriber fees and access limitations to the domains under their control. "Open access" is thus—in a wider sense—relocation of the location of the "access boundaries" from their traditional places (publishers) to new ones (technology access providers). [20]

It is thus a convenient illusion for scientists that by eliminating publishers' "access boundaries" access to scientific information becomes "open." Rather, access becomes "closed" in ways that are socially controlled by new players in the commercialization of the newly created Internet world. It is, in a sense, a process of "closing down openings" in unison with "opening up closures." [21]

5. Promises and Safeguards

Of course, the contributors to the Special Issue are careful to point out that "open access" does not equal "free access." Without doubt, "open access" benefits scholarly communication all over the World, yet its promises are currently part of an advertising effort that builds on the euphoria of "liberation" of the communication from its present "holders" (publishers). Like any up and coming utopian belief system, the "open access" has its recognized and very elaborate missionaires. [22]

Steven HARNAD is undoubtedly the most prominent of those, given his decades of promoting "open peer commentaries" in the Behavioral and Brain Sciences, followed by Psycholoquy. His paper in the Special Issue covers all sides of the new media and "open access," preemptively answering questions that are on the minds of many skeptical readers. After reading his paper the reader is left with the comfortable feeling that the Internet has liberated the scientific world from its vanities and returned it to the honorable state of the old academe where knowledgeable people dispute ideas, rather than fight for power. [23]
HARNAD, while trying to persuade the reader of the absolute (and low-cost) benefits of on-line preprint distribution and post-print archiving, emphasizes that the crucial aspect of scholarly publication—the peer review—remains as central to "open access" publication as it was to previous forms. It is the unrecognized work of reviewers (HARNAD, p.102) that creates the "scientific impact" of the journal—a new form of social capital. Scientific publication operates by generating a specific kind of value—"impact income"—that differs from the immediate income that authors of artistic or literary creations earn from direct sales of their work. [24]

6. "Open Access" and "Earning Income": The Metaphor of "Social Capital"

The coverage of new ways of publishing in the Special Issue is not merely a testimony to technical innovations. It demonstrates the strain that the social system of science is under, as an institution, to preserve and re-construct its social capital. Whether scientists like it or not, what they do is partly the creation of knowledge, and partly the negotiation of their social roles in their wider societies. Scientific publishing is a form of creating new social capital that is used in the negotiation of livelihood of the scientists, their institutions, and their prestige in a given society. Some of it is dangerous to them—the "open access" of the "wider society" (or at least its leading part—that of Inquisition) led to the public burning of Giordano BRUNO and many other heretics in philosophy and science. The survivors were the ones who could negotiate their social value in their interaction with the Inquisition and other similar power holders in their societies (YUREVICH, 2002). Knowledge has always been—and will always be—closely watched and regulated by social institutions. [25]

The metaphor of social capital may be illustrative—even if not explanatory (PORTES, 1998)—of the processes involved in the "open access" publishing discussions in our times. Specifically, "social capital is the sum of the resources, actual or virtual, that accrue to an individual or a group by possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition." (BOURDIEU & WACQUANT, 1992, p.119) [26]

In science that metaphoric extension of the notion of capital to its social realm is at stake. Creating such capital happens through the acts of social certification of scientific messages (based on peer review), the symbolic weighting of different

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4 HARNAD (p.102) subscribes to the formal estimation of the value added to journals: "... journal quality and prestige (and impact) depend on rejection rates. Trying to inflate revenue by lowering acceptance thresholds simply lowers quality, thereby favoring the competition, with higher standards." There can hardly be a more inadequate way of valuing the impact of a journal to the development of ideas in the given field. This criterion replaces the intellectual future-oriented value of the ideas published in a given journal by measurement of outcomes of submissions and of citations. The only value of citation is the traceability of the idea between different retellings of the explanatory stories.

5 Possibly that era could be characterized by another version of the "publish or perish" game. If in our time an orientation towards not publishing would lead to metaphoric "perishing" in the academic world, then in the middle ages the act of publishing (or publicizing) one's ideas led to the danger of literal perishing of the author.
publication outlets (e.g., the "impact factor," or added value of journal articles in contrast with books or book chapters), the role of sheer numbers of publications (in socially certified sources), and the presentation of all of this in individual scientists' or research groups' curricula vitae, grant applications, or institutional reports. All this feverish activity is what is much of our administrative structures of science—as well as scientists themselves—are actively involved in. [27]

The special form of social capital—"scientific capital" (BOURDIEU, 1997, pp.29-30)—can be seen to exist in two forms: "pure" and "institutional." These forms are mutually intertwined and inseparable. For example, a paper published in a journal operates for its author first of all in the "institutional" form (one more "publication item" in one's CV or annual report), while its role for science may be in the "pure" form. The latter may further feed into the proliferation of the "institutional" form (e.g., many citations that increase the "value" of the paper—and of its author—through some "citation index"). Yet this "institutional success" is not automatic, since high results in citation indices are also evident in the cases of politically notable, controversial, and critical treatises that trigger some public (and published) outcries. Conversely, some papers reporting basic breakthroughs in an area may go unnoticed for years in their "institutional form" of scientific capital and may be "discovered" when the institutional capital construction begins to make use of them. 6 [28]

The whole system of social capital generation crumbles under the impact of new technologies. Advances in technology coincide in time with the sociological tendency of appropriation of the academic world by the "market dominance" of the globalizing corporate world (KURASAWA, 2002, p.327). The sciences are not merely an "epistemic market" (BOURDIEU, 1988; ROSA, 1994) but become a commodity market where working conditions of scientists, research teams, and even research institutes are exchanged on the basis of some currency equivalent. As with all currencies it is an illusory process depending on irrational "trust" in one or another economic success parameter—number of publications, total values of obtained research grants, and use of fashionable equipment (e.g., fMRI7) for purposes of answering trivial-but-publishable questions. The notion of "data accumulation" may replace the notion of the "theoretical meaning of the data." If Albert EINSTEIN were alive he would probably shake his head and turn from science to becoming a professional violin player. [29]

Yet behind "scientific capital" is its backing in real capital, and in who controls the communication channels. In our contemporary societies, the symbolic capital of knowledge is increasingly transformed into its monetary equivalents through patents, institutional permissions, and grant funds allocations. Both kinds of capital—though increasingly the money rather than the knowledge—become a

6 The "discovery" of the heritage of Jean PIAGET in the 1960s, Lev VYGOTSKY in the 1970s, and Mikhail BAKHTIN in the 1980s in the North-American social sciences is an example of how the "institutional form" of "scientific capital" began to make use of basic ideas (the "pure" form of "scientific capital") that were of course known in America around the time of their first publications, but not turned into a means of public discourse among social scientists.

7 functional Magnetic Resonance Imagery
tool for creating institutional power. It is the state, through its institutions that hold "the monopoly of legitimate symbolic violence" (BOURDIEU, 1985, p.205), that designates the prestige to the simple fact of tree peers looking at a submitted manuscript (usually in a hurry) as "peer review," or as "open access." What we can observe in all of the discussions about the latter is merely the question of re-allocation of social power of who controls the channels of scientific communication. The question in common terms (who pays for the "open access") is answered clearly in a letter to the National Institutes of Health (NIH) by one Internet publisher—under the general banner of campaigning for freedom of research information:

"Since we publish research articles with open access and have done so for the last five years, we have come to conclude that there is a viable and feasible business model that ensures immediate open access, based on article processing charges payable by or on behalf of the author, as an integral part of the research process, instead of the traditional subscription charges to users and institutional libraries, which restrict access." (VELTEROP to ZERHOUNI, September, 23, 2004, added emphasis) [30]

Thus, "freedom" is a keyword for new business interests that are about to reach profitability. Putting the burden of publication costs (per page) on the authors (and their research grants or institutions) has been a practice in print-based journals (at least in the natural sciences) for some time, so it is unsurprising that it becomes the core of the business model of new Internet publishers. Yet here's the rub: while the "open access" initiative has been focusing on the accessibility of already published journals to audiences who cannot afford to subscribe to them, can one expect that representatives of some of these audiences—as authors—will be able to afford the per page costs required to publish his or her paper in a new Internet journal? If the answer is no, and the new developments in the scientific publishing world lead to a state of neo-colonialism at the source, then what is being published comes from that part of the World that can afford to pay the publication costs, but is indeed free to all of the World, without any "access boundaries." This would mean that opening up access may be equal to closing it at the other end. Technology allows for many new forms of scientific communication, but also for many new forms of commercial profit-making from the collective acts of symbolic capital creation in the social institution of science. [31]

We are living in the middle of a tough negotiation of the relations between science and society. In relation to the latter it is not democratic governance but the growing interests of various corporations that need to control the free flow of scientific information to protect their products and advertise them for a wide audience of potential consumers. [32]
References


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Jaan VALSINER is interested in the ways in which human psychological systems regulate themselves through constructing and reconstructing sign hierarchies. His work unites anthropological, sociological, and psychological ideas into a framework of cultural development of persons. He is editor of *Culture & Psychology* and since 2005 he has, together with Peter MOLENAR and SARAH STROUT, edited the online journal *International Journal for Ideographic Sciences*. To previous issues of FQS Jaan VALSINER contributed reviews on *The Games of Gods and Man: Essays in Play and Performance*, *Handbook of Ethnography*, and *Qualitative Research in Information Systems*.

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Citation


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