

On Scientific Knowledge and its Circulation: Reception Aesthetics and Standpoint Theory as Resources for a Historical Epistemology

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Abstract

This short essay proposes a combined framework of Reception Aesthetics and feminist Standpoint Theory as an approach to the circulation of scientific knowledge and to a Historical Epistemology. The article argues that Reception Aesthetics provides intellectual tools to examine how ideas were appropriated at each conjuncture and made productive. Standpoint Theory focuses on how local agents can be scientific and epistemically productive and relevant, and how scientific labour is divided according to cultural, economic, and geographical factors. Here it is argued that the articulation of both outlooks can be fruitful for elucidating how the production of scientific knowledge with its normative criteria are distributed, how the dynamics of contemporary circuits of scientific exchange can be conceptualized, how the possibilities and limits to making past knowledge productive can be discussed, and how a normative stance can be built from the relationship between epistemic values, non-epistemic values, and historical conditions.

Introduction

In an well-known article, Secord (2004) concluded that although conceiving of the history of science as a form of contextualization has been an advancement for the field overall, it ended by equating “context” and “history”, and confusing the approach itself due to

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imprecisions in the definition of objects and frameworks (p. 659). He called for a new, “foundational” way of understanding historicity in science as “an act of communication, with receivers, producers, and modes and conventions of transmission”, oriented towards “eradicating the distinction between the making and the communicating of knowledge [...] [and] thinking about statements as vectors with a direction and a medium and the possibility of response.” (p. 661). This implies not only the study of the circuits, media and mechanisms of circulation of knowledge, a line of analysis pointed out by transnational history (Heilbron, Guihot & Jeanpierre, 2008; Turchetti, Herran & Boudia, 2012) but also an investigation into who produces knowledge and how it is modified in the process. That is to say, a conception in which the role of production of knowledge, and the role of appropriation and reconfiguration of knowledge, are two modalities of the same process — the producer is already a receiver, and the receiver can be considered a producer.

What is at stake here is not only a renewed way of thinking about history of science, but also an epistemological statement: scientific theories, methods, evidence, discussions and consensus are a result of the circulation of knowledge. That is to say, scientific production is not merely spread from one point to another but inherently distributed through different spaces and times. This description, which may seem trivial, is still not often taken as a starting point to conceive how scientists have been thinking and working through different times and places. Scientific knowledge’s situatedness is not thinkable without taking into account its mobility, through time and across geographies. In this respect, both scientific outcomes and criteria for theorizing and obtaining evidence demand that a Historical Epistemology (HE) reconstructs and appraises scientific evolution.

This short essay aims to provide some intellectual tools, derived from my own research on the reception of Soviet and communist psychology in Argentina (García, 2014a, 2014b, 2016a, 2016b), for a historical epistemology of the sciences, in line with Secord’s call, but with a different approach that highlights not just the communication in science, but stresses how situated agents appropriate and make circulating knowledge productive. The idea that epistemology and philosophy of science requires a historical basis is not new (e.g. Fleck, 1935/1979; Bachelard, 1938/2004; Metzger, 1987), but in recent years that demand has gained new attention and many versions of such a reconsideration have been proposed (e.g. Daston, 1994; Renn, 1996; Galison, 2008; Rehinberger, 2010). HE, as well as its companion, Epistemological History, remains a very imprecise field, however; agreements are rare and there are many terminological and conceptual juxtapositions that still require elucidation (e.g. Sturm, 2011). Nevertheless, this state of

indeterminacy broadens the search for intellectual and methodological tools. The approach to an HE proposed here is not normative; it does not offer criteria for deciding which knowledge is more accurate or consistent, and is not proposed as a closed or complete model.

Instead, it offers an outline of the ways one might deepen an examination of where, when, how, by whom, and for whom knowledges have been produced. This allows for a consideration of science as an endeavor that results from combined conjunctures, as an historical outcome *tout court*. This strong emphasis on historicity is still not incompatible with analytical and normative approaches; nevertheless, it obliges one to consider both contemporary and past epistemological norms, their situatedness and interaction. The aim, therefore, is to search for a historical reflexivity that provides information not only about specific knowledges and their contexts, but also about the epistemological frameworks used or presupposed by historical figures and contemporary historians and scientists, in an informed and productive recovery of the past.

In order to do so, this article offers an outline for the possibilities of a combined framework of Reception Aesthetics (RA), proposed in the German tradition of literary theory, and Standpoint Theories (ST), formulated in the feminist philosophy of science, as historiographical and epistemological resources for the history of sciences. RA is considered to have been a renovating outlook for the study of the circulation and changes in cultural production (e.g. Hohendahl, 1977; Dotti, Blanco, Plotkin, Vezzetti & García, 2008). What RA provides is not a proper historiographical framework, but a strategy for analyzing historical sources without a previously defined goal. This open-ended feature allows for diverse articulations with several other historiographical tools and approaches (e.g. Vezzetti, 1996; Wieviorka, Burguière, Chartier, Farge & Vigarello, 1998; Woessner, 2010). Here an articulation with ST is offered; this philosophical approach is proposed by their advocates as a renewed starting point for scientific thinking, and as such it is normatively driven. However, in contrast to the mainstream philosophy of science, ST considers that historical factors are constitutive of such normativity, and allows for an exploration of how scientific knowledge, and the scientists as agents, have been historically determined, both in the past and in the present.

This brings many challenging conceptual and methodological issues to the forefront, such as the possibility of using the past to establish normative criteria for the present, and vice-versa. While RA and ST are not new approaches, they have not been systematically articulated before; this brief essay proposes that a combined framework can be a fruitful historiographical strategy to highlight the entanglement of objects and

processes, impossible to attain by a single approach. In particular, RA and ST have features that can be useful to illuminate the production, circulation and embedding of scientific knowledge. I propose here that the articulation of both approaches is useful for an accurate historical analysis of the specificities of conditions of production and circulation of scientific knowledge, as well as the capabilities of scientists as local agents.

Circulation through geographies and history: Some features of Rezeptionsästhetik

The main innovation of RA – contrary to what the word “reception” may suggest – was to locate the reader as a productive agent of a literary work, differentiating him or her from the reader presupposed by the author as an intended public. The variation of readers over moments of time and geography allowed for the introduction of the historical-aesthetic problems of how an oeuvre can retain its value across time, how a network of readers can develop, and how each reader and context for reading can have an impact on the consideration of that oeuvre. According to H. R. Jauss (1970/2000), consecutive readings are those that “concretize” and give historical life to each work. The value of a text depends on this evocative potentiality in different readers, derived from the intersection between the “horizons of expectation” created by a work and the expectations of the reader. The reader is reinstated as an agent who due to his or her historical placing, can make a reading effective and enhances the text through successive readings. From this stance, the reader as historical agent also has an epistemic role: it is through the act of reading, in the permanently updated historical relationship among author, work, and reader that the productivity and historicity of literary activity resides. Literary history is not a mere sequence of events, but the recognition of inherent change in any literary production due to the updating of readings. The task of history is thus the reconstruction of the mediations that allow the contact of the past (of a work) with the present (of a reading). This outlook opens the possibility of making historical studies to characterize specific readers – those expected by an author, those who read in practice, and the distance between them – which results in a history of the activity and skills of reading in itself and a history of the dissemination, publishing process and marketing of books. A solid tradition already exists in this area of historical studies (e.g. Darnton, 1982; Chartier, 1994; Moretti, 2006), yet scientific texts are still scarcely addressed in such perspective.²

² As RA is focused on the appropriation of circulating knowledge, it is mostly dependent on published texts. Yet correspondence, outlines, notebooks, unfinished manuscripts and other “private” and never published texts can be meaningful for reconstructing the genesis and development of scientific ideas (e. g. Holmes,

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According to Eagleton (1983/2011), literature should not be restricted to a specific genre, given that genres are mutable and the same text might belong to several of them. It can even be said that “[t]here is therefore always the possibility of a vacillation of meaning, a chording of significance, that will break through generic constraints, whether the genre be that of poem, drama, novel, scientific paper” (Beer, 1990, p. 91). If this stance is admitted, scientific texts can be analyzed from the framework of reception, as they are also a kind of mutable literature. Yet, linguistic or aesthetic analysis should not overshadow the fact that scientific texts have peculiarities that cannot be merely considered to be part of a “genre” and need specific considerations. As a result of actions by the reader, the dissemination and reception of a scientific text is modulated by a series of characteristics that are considered to be scientific in specific moments and places. First of all, scientific texts intend to reveal the effective and material features of reality, so they aim for a clear and distinctive writing and vocabulary, and tend to minimize literary devices such as metaphors, unless they are suitable to acknowledge the available empirical evidence. Secondly, their technical vocabulary defines the circuits of dissemination; the reader is usually another scientist or student of science, and the texts refers to specific practices and methodological procedures.³ This is a crucial aspect of scientific literature, as it must explicitly state the methodology used for obtaining data, so that such procedures could be replicated or altered by other scientists. In this way, scientific literature can generate more knowledge and guarantee its objectivity. Thirdly, from this perspective, objectivity depends on the circulation of scientific knowledge and practices in different contexts, and this epistemic aspect is tied to the usual expectation that science should be an international enterprise. That conjunction between objectivity and internationalism imposes the homogenization of practices and vocabularies for the communication of results and replication of procedures.⁴ In that way, as opposed to other kinds of literature, scientific texts do not prioritize local specificities, but rather tend to diminish, if not eliminate them.

There is another aspect to consider. Scientific knowledge changes (grows, advances, develops) as new theories and evidence displace, refute or discredit previous ideas. In this sense, the recovery of knowledge from the past by a current reader always implies some kind of epistemological criteria with which to establish the pertinence, productivity, and

Renn, & Rheinberger, 2003). RA does not exclude *per se* the analysis of these kinds of materials, as they may be helpful in establishing the distance between the actual work of research and the way the results were later communicated. However, as they are accessible to only a few specialists, their value for studying reception processes in different publics is limited.

³ In order to define a clear subject in this article, I will not consider “popular science” literature, directed toward lay people. On this topic, see Vincent (2003).

⁴ In fact, this perspective is one of the basis of Vienna Circle program (cf. Hahn, Carnap, Neurath, 1929/1996, p. 316).

relevance of that “old” knowledge for the present state of the art. Lucian of Samosata might always be productive for fiction and poetry; Claudius Ptolemy, however, is not equally productive – if at all – for current astronomy and geometry. The circulation, reception and re-updating of scientific knowledge thus works in specific ways.

Here is where ST can be useful for historical and epistemological ways of thinking about science.

Situatedness as agency: Some features of Standpoint Theory

Proposed by Anglo-Saxon feminists in the late 1970s, ST draws on the thesis postulated by Marx and Engels in *The German Ideology* (1846/1998) and by György Lukács in his essay “Reification and the Consciousness of the Proletariat” (1971). Stated briefly, ST claims that the gendered division of labor and the specific conditions of women’s socialization generate a material and structural position different from that of men, from which the world can be known and experienced in a differentiated way. This would allow for the creation of specific knowledge and practices critical of the masculine ones that perpetuate gender inequality and oppressive practices towards women, which would lead to a challenge of the *status quo* in the pursuit of women’s emancipation (Hartsock, 1985). This proposal had a considerable impact on the constitution of a new scientific epistemology in feminism, yet it also had its problems. The early version of ST assumed the masculine/feminine opposition as central, and therefore considered women as a unified subject that experiences the same vital and economic conditions in every place, leaving out other dimensions as race, culture and sexuality that introduce many important differences in women’s experiences. When these dimensions were incorporated to the economic and relational facets of the ST, they broadened its scope without losing its central tenet: the primacy of situated experiences as knowledge is produced within material conditions and contingent relations. Such embeddedness allows for the consideration of different perspectives about phenomena and enables the emergence of new agents of knowledge, which include, but are not limited to, women who are feminists (Hartsock, 1997).

Mainstream philosophies of science do not thematize the international division of scientific labor, and thus they do not consider the incidence of race, gender, geographies, and class biases in the production of knowledge (Harding, 1986, 2006). The economic dimension is particularly important not only in local conditions for knowledge production but also on its international dissemination. Past and current internationalism in science have worked as the imposition of research agendas to the periphery by some centers –

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mainly the North-Atlantic ones – based on important economic, political and military differences between the two that define the international distribution of labor (e.g. Kreimer, 2010; Raj, 2013). ST enables the consideration of the issues of periphery, culture, gender, economy, and other historical and social aspects within the normative analysis of science, and so it opposes the imposition of an “abstract masculinity” as it considers crucial aspects of reality not considered by such central, androcentric, Caucasian, bourgeois, and western rationality.

Material conditions and systems of relations affect the formation of the scientist and define the research agenda. But this does not imply the acceptance of a relativist stance without proper norms to decide which knowledge is better or worse; on the contrary, when knowledge is materialized in its specific conjunctures, it avoids assuming that it belongs to a universal, ahistorical realm that is valid *per se* for every place and time. ST as a philosophy of science seeks the procurement of more objective knowledge because of its reflection on the historical situations of conception and development, and in doing so it provides sources for knowledge that may be disdained or inaccessible from other stances. ST looks for new grounds, such as marginalized agents, conceptions, problems and events, from which to establish a “strong objectivity” and “robust reflexivity” against philosophies of science that do not consider the historical embeddedness of scientific production, and thus only account for justification criteria that are offered as universal norms immediately applicable in any setting. For ST, such an approach is less objective, less productive and even ideological, because it offers restricted criteria and systematic biases without tools for reflexivity (Harding, 1996b). ST avers that “it is the perspectives of economically, politically, and socially oppressed groups that can bring valuably novel insights to research projects” (Harding, 2015, p. 35). In this regard, the inclusion of alternative or dismissed perspectives that may provide new hypothesis and evidence would allow for the revision of the scope and biases of current methods and theories.

Accordingly, ST does not endorse any kind of value neutrality. Knowledge provided by the new situated agents might introduce different realities that affect ethical and political values. The regular distinction in history of science between epistemic and non-epistemic values cannot be defended if that analytical distinction implies only the epistemic ones are relevant to scientists (e.g. Kuhn, 1983). The former cannot be understood without the latter, and that does not suppose that the rationality of epistemic values necessarily have to be degraded. Epistemic values are more justifiable and productive insofar as they are considered along with non-epistemic values (Anderson, 2004; Kinkaid, Dupré & Wylie, 2007). This also contributes to a better historical understanding of the ideas and choices

scientists made in the past and a more sophisticated reflexivity on what it takes to produce scientific knowledge.

Distributed scientific thinking through embedded agents: Possible articulations between RA and ST

What science considers well-established knowledge has changed historically, and it is clear that a given idea or theory would not have been considered scientific at a different historical moment. Even if scientific limits are variable because they change with evidence and debates, several types of demarcation criteria have been proposed to settle what kind of knowledge is scientific and what kind is not. It is thus possible to give historical accounts of how such criteria have been defined and disseminated in different scenarios. For RA, the re-contextualization of received knowledge does not imply that they are mere copies, even less distorted ones, but that their productivity is renewed in each crossing of “horizons of expectation” which results in novel and specific “concretizations”. Furthermore, it allows for novel opportunities for contrast between theories, practices and evidence, as well as the examinations of epistemic norms.⁵

ST aims to examine which social formations enable or constitute theoretical questions and answers. Thus, its framework includes the historical conditions that fostered the emergence and reproduction of epistemic and non-epistemic values in science, in particular those associated with “abstract masculinity”. Therefore, it is possible to reflect on how those values can be challenged, updated or changed. Also, this allows for the detection and rescuing of “subjugated” knowledge with critical and normative perspectives, how it could be appropriated and modified, and its significance for the present. While ST keeps its focus in the present, RA can open the past in the search for neglected knowledge, as the problem of the recovery of the past in the present is a central part in hermeneutics, the tradition from which it has developed.⁶ This opens up the possibility for two

⁵ It can be argued that knowledge does not travel alone, but with its criteria of elaboration and justification. It should be noted, however, that knowledge is often appropriated with different criteria than those used in its initial production. Darwin’s and Lamarck’s evolutionary theories could be a case in point (Miranda y Vallejo, 2005; Engels & Glick, 2008; Gissis & Jablonka, 2011). This implies that, although normative criteria are always present, the relevant epistemic norm has to be defined in each case. This also opens up the possibility of considering how the same evidence, methods and theories could be accepted by different, even opposing, epistemologies depending on their geographical and historical circulation.

⁶ See Bernstein (2002, pp. 270-275) for a brief exposition on this, following discussions of “difference” by Gadamer and Habermas. For this topic, Marxist philosophy also serves as a connection between RA and ST;

operations; first, the extension of loci, objects and agents for historical inquiry, which involves a critical decentering of disciplinary canons – still the main references in history of sciences, in any of their approaches.

It allows for a reconstruction of how sciences are and were made “from below” by non-canonical figures, such as middle range researchers and research teams, visiting researchers, scientists from peripheral contexts, immigrants, women, specific populations under study, and an array of intermediaries, from journalistic outlets and publishing houses in different languages to managers of international institutions. This centering of groups and communities emphasizes how they interact and communicate through geographies and time, focusing particularly on who put specific scientific knowledges into circulation and in what way, as well as how the circuits and mediators have been historically defined. Second, it sets a limit to an overly intellectual approach to history, as it demands the examination of social and material aspects that define how and by whom evidence is obtained and considered “objective”.⁷ This would avoid histories too centred in local controversies around the ideas of canonical figures, from which conclusions are usually too swiftly extended to several locations at the same time, or they are used to represent the rationale of dilated periods. As such, this articulation between RA and ST can be useful to both diachronic – the thorough reconstruction of knowledge in a specific time in the past or in the present – and synchronic – the changes and itineraries through time of theories, philosophical criteria, methodologies, agents and practices – approaches in studies of science. In fact, such outlook would preclude a sole strategy in history of science. It suggests that the aim is not a grand unified framework for history of sciences, but rather the more achievable objective of the necessity for a broad and reflexive approach to agents, problems and knowledges.

As has already been mentioned, historical and geographical re-appropriation deserves a careful analysis with respect to science. It is possible to allege that authors are not completely subordinate to reading operations, and that texts are part of their agency

RA has roots and connections with Marx's ideas on classic art (1857/1993), and the ideas on history of Walter Benjamin (1969) and Karel Kosik (1963/1976). For the sake of intellectual honesty, it must also be acknowledged that Jauss explicitly rejected literary theories based on the ideas of Lukács (Jauss, 1975). This is worthy of consideration for the debates between literary critics from Democratic and Federal Germany, but does not seem relevant for current philosophy of sciences and its feminist approaches (cf. Jameson, 1988/2004).

⁷ About this specific issue, see Peter Dear's and Matthew Jones' objections to the mainly philosophical argumentation posed by Daston and Galison for a historical approach of objectivity (Dear, Hacking, Jones, Daston & Galison, 2012, pp. 13-15, 28-29). Daston and Galison warned of historical simplifications at the “macro” and “micro” level, where an overreaching context (e.g. capitalism, modernity, patriarchy) directly “explains” the specific ideas and practices of scientists, or where the insistence on local specificities keeps the analysis blind to global patterns and structures (2007, pp. 197, 205; 47-48). But this warning, albeit reasonable, only calls for specific approaches able to track and assess the historical sources. The articulation has to be shown, not merely inferred; the approach presented here is useful for such reconstruction.

(Thompson, 1993). Scientific authors impose their ideas, authorship and authority in a different manner from literary authors; they have their own ways of defining limits on how their work can be read or how their practices should be emulated based on their legitimacy for producing knowledge or the technical possibilities of their context. This sets standards on truth claims derived from the results of the research, and on the technological means required for their replication and confirmation. In a way, scientific texts are open to the extent that certain procedures and rules of knowledge production are followed.

Certainly, this does not mean that different readings cannot be carried out, but that they depend on the evaluation of procedures that lead to relevant evidence. Considering this, it could be argued that one of the limitations of RA is that it is restricted to key readers, individuals or specific groups. This may not be a shortcoming in itself, but it may reveal that the analysis of massive and/or non-differentiated audiences requires a specific approach with different methodological tools. On the other hand, Harding affirmed that standpoints “are not to be conceptualized only as perspectives. Everyone has perspectives on the world, but standpoints are intellectual and political achievements in that a group has to work together to figure out how to arrive at them” (2011, p. 19). Just as RA does not refer to massive audiences, ST is not meant to refer to solitary individuals or large undifferentiated groups. RA and ST are compatible in this respect, allowing for more historiographical precision in defining processes and actors.

In that respect, ST, due to its emphasis on the contexts of discovery and production, can resituate the problem of epistemic norms within the conjuncture that produced them. The problem becomes one of how and why the reader and the author have the same criteria for producing and evaluating knowledge (Ruetsche, 2004). That is to say, instead of assuming the preexistence of common norms beyond the circulation of knowledge, the establishment of shared norms in different conjunctures is what has to be historically examined. ST thus calls for research on the politics of dissemination of scientific knowledge, the internationalization of its production conditions, and the distribution of scientific work. Many lines of inquiry could be opened up by such a perspective, such as how scientific knowledge is accepted where technical means, or even the object itself, are missing, but where there nevertheless exists a scientific community that is authorized by it.⁸ In addition, one could investigate how such a scientific community produces new knowledge from the knowledge it receives, without the possibility of

⁸ See, for example, the use of Pavlov’s physiology in psychiatry outside U.S.S.R., in contexts where laboratories conditions and research were completely different – if there were any –, and psychiatric practices were done with very different trainings and settings (Harris, 1995, Gao, 2015; García, 2015, Ruiz y Sánchez, 2016; Lambe, 2017). For detailed account on Pavlov’s laboratory and research, see Todes (2000, 2014).

replicating this previous research. ST sheds light not only on the dissemination of knowledge, but also on the implantation of biases in science. The members of a scientific community have multiple subjective positions that overdetermine – or multidetermine – their readings and appropriations, which results in different modalities of reception. This implies that evaluation stances diverge, converge or contradict each other and cannot be limited to epistemic criteria, even when the latter is necessary. Appropriation and rejection of knowledge in science is a process that potentially includes the whole range of scientists' experiences.

A brief example: Pedagogy and communism in Latin America.

Taken from my own research, the following is an example of the kinds of figures and processes for which this combined framework would be suitable. Berta Perelstein de Braslavsky (1913-2008) was born into a Jewish immigrant family. Her parents decided she would be a schoolteacher, a standard job for females and a feminized profession in the 1930s. Her studies were interrupted in 1936 when a ministerial decree expelled her from the Instituto del Profesorado Secundario [Secondary Professorate Institute] due to her involvement with the Communist Youth Federation, which gave rise to public scandal, both because of the presence of communism in public education and because she was a young “free” woman (Braslavsky, 1996, 2008). Braslavsky managed to continue her studies at the University of Buenos Aires (UBA). Though she did not consider herself a feminist, she nonetheless rejected religious and family values, choosing to live with her partner, himself from a traditional Jewish family, without immediately getting married. Once she graduated, unable to work in a public institution, she opened the Instituto de Argentino de Reeducción (IAR) [Argentinian Institute of Reeduction] in 1944 with the psychiatrist and comrade Julio Peluffo, where she would study and give treatment to around 60 children with mild developmental and learning disorders. This specific demographic combined education, child rearing and health attention, all subjects strongly associated with female roles. She remained a full-time activist, and in 1948 she spoke in representation of Argentina at the Second Women's International Congress in Budapest on the imperialist economy, the inequality of wage for women, the poor working conditions of female industrial workers and peasants, the excess of work in the domestic sphere, and the lack of proper laws for maternity (Women's International Democratic Federation, 1949, pp. 333-338). Before returning to Argentina, she spent four months at the Laboratoire de psychobiologie de l'enfant in Paris [Laboratory of child psychobiology], led by the communist psychologist and politician Henri Wallon. There she learned developmental

theories and testing procedures that defined the work at the IAR. After her return, while still working at the IAR, she wrote a book in which she proposed dialectical and historical materialism as a philosophical surpassing of positivism and antipositivism and a basis for scientific thinking, in line with the communist stance at that time (Braslavsky, 1952).

In her role of communist intellectual and international activist, in 1954 she became the general secretary of the Instituto de Relaciones Culturales Argentina-U.R.S.S. (IRCAU) [Soviet-Argentinian institute for cultural relationships], an institution officially recognized by the Argentinian government. In 1957 Braslavsky was able to teach again and entered the UBA as professor. That same year, she got the support of the Consejo Nacional de Educación [National Council of Education] to conduct a series of research projects on the methodology of teaching, reading and writing in children with learning disadvantages, particularly dyslexia. The results of those inquiries were synthesized in the book *La querrela de los métodos de enseñanza de la lectura* [*The Quarrel over Reading Teaching Methods*] (1962/1992), a book that gave her recognition in Latin America and was republished many times. There she proposed a developmental psychology and neurophysiology that mixed the ideas of Ivan Pavlov, Alexander Luria, Alexei Leontiev, Sergei Rubinstein, Wallon, René Zazzo and Jean Piaget – excluding the latter, all of them were standard communist references for the psychological sciences. Braslavsky combined their ideas – something not done in Europe, where those authors tried to differentiate from each other – to support a holistic and environmental idea of language functions as social products that preexist the child, who “internalizes” them through cultural transmission, and that determine the whole of cognition, behavior, and personality by means of functional modifications in the anatomy of the nervous system. The school is one of the most important spaces of socialization, reading, and writing, and does not just endow children with cognitive abilities, but more importantly gives them the tools for a whole cultural and social existence. Braslavsky discussed the current approaches to reading and writing education, and dismissed them for not being founded in scientific psychologies. In her view, the problem with methods contributed to the indiscriminate diagnosis of dyslexia, a disorder then blamed for failures by the educational institution.

The specialists on the issue – mostly physicians, still by then a predominantly masculine profession – recommended special schooling, with different teachers, programs and buildings, and medical attention for children with this pathology. Braslavsky rejected all teaching and diagnostic methods that reduced child psychology to internal factors, and criticized special schooling as “the dyslexic disorder is manifested, if not produced, in an essentially pedagogical situation such as the school environment” (p. 156). The pathology

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was therefore not independent from teaching methods, so special education and medical treatments were not the solution; even worse, they hampered the socialization of the child. Her positions led to an open polemic in 1963 with Julio Bernaldo de Quirós, by then president of Argentine Speech-Language and Hearing Therapy Association and director of its specialist journal *Fonoaudiológica*, during the in the First Seminar on Dyslexia in Montevideo, Uruguay. There Quirós stated that statistics proved that “heredity seems to be an important factor, much more important than environment”; Braslavky, replied that “reading is an acquisition, not an innate possibility” (Grompone, et al., 1965, pp. 28, 140). In that dispute she represented the stance of teachers, still a feminized profession linked to the humanities, against that of physicians, a mainly masculine profession that was considered fully scientific (Barrancos, 2010, 220-224). Braslavsky’s communist ideals of social justice and readings of leftist psychology and physiology were the basis of her stance. Her researched intertwined her political commitment with applied research, taking into account the work of Soviet and French Communist scholars without assuming their thesis *a priori*, as she employed her own methods and ideas, and searched for intellectual tools and data from non-communist authors. Her ideology set out problems, references, and certain hypothesis, but that did not imply an orthodox or partisan closure in her actual research, as is usually attributed to communist scientists. Political values lead her ideas on psychology and pedagogy, but evidence and problems were not collapsed into ideological limits.

After some years of full time teaching at the UBA and the Universidad Nacional de La Plata, the 1976 *coup d'état* drove her to exile in Venezuela, where she became a consultant for the local ministry of education, for Mexican and Cuban programs and for UNESCO. When the military dictatorship ended, she went back to Argentina and in 1986 was appointed as the director of the new department of Education Sciences of the UBA. In this position she promoted the pedagogical ideas of Vygotsky with specific graduate and postgraduate courses, and organized a four-year research program on methods of reading and writing for the Buenos Aires city council to design the first-grade curriculum in public schools. The results of this research were implemented in the schools and published in the book *La escuela puede [The school is able]* (1991). Although Braslavsky had left the Communist Party by then because of its conciliatory position toward the dictatorship, she still drew on Vygotsky’s ideas on cognition and development; in fact, this research was the first in the country to apply the Soviet psychologist’s theories on concrete public school practices.

This overview of Braslavsky’s ideas, work, and life shows that a history of her knowledge and practices cannot be understood without at the same time taking into

account that she was Argentine, communist, and a woman. As such, she occupied a triply peripheral position: from the Western academic centers, from the political liberalism and conservatism of South America, and from a feminized profession not considered a “hard” science. In this example, RA would explore how political, psychological, pedagogical, and physiological ideas arrived from Western and Eastern Europe, while ST would account for how Braslavsky’s own position in the social field and stance toward leftist values and ideologies provided a specific position from which to conduct research with a defined population and condition, and produce a scientific interpretation of data to discuss with local and international authors. From that characterization, her figure leads to the history of pedagogy in Latin America, the communist dissemination of scientific ideas, the roles assigned to women in society, and the capabilities and problems of an individual to produce knowledge from that setting. The combined approach of RA and ST allows for this kind of systematic and intertwined examination of the agent, the knowledges involved and means of circulation, and the specific political and social conditions of different contexts. Though she was not a figure of the disciplinary canon, Braslavsky’s position as a peripheral middle range researcher who was nonetheless influential in Latin America provides an example in which the combined framework of RA and ST would give a thorough description of her conditions and activities for producing knowledge, as well as a novel starting point for histories of science, based on the circulation of knowledge, the disputes for legitimation of knowledge, and the possibilities of “marginal” agents and contexts for the production of scientific knowledge.

Conclusions

This short essay tried to show some articulation between two different frameworks to propose a historiographical outlook that is sensitive to the circulation and embeddedness of scientific knowledge, and the changes that this process implies. RA can offer a solid historical approach to ST, and the latter can in turn introduce epistemological issues into the reception process of scientific production. The historization of scientific knowledge and their epistemic norms can offer new insights into how current knowledge is generated and justified. The combined framework proposed here is suitable for the inquiry and assessment of knowledge production, both for the history and philosophy of science, and for science in general: it permits an informed recuperation of past knowledges, problems and failures; it provides criteria with which to advance historical studies and obtain evidence for a critical examination of the means for production and dissemination of

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science; and it opposes ahistorical epistemologies that attempt to exert normative dominance based in an explicit or tacit universal rationality. All of this adds epistemic and philosophical value to the history of science.

Knowledge agents are active constructors in the process of reception, and so there is always some form of normativity with which they can read, evaluate and make received knowledge productive. Reception Aesthetics enables this level of analysis and provides the specific means by which to carry it out, introducing a historicity that is impeded by the usual overgeneralizations of mainstream philosophical approaches. Correspondingly, Standpoint Theory is open to such historicization and provides intellectual tools and approaches to analyze the production of knowledge from the specific experiences of the agents involved.

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References

- Anderson, E. (2004). Uses of Value Judgements in Feminist Social Science: A Case Study of Research on Divorce. *Hypatia*, 19(1), 1-24. doi: <http://dx.doi.org/10.1111/j.1527-2001.2004.tb01266.x>
- Bachelard, G. (1938/2002). *The Formation of the Scientific Mind*. Manchester: Clinamen.
- Barrancos, D. (2010). *Mujeres en la sociedad Argentina. Una historia de cinco siglos*. Buenos Aires: Sudamericana.
- Beer, G. (1990). Translation or Transformation? The Relations of Literature and Science. *Notes and Records of the Royal Society of London*, 44(1), 81-99. Retrieved from <http://www.jstor.org/stable/531587>
- Benjamin, W. (1969). *Illuminations. Essays and Reflections*. New York, NY: Schocken.
- Bernstein, R. J. (2002). The constellation of Hermeneutics, Critical Theory and Deconstruction. In R. Dostal (Ed) *The Cambridge Companion to Gadamer* (pp. 267-282). New York, NY: Cambridge University Press.
- Braslavsky, B. (1952). *Positivismo y antipositivismo en la Argentina*. Buenos Aires: Procyon.

- Braslavsky, B. (1962/1992). *La querrela de los métodos de enseñanza de la lectura*. Buenos Aires: Kapeluz. (Original work published 1962)
- Braslavsky, B. (1991). *La escuela puede. Una perspectiva didáctica*. Buenos Aires: Aiqué.
- Braslavsky, B. (1996). *Testimonios para la experiencia para enseñar*. Buenos Aires: Secretaría de Cultura y Bienestar Universitario de la Facultad de Psicología, Universidad de Buenos Aires.
- Braslavsky, B. (2008). *La educación achica las diferencias*. Buenos Aires: Capital Intelectual.
- Chartier, R. (1994). *The Order of Books: Readers, Authors, and Libraries in Europe Between the 14th and 18th Centuries*. Stanford, CA: Stanford University Press.
- Darnton, R. (1982). What Is the History of Books? *Daedalus*, 111(3), 65-83. Retrieved from <http://www.jstor.org/stable/20024803>
- Daston, L. (1994). Historical epistemology. In J. Chandler, A. I. Davidson, & H. Harootunian (Eds.), *Questions of evidence* (pp. 282-289). Chicago, IL: University of Chicago Press.
- Daston, L. & Galison, P. (2007). *Objectivity*, New York: Zone Books.
- Dear, P.; Hacking, I.; Jones, M., Daston, L. & Galison, P. (2012). Objectivity in historical perspective. *Metascience*, 21(1):11-39. doi: <http://dx.doi.org/10.1086/587536>
- Dotti, J., Blanco, A., Plotkin, M. Vezzetti, H. & García, L. I. (2008). Dossier: La Historia Intelectual y el problema de la recepción. *Políticas de la memoria*, 8/9, 98-109. Retrieved from http://www.cedinci.org/PDF/PM/PM_8-9%20compilada.pdf
- Eagleton, T. (1983/2011). *Literary Theory: An Introduction. 2nd Revised Edition*. London: Wiley-Blackwell.
- Engels, E-M. & Glick, T. (Eds.) (2008). *The Reception of Charles Darwin in Europe. Volume I*. London: Continuum.
- Fleck, L. (1935/1979). *The Genesis and Development of a Scientific Fact*. Chicago, IL: University of Chicago Press.
- Galison, P. (2008). Ten problems in history and philosophy of science. *Isis*, 99(1), 111-124. doi: <http://dx.doi.org/10.1086/587536>
- Gao, Z. (2015). Pavlovianism in China: Politics and differentiation across scientific disciplines in the Maoist era. *History of Science*, 53(1) 57-85. doi: <http://dx.doi.org/10.1177/0073275314567436>
- García, L. N. (2014a). Biologising psychoanalysis. Konstantin Gavrilov and freudopavlovism in Argentina (1942-1960). *Psychoanalysis and History*, 16(2), 215-236; doi: <http://dx.doi.org/10.3366/pah.2014.0151>
- García, L. N. (2014b). Henri Wallon en castellano: jalones argentinos de un itinerario transnacional (1935-1976). *Universitas Psychologica*, 13(5), 1835-1845. doi:

<http://dx.doi.org/10.11144/Javeriana.upsy13-5.hwcj>

García, L. N. (2015). La psiquiatría comunista argentina y las psicoterapias pavlovianas: propuestas y disputas (1949-1965). *Trasbumbante. Revista Americana de Historia Social*, 3(5), 220-243. doi: <http://dx.doi.org/10.17533/udea.trahs.n5a11>

García, L. N. (2016a). Before the “boom”: Readings and uses of Vygotsky in Argentina (1935-1974). *History of Psychology*, 19(4), 298-313. doi: <http://dx.doi.org/10.1037/hop0000046>

García, L. N. (2016b). *La psicología por asalto. Psiquiatría y cultura científica en el comunismo argentino (1935-1991)*. Buenos Aires: Edhasa.

Grompone, M., Guadalupe, E., Quiros, J., Della Cella, M., Escuder, E., Lorenzo, E., . . . Tuana, E. (1965). *Actas y trabajos sobre el I seminario sobre dislexia*. Montevideo: Sociedad de Dislexia del Uruguay.

Hahn, H., Carnap, R. & Neurath, O. (1929/1996). The Scientific Conception of the World. In S. Sarkar (Ed.) *The Emergence of Logical Empiricism: From 1900 to the Vienna Circle* (pp. 312-340). New York, NY: Garland.

Harding, S. (1986). *The Science Question in Feminism*. Ithaca, NY: Cornell University Press.

Harding, S. (1996). Rethinking Standpoint Epistemology: What is ‘Strong Objectivity’? In E. Fox Keller & H. Longino (Eds.) *Feminism & Science* (pp. 235-248), New York, NY: Oxford University Press.

Harding, S. (2006). *Science and social inequality. Feminist and Postcolonial Issues*, Chicago, IL: University of Illinois Press.

Harding, S. (2011). Introduction. Beyond Postcolonial Theory: Two Undertheorized Perspectives on Science and Technology. In S. Harding (Ed.) *The Postcolonial Science and Technology Studies Reader* (pp. 1-31). Durham, NC: Duke University Press.

Harding, S. (2015). *Objectivity and Diversity. Another Logic of Scientific Research*. Chicago, IL: University of Chicago Press.

Harris, B. (1995). The Benjamin Rush Society and Marxist psychiatry in the United States (1944-1951). *History of Psychiatry*, 6(23), 302-331 <http://dx.doi.org/10.1177/0957154X9500602303>

Hartsock, N. (1985). *Money, sex and power. Toward a feminist historical materialism*. Boston, MA: Northeastern University Press.

Hartsock, N. (1997). *The Feminist Standpoint Revisited and Other Essays*. Boulder, CO: Westview Press.

Heilbron, J., Guihot, N., & Jeanpierre, L. (2008). Toward a Transnational History of the Human Sciences. *Journal of the History of the Behavioral Sciences*, 44(2), 146-160. doi:

<http://dx.doi.org/10.1002/jhbs.20302>

Hohendahl, P. U. (1977). Introduction to Reception Aesthetics. *New German Critique*, 10, 29-63. doi: <http://dx.doi.org/10.2307/487671>

Holmes, F. L., Renn, J. & Rheinberger, H. (2003). *Reworking the Bench: Research Notebooks in the History of Science*. Dordrecht. Kluwer Academic Publishers.

Gissis, S. & Jablonka, E. (Eds.) (2011). *Transformations of Lamarckism. From Subtle Fluids to Molecular Biology*. Cambridge, MA: The MIT Press.

Jameson, F. (1988/2004). *History and Class Consciousness* as an “unfinished project”. In S. Harding (Ed.) *The Feminist Standpoint Theory Reader: Intellectual and Political Controversies* (pp. 143-151). New York, NY: Routledge.

Jauss, H. R. (1970/2000). *Historia de la literatura como provocación*. Barcelona: Península.

Jauss, H. R. (1975). The Idealist Embarrassment: Observations on Marxist Aesthetics. *New Literary History*, 7(1), 191-208. doi: <http://dx.doi.org/10.2307/468285>

Kincaid, H., Dupré, J. & Wylie, A. (Eds.) (2007). *Value free science? Ideals and illusions*. New York, NY: Oxford University Press.

Kosik, K. (1963/1976). *Dialectics of the Concrete: A Study on Problems of Man and World*. Dordrecht-Boston: D. Reidel.

Kreimer, P. (2010). *Ciencia y Periferia. Nacimiento, muerte y resurrección de la biología molecular en la Argentina*. Buenos Aires: Eudeba.

Kuhn, T. (1983). Rationality and Theory Choice. *The Journal of Philosophy*, 80(10), 563-570.

Lambe, J. L. (2017). Revolutionizing Cuban Psychiatry: The Freud Wars, 1955-1970. *Bulletin of the History of Medicine*, 91(1), 62-93. doi: <http://dx.doi.org/10.1353/bhm.2017.0003>

Lukács, G. (1971). *History and Class Consciousness: Studies in Marxist Dialectics*. Cambridge, MA: The MIT Press.

Marx, K. (1857/1993). *Grundrisse. Foundations of the Critique of Political Economy*. London: Penguin.

Marx, K. & Engels, F. (1846/1998). *The German Ideology*. Amherst, NY: Prometheus.

Miranda, M. & Vallejo, G. (Comps.) (2005). *Darwinismo social y eugenesia en el mundo latino*. Buenos Aires: Siglo XXI.

Metzger, H. (1987). *La méthode philosophique en histoire des sciences. Textes 1914-1939*. Paris: Fayard.

Moretti, F. (Ed.) (2006). *The Novel. History, Geography, and Culture*. Princeton, NJ: Princeton University Press.

Raj, K. (2013). Beyond Postcolonialism... and Postpositivism: Circulation and the Global History of Science. *Isis*, 104(2), 337-347. doi: <http://dx.doi.org/10.1086/670951>

On Scientific Knowledge and its Circulation

- Renn, J. (1996). *Historical epistemology and the advancement of science*. Berlin: Max-Planck-Institut für Wissenschaftsgeschichte. Retrieved from <http://www.mpiwg-berlin.mpg.de/Preprints/P36.PDF>
- Rheinberger, H. (2010). *On Historicizing epistemology: an Essay*. Stanford: Stanford University Press.
- Ruetsche, L. (2004). Virtue and Contingent History: Possibilities for Feminist Epistemology. *Hypatia*, 19(1), 73-101. doi: <http://dx.doi.org/10.1111/j.1527-2001.2004.tb01269.x>
- Ruiz, G. & Sánchez, N. (2016). W. Horsley Gantt, Nick, and the Pavlovian Science at Phipps Clinic. *The Spanish Journal of Psychology*, 19, 1–14. doi: <http://dx.doi.org/10.1017/sjp.2016.73>
- Secord, J. (2004). Knowledge in transit. *Isis*, 95(4), 654-72. doi: <http://dx.doi.org/10.1086/430657>
- Sturm, T. (2011). Historical Epistemology or History of Epistemology? The Case of the Relation between Perception and Judgment. *Erkenntnis*, 75(3), 303-324. doi: <http://dx.doi.org/10.1007/s10670-011-9338-3>
- Thompson, M. (1993). Reception Theory and the Interpretation of Historical Meaning. *History and Theory*, 32(3), 248-272. doi: <http://dx.doi.org/10.2307/2505525>
- Todes, D. (2000). *Ivan Pavlov. Exploring the animal machine*. New York, NY: Oxford University Press.
- Todes, D. (2014). *Ivan Pavlov. A Russian Life in Science*. New York, NY: Oxford University Press.
- Turchetti, S., Herran, N. & Boudia, S. (2012). Introduction: have we ever been ‘transnational?’ Towards a history of science across a beyond borders. *The British Journal for the History of Science*, 45(3), 319-336. doi: <http://dx.doi.org/10.1017/S0007087412000349>
- Vezzetti, H. (1996). *Aventuras de Freud en el país de los argentinos*. Buenos Aires: Paidós.
- Vincent, B. (2003). In the Name of Science. In J. Krige & D. Pestre (Eds.) *Companion to Science in the Twentieth Century* (pp. 319-338). London: Routledge.
- Wieviorka, M, Burguière, A., Chartier, R., Farge, A. & Vigarello, G. (1998). The work of Norbert Elias: Its contents and its reception. *Thesis Eleven*, 54(1), 89-103. doi: <http://dx.doi.org/10.1177/0725513698054000008>
- Woessner, M. (2011). *Heidegger in America*. New York, NY: Cambridge University Press.
- Women’s International Democratic Federation (1949). *Second Women’s International Congress*. Paris: Women’s International Democratic Federation.