The Metaphor of the Stranger in the Historical Narrative of Science*

María Martini†

Abstract

The recognition by the sociology of scientific knowledge of the artifactuality and contingent character of scientific knowledge has resulted in considering the canonical narrative forms of history of science as unsustainable (Golinski 1998). However, Kuukkanen (2012) holds that the social turn in the historiography of science has led to the adoption of social research models, which therefore caused the empirization of the field and prevented the appropriation of narrativist contributions to the theory of history. This paper analyzes the way in which the metaphors of the stranger are used as historical distancing devices in *Leviathan and the Air-Pump* by Shapin and Schaffer. The examination of these devices constitutes a means of entry into historical narrative that allows us to evaluate the acceptance of the figural character in this historiographical production.

Keywords: history of science - sociology of scientific knowledge - historical narrative - historical distance

Resumen

El reconocimiento por parte de la sociología del conocimiento científico de la artefactualidad y el carácter contingente del conocimiento científico condujo a considerar las formas canónicas de la narrativa de la historia de la ciencia como insostenibles (Golinski 1998). Sin embargo, Kuukkanen (2012) sostiene que el giro social llevó a la historiografía de la ciencia a asumir los modelos de investigación social, provocando la empirización del campo y evitando que se apropiara de las contribuciones del narrativismo a la teoría de la historia. El presente escrito analiza el modo en que en *El Leviathan y la bomba de vacío*, de Shapin y Schaffer, se emplean las metáforas del extranjero como dispositivos de distancia histórica. El examen de estos dispositivos constituye una vía de ingreso a la narrativa histórica que permite evaluar la asunción del carácter figural en esta producción historiográfica.

Palabras clave: historia de la ciencia - sociología del conocimiento científico - narrativa histórica - distancia histórica

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1. Introduction

Since the 1970s, diverse metascientific perspectives have performed critical analyses of the representationalist conception of science, understanding this to be an approach committed to a specular vision of knowledge and a conception of reality as a fixed entirety of objects which are independent from representations. Sociological studies on scientific knowledge questioned what had to be understood by scientific practice and strongly criticized the essentialist and normativist approaches to science. In addition, inquiries concerning the local character of scientific practice were undertaken. It was assumed that the limits of such practice – which are its components, what it is allowed to do, what is excluded – are performatively configured by means of available cultural resources.

In the face of the challenge that these approaches have mounted against classical epistemology, Jan Golinski (1998) claims that the canonical narrative forms of the history of science seem to be unsustainable. His analysis of the relationship between the approaches he refers to as "constructivist" on scientific knowledge and history of science leads him to question what kind of history of science should be told once the artifactual character of scientific knowledge is acknowledged.

However, Jouni-Matti Kuukkanen has recently claimed that the critical reflection on the representationalist approach to science – developed in metascientific fields – has not been generally extended to historiographical productions of science as representations. The author holds that, even though within the field of social studies on science the abandonment of progressivist histories of science was strongly argued for, theses supported by some of these approaches (see Latour [1991] 1993, 1999, 2005, Pickering 1985) imply a progressivist conception of the history of historiography of science, given the presupposition that our understanding of the nature of science has currently become more accurate. The appropriation of anthropological and sociological models of research on the part of the historiography of science entailed both an empirization of the field and an attempt to minimize the temporal distance through a close reading of archival material. The influence of social studies of science, as Kuukkanen states, has led to a commitment to the idea of a pre-structured past and to a historical realism. In this sense, the history of contemporary science, rather than taking a narrativist turn, would have followed the path of a historiography *à la* Ranke (Kuukkanen 2012, p. 341). Kuukkanen suggests introducing the contributions of narrativism to the theory of history into the analysis of the historiography of science, in order to make visible the active role of the historian in constructing general cognitive structures which organize historical data and create a historical interpretation.

My starting point is the discussion which developed in the 1990s (see Rouse 1990, 1991, Golinski 1998, Christie 1993, Rheinberger 1994, 1997, Clark 1995) and was enlivened by Kuukkanen (Kuukkanen 2012) regarding the novelty of a historiographical narrative constructed on the social studies of science. As Kuukkanen, I support the relevance of the narrativist philosophy of science in understanding the inherent problems of the historiographical production of science.

My interest is centered on considering whether a fragment of such historiography, *Leviathan and the Air-Pump*[1] by Steven Shapin and Simon Schaffer, assumes the instrumental character of narrative in the way that White resignifies that instrumentality by means of reading the figural causation in Erich Auerbach and the intransitive writing of Roland Barthes. Although Hayden White's approach to what he calls "modernist events" and to the proper modes of representation of such events cannot be transferred to the dispute about constructing a new historiography of science, I consider that such explorations will provide fruitful conceptual resources for assessing the re-writing of the past of science from the perspective of the sociology of scientific knowledge.

More precisely, I will analyze how the metaphor of the stranger in *LAP* is used to configurate different devices to construct historical distance. Assuming the metahistorical character of historical productions, that is, "the 'constructed' nature of their versions" and the predisposition to be "willing to make of their own modes of production elements of their contents" (White 1999b, p. 38), I consider that the examination of historical distance constitutes a means of entry into Shapin and Schaffer's narrative which allows me to evaluate, through strategies of proximity to or detachment from the past, in what sense we can talk about a new historical discourse of science.

Firstly, I will present the elements of Whitean philosophy of history which constitute the starting points to explore which senses are assigned to the question of the novelty of re-writing the past, as well as to perform an evaluation of the new in the history of science written by Shapin and Schaffer. Secondly, I will introduce the metahistorical problem of historical distance. Finally, I will analyze the historical distance strategies in *LAP*.

2. The historical narrative

In this section, I will outline a group of theses by Hayden White and also interpretative theses on White's work (Tozzi 2009, La Greca 2012) to which I resort in order to delimit, on the one hand, the meaning of the question about a new narrative form of the history of science and, on the other hand, the answer about the novelty of the historiographical narrative of *LAP*.

In the first place, in order to understand what Golinski's question – "What kinds of stories ought we to be telling?" – is asking, we start by accepting the controversial character of the historiographical practice. This Whitean thesis involves not only an interpretative pluralism but also its unsolvable dispute, which leads us to consider that "the approach to the history of any historical process or event will immerse us in the history of the history of that event" (Tozzi 2009a, p. 105).[2]

Given that every historical discourse is constructed by means of a prefigurative movement of the historical field on the basis of four tropes for the analy-

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[1] Henceforward, *LAP*.

[2] The translation is ours.

sis of the figurative language – metaphor, metonymy, synecdoche, and irony – the deployment of the different historiographical productions can be analyzed in terms of these tropes. According to Tozzi's interpretation, the operation of a trope is carried out by deactivating the operation of another trope:

> In this disabling and enabling interaction among the tropes, we can notice the relation held among the different versions of the past to be expressed, not as a succession of proposals confronted with neutral evidence, but as a tropological disabling game (Tozzi 2009b, p. 82).[3]

Thus, the controversial character of the historical practice allows us to frame the question about a new history of science in a movement of self-construction, in opposition to some of the previous controversial re-writings of the past.

In the second place, and in relation to the previous point, our guiding inquiry does not question the narrative character of the historiography of science. What is at stake is determining in disagreement with what old discourse a new discourse is constructed. In order to advance in determining the meaning of the question we must frame what Golinski points as "the traditional narrative forms of the history of science" (Golinski 2005, p. 188) which are challenged by the new narratives.

At this point, some light can be shed by the distinction that White introduces in "The Value of Narrativity in the Representation of Reality" (White 1987), between a discourse that narrates and a discourse that narrativizes, between "a discourse that openly adopts a perspective that looks out on the world and reports it and a discourse that feigns to make the world speak itself and speak itself as a story" (White 1987, p. 2). Although narration and narrativity are instruments "with which the conflicting claims of the imaginary and the real are mediated, arbitrated, or resolved in a discourse" (White 1987, p. 4), when narrativity is turned into

> A paradigm of the form that reality itself displays to a "realistic" consciousness […] this value attached to narrativity in the representation of real events arises out of a desire to have real events display the coherence, integrity, fullness, and closure of an image of life that is and can only be imaginary (White 1987, p. 24).

The canonical forms of historical narration, far from assuming the artifactuality of historical discourse and the figuration possibilities that language offers to give meaning to the events, are presented as

> *Mimetic* reproduction[s] of the events characterized as facts in the chronicle. But in the reality whatever resemblance the story has to the facts contained in the chronicle is a function of the process of *symbolization* produced in the fusion of a generic plot structure with the facts of the chronicle (White 1992, p. 294).

However, as La Greca points out

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[3] The translation is ours.

> When White approaches narration as a way of speaking we see the instrument *as* an instrument and we can no longer narrativize […] considering White's work as a critical theory of the historical narration means that we can continue figuring the historical by means of stories if we abstain from narrativizing the real (La Greca 2012, pp. 231, 237).[4]

Rheinberger characterizes the traditional form of historical narrative of science as the history of what, *then*, really happened: "This presupposes the existence of an undistorted past *out there* that, from a detached present *in here,* can in principle be grasped by means of an analysis whose means are supposed not to have been altered by what is going to be synthesized" (Rheinberger 1994, p. 66). This vision "perpetuates the illusion that the task of the historian is to relate 'real history' as opposed to just telling stories" (Rheinberger 1994, p. 66). If we understand the canonical narrative modes in this way, we can specify the scope of the question as follows: does the assumption of the artifactual character of scientific knowledge entail the acknowledgement of the artifactual character of historical narration itself? The constructed character that the sociological perspectives ascribe to the "natural order" as a result of the scientific practice would distance them from the production of historiographical narratives that intend to *recover* the way in which different past natural orders were constructed or from those narrations that produce a closure effect by intending to reveal the immanent structure which reaches across the events in the achievement of a sole purpose.

In the third place, both the understanding of the controversial mode in which a new narrative is constructed and the identification of the innovative character of a historiographical story can be understood by means of White's notion of figural causation postulated on the basis of his examination of the history of literary realism that Erich Auerbach presents in *Mimesis: The Representation of Reality in Western Literature* (Auerbach 2003). This interpretation allows us to obtain a different reading from that which Kuukkanen proposes about the progressivist character of the history of the historiography of science provided by the sociological studies on science.

White considers that *Mimesis* (Auerbach 2003) offers a model for conceptualizing both the relation among specifically historical events in the plot of historical representations and the relation among successive historical representations. In either case, the elements linked by a figure-fulfillment relation are presented as being doubly-articulated: the latter terms are shown to be fulfillments of the preceding figures and, in turn, prefigurations of subsequent elements. The notion of fulfillment, White points out, must be considered neither as part of a deterministic causal relation nor as the teleologically governed realization of an inherent potentiality: "this distinctively historical mode of causation I propose to call figural causation" (White 1999a, p. 88). Now then, White highlights the aesthetic dimension of the figure-fulfillment relation that Auerbach shapes:

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[4] The translation is ours.

> To say […] that a given historical event is a fulfillment of an earlier one […].
> It is to say that historical events can be related to one another in the way that
> a figure is related to its fulfillment in a narrative or a poem. […] They are re-
> lated in the way that a rhetorical figure, such as a pun or metaphor, appea-
> ring in an early passage of a text might be related to another figure, such as a
> catachresis or irony, appearing in a later passage – in the way that a premise
> of a joke is fulfilled in its punch line, or the conflicts in as opening scene of a
> play are fulfilled in its ending. The latter figure fulfills the earlier by repeating
> the elements thereof, but with a difference (White 1999a, pp. 89-91).

The meaning of the successive connections in a historiographical line is placed
in the retrospective act of appropriation of a prior text by the procedure of con-
sidering it a figure related to a subsequent text. The act of expropriation empha-
sizes the new and the original of the present rather than its mere continuity with
the referenced past. At the same time, a historical text "remains open to retro-
spective appropriation by any later group that may choose it as the legitimating
prototype of its own project of self-making and hence an element of its geneal-
ogy" (White 1999a, p. 96).

White's figural causation is compatible with John Austin's conception of
speech acts, given that it is possible to understand the establishment of a figural
link among different historiographical texts as a performative act that takes place
in the story of who assumes himself as a *descendant* or who intends to tell the sto-
ry of diverse historiographical positions.[5] The illocutionary act, which retrospec-
tively founds a descendancy relation between a later and an earlier text, can be
applied as the criterion to establish the links in a tradition or perspective.

The enabling and disabling movements, produced by the different historio-
graphical representations by means of prefigurations of the historical field, can
be understood to involve, on the one hand, relations of *positive* figural causa-
tion, which signal prior texts as the announcement of subsequent ones, in the
renewed but always unrealized promise of fulfilling a figure and, on the oth-
er hand, relations of *negative* figural causation, which signal prior texts that an-
nounce an unrealized promise and whose fulfillment is not only an impossible
but also a sterile endeavor. The resource of figural causation allows us to under-
stand that the *novelty* introduced by the history of science of sociological lineage
is configured through signaling strategies by means of which narrative forms that
close down the meaning of the past are argued against, at the same time that
their own narrative is presented as the fulfillment of prior stories and is project-

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[5] John Austin calls certain utterances "performatives" to indicate "that issuing of the utterance is the perform-
ing of an action – it is not normally thought of as just saying something" (Austin 1962, pp. 6-7). That is, there
are cases in which *saying* something is *doing* something. Furthermore, the author shows his concern about the
performative character of every expression. According to Austin's analysis, the use of language can be under-
stood in three different senses or dimensions: the locutionary act, which is equivalent "to uttering a certain
sentence with a certain sense and reference, which again is roughly equivalent to 'meaning' in the traditional
sense" (Austin 1962, p. 108). The illocutionary acts are utterances which have a certain conventional force.
They are acts that we do *when* we say something and, finally, the perlocutionary acts, "what we bring about
or achieve *by* saying something" (Austin 1962, p. 108). Of these language uses, I consider that the constitu-
tion of a tradition or perspective by means of a retrospective signaling of successive texts must be seen as an
illocutionary act.

ed as a prefiguration to be fulfilled by future stories. These expropriation and re-vocation games of different historiographical narratives lead us

> To assess the past from the standpoint of its utility for the present, which is not to suggest that this "present" is something known in its essence or some-thing to which we should commit ourselves without reservation. On the con-trary, the "present" is as much a construction as the "past" or the "future" (White 1999b, p. 33).

In the fourth place, if the construction of the past is realized by performative acts of expropriation and deactivation of the past productions, is the construction of the present depleted in its institution as a descendent, as a contender and, at the same time, as a promise to fulfill? We can interpret the construction of the present – considering the present as the innovative historiographical production in itself – as an intervention mode of the same nature as the intransitive writing postulated by Roland Barthes and resignified by White. According to White's interpretation, the intransitive verb "write" rather indicates "a kind of metatran-sitive relationship among an agent, an act and an effect as that expressed in what grammarians call the 'middle voice' of a verb" (White 1999b, p. 443). For Barthes, writing in the middle voice, as claimed by White, can be considered to be part of Austin's performative acts by means of which "one not only acts on the world but also changes one's own relationship to it" (White 1999b, p. 450).

In the historiographical discourse of science, the metatransitivity of writing can be understood as the performative acts by which the artifactuality of the sto-ry is made visible and the contingency of the configuration itself – realized on the basis of available cultural resources and on the meaning re-negotiation of the reality in which it operates – is exhibited and assumed:

> The important distinction from the postmodernist point of view is not bet-ween ideology and objectivity but between ideological constructions of his-tory that are more or less open about the "constructed" nature of their ver-sions of history and more or less willing to make of their own modes of pro-duction elements of their contents (White 1999b, p. 39).

Thus, the assertion about the instrumental character of the production of his-toriographical stories is a constant in White's work which, as La Greca claims, leads, on the one hand, from a critical theory of historical narration to the recog-nition of epistemic, ethical and aesthetic commitments made in every narration and, on the other hand, from the analysis of the modernist narration style to a radicalized instrumentality.

> In this interpretative line, the dispute about the writing mode or about more accurate representational techniques exceeds the framework of the *modernist event* inasmuch as it is unveiled as a more fundamental modification of our attitude towards the use of language. In other words, once we recognize the diverse sense effect that a conventional narrative or a modernist *counter-na-rrative* writing mode can produce, it is not possible to avoid the attitudes or answers that we will provoke regarding what is represented in that way. […]. I consider that it is not a matter of quitting the traditional narration and star-ting to narrate modernistly […] rather it is a matter of assuming the diffe-

rence between offering stories with which to close down the meaning of the past and offering stories with which we make evident our perplexity in order to promote an open discussion about the being of the event (La Greca 2012, p. 239).[6]

Finally, given that the succession of historiographical representations is presented as arousing an insuperable controversy and that the figural causal signaling produced by every historiographical production shapes both a genealogical relation by means of successive expropriations and an agonal position towards other historical stories, does recognizing the inevitable succession of rewritings of the past lead to an epistemological skepticism? From a pragmatist perspective, Tozzi proposes an evaluation form that overcomes any skeptical view: "only the historical representation of certain events that promotes new writings about them can be considered as heuristically better" (Tozzi 2009a, p. 106).[7]

We can now, by following the items explained above, consider the novelty of *Leviathan and the Air-Pump* as an intervention act in which: (1) the controversial character of the historiographical practice is assumed, and consequently (2) a set of available resources are managed in a contingent way (3) in order to emphasize the contingent and disputed character not only of scientific knowledge but also of every historiographical production (4) which struggles for the predominance in the meaning of the past of science as a promise to be fulfilled or as an engine of configurations, whose realizations will sail between the convention of the available resources and the contingency of their figural appropriation. In the following section, I will consider these aspects through the analysis of historical distance production mechanisms.

3. Temporal distance and historical distance

According to Mark Salber Phillips (2011), it is possible to support a broadened meaning of historical distance which goes beyond its temporal sense and the kind of analysis that this sense entails. Temporal distance has been usually considered, for an observer, as the lapse of time between a point in the past and a present moment. Temporal distance is accompanied by an intuitive model of time that contains an implicit spatial metaphor. According to this model of time, the present is like a line lacking thickness which separates past from future, a kind of bridge through which events flow from the future to the past. On this assumption, temporal distance is interpreted as preventing or enabling the comprehension of the past. Given that we move further and further away from past events, they become less accessible for us. As they become distant in time, the traces that events have left behind can disappear, making it increasingly difficult for us to understand what has happened. Although the meaning of temporal distance is habitually expressed in terms of loss of valuable information over time,

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[6] The translation is ours.

[7] The translation is ours.

this meaning can involve benefits acquired by clarity, perspective and possibility of access to documents which were not available for the contemporaries with the historical events in question. Now, the chronological interval that separates the historian in the present from the past events is only a starting point. Historians construct historical distance by means of different devices[8] which shape their commitment to the past, a construction that puts both the intuitive model of time and the epistemic assumptions about historical distance into question.

The distinction between historical distance and temporal distance is placed in the field of literary technologies which historians employ in their acts of signaling historical events or historiographical productions, performing figural causal relations by means of which a historiographical tradition is either inaugurated or invalidated, or our approach to the past is either minimized or maximized. It is in this sense that the metaphor of the stranger mediates ruptures and approximations at the same time that it displays the artifactuality of the mediating operation.

4. The metaphors of the stranger

In *Tristes Tropiques* (Lévi-Strauss [1955] 1961), Lévi-Strauss claims about the ethnographer that:

> The conditions of his life and work cut him off from his own group for long periods together; and he himself acquires a kind of chronic uprootedness from the sheer brutality of the environmental changes to which he is exposed. Never can he feel himself 'at home' anywhere (Lévi-Strauss [1955] 1961, p. 58).

The ethnographer's heroic strangeness and solitude are offered as detachment figures which provide the possibility of defining and valuing the disciplinary fields in different manners. His expropriation also entails the task of resignifying the ungraspable character of the subject of his enquiries:

> There they [the savages] were, all ready to teach me their customs and beliefs, and I knew nothing of their language. They were as close to me as an image seen in a looking-glass: I could touch but not understand them. I had at one and the same time my reward and my punishment […]. No sooner are such people known, or guessed at, than their strangeness drops away and one might as well have stayed in one's own village. Or if, […] their strangeness remained intact, then it was no good to me, for I could not even begin to analyze it (Lévi-Strauss [1955] 1961, pp. 326-327).

The historian, dressed with the figure of the stranger, highlights the strange character of the past and, in his re-writings, will give significance to that figurative strangeness by means of multiple discursive strategies of historical distance. For

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[8] Phillips postulates four basic dimensions of historical representation – formal, affective, ideological and cognitive – which must be understood as mediators of temporal distance. Such mediations contingently relate in the historical productions, and therefore similar formal devices that create proximity/detachment effects can fulfill different purposes or have affective, ideological or cognitive uses.

instance, he could configurate a profound detachment from the past, reinforced with the spatial image of a gap. The historiographical production would have to fill that gap as long as it is intended to reach certain historical comprehension. If, on the contrary, the fruitfulness of any attempt to reconstruct the past in its strangeness is rejected, it could be possible to arrange and rearrange the past events, constructing a plot which is significant for the present. Therefore, the realizations of the metaphor of the stranger can be multiple in historiography.

In this section, I will analyze the mediation strategies employed in *LAP* with the purpose of constructing different levels of historical distance. I will stress two forms of strategy of historical distance. In the first one, the metaphors of the stranger and of the member of the community characterize two different narrative modes in dispute: the canonical history of science and the historical narration in *LAP*. The metaphor of the stranger bursts against the naturalization of the canonical narrativization to make the historiographical discourse contingency evident. In the second one, the metaphorical pair member/stranger advances in the prefiguration of the historical field of *LAP* exhibiting the artifactual character of scientific knowledge. Different anthropological and sociological discourses are the signaled resources after which the metaphorical transpositions of the *members' stories* and the *strangers' stories* are realized.

In the already mentioned first strategy of historical distance, the starting point for the metaphorical constitution is the analysis that Mary Douglas carries out about purity and pollution as social order structuration modes:

> I believe that ideas about separating, purifying, demarcating and punishing transgressions have as their main function to impose system on an inherently untidy experience. It is only by exaggerating the difference between within and without, about and below, male and female, with and against, that a semblance of order is created […] our pollution behavior is the reaction which condemns any object or idea likely to confuse or contradict cherished classifications (Douglas [1966] 2001, pp. 4, 37).

Douglas has gone in depth with the Durkheimian correlation between the properties of classification systems and the properties of social systems in which those classifications are employed. This correlation connects with the inclusion and exclusion limits established both in the categories of nature and in the social systems. The stranger can be seen as the kind of anomaly that Douglas characterizes by means of the Sartrean figure of the viscous (see Bauman 1991):

> When something is firmly classed as anomalous the outline of the set in which it is not a member is clarified. To illustrate this I quote from Sartre's essay on stickiness. Viscosity, he says, repels in its own right, as a primary experience. An infant, plunging its hands into a jar of honey, is instantly involved in contemplating the formal properties of solids and liquids and the essential relation between the subjective experiencing self and the experienced world (1943, p. 696 seq.). The viscous is a state half-way between solid and liquid. It is like a cross section in a process of change. It is unstable, but it does not flow. It is soft, yielding and compressible. There is no gliding on its surface. Its stickiness is a trap, it clings like a leech; it attacks the boundary between myself and it. […]. I cannot do justice […] to the marvelous reflec-

> tions to which Sartre is provoked by the idea of stickiness as an aberrant fluid
> or a melting solid. But it makes the point that we can and do reflect with pro-
> fit on our main classifications and on experiences which do not exactly fit
> them. In general these reflections confirm our confidence in the main classifi-
> cations (Douglas 2001, p. 39).

The effort of classifying inevitably entails the production of anomalies. The anomaly assumes the character of an ambiguity since it can be inserted in neither of the disjoint classification sets. Ambiguity provokes practices that oscillate between its dissipation and the consolidation of the limits by means of its exclusion. These effects are parallel to the treatment of the stranger in a continuum of social systems. Every point in this continuum has its correlation in the way that the hybrids and the anomalous are referred to. The monsters can be ignored or considered as a vehicle of either prosperity or disasters. At one end, strangers are irrevocably excluded but in the opposite end they are incorporated as members. Thus, the members of a community construct and support both the social and the symbolic order, being these self-evidence institutions:

> Apprehending a general pattern of what is right and necessary in social rela
> tions is the basis of society: this apprehension generates whatever a priori or
> set of necessary causes is going to be found in nature (Douglas 1975, p. 281).

Regarding the pairs member of the community/stranger and self-evidence/anomaly, a first sense of the metaphor of the stranger is constructed in *LAP*: it is an intervention device in the academic present to deactivate the self-evident character that historiographical traditions of science, which have acquired a canonical status, exhibit.

The procedure consists of unveiling the modes in which tradition establishes itself as:

> [A] concrete exemplar of how to do research in the discipline, what sorts of his
> torical questions are pertinent to ask, what kinds of historical materials are re
> levant to the inquiry, what sorts are not germane, and what the general form of
> historical narrative and explanation ought to be (Shapin & Schaffer 1985, p. 4).

The fulfillment of this procedure entails different moments. In the first place, the way in which this historiography employs its historical distance strategies is evidenced from the perspective of *members' stories*. They bring the past closer to the present as a device to naturalize the limits of the scientific practice prefigured in its own historical narrations. There is no gap to be filled. The proximity between past and present is made visible in the expropriation of seventeenth century experimental philosophy on the part of historians of science, an act by means of which they establish themselves as descendents at the same time that they found a historiographical line or tradition: seventeenth century experimenters, and present-day historians and scientists are members of the experimental culture. This sense of belonging makes established intellectual work schemes – both scientific and historiographical – carry "the ring of self-evident truth so clearly that its fundamental assumptions are implicit and considered to need no justification" (Douglas 1975, p. 277).

In the second place, *LAP* exhibits the artifactual character of the inclusion and exclusion limits constructed by the canonical narration:

> The member's account and its associated self-evident method have great instinctive appeal; the social forces that protect and sustain them are powerful. The member who poses awkward questions about "what everybody knows" in the shared culture runs a real risk of being dealt with as a troublemaker or an idiot. Indeed, there are few more reliable ways of being expelled from a culture than continuing seriously to query its taken-for-granted intellectual frameworks (Shapin & Schaffer 1985, p. 6).

In this way it is shown how the metaphorical pair member/stranger works in the prefiguration of the historical field: the canonical history exhibits Boyle's program "to exude the banality of the self-evident" and Hobbes' vision, with the charm of the exotic: "How was it possible for any rational man to deny the value of experiment and the foundational status of the matter of fact?" (Shapin & Schaffer 1985, p. 22). The anomalous character of Hobbes' figure was shaped by means of the successive canonical re-writings of the past until his strangeness and exclusion were unappealable: from being Boyle's most steadfast adversary in seventeenth-century England, to end up being suppressed from the history of science in the late eighteenth century, until history was *cleaned* from significant opposition to the experimental program (Shapin & Schaffer 1985, pp. 8-12).

Finally, the form of historical awareness fostered by the canonical history is put into question. The signaling of this history's lineage – descending from experimental philosophy – and its introduction as a promising figure to follow is exhibited in *LAP* with the signs of a *negative* figural causation, as an infertile endeavor, whose infertility lies in the closure effect on the past, which entails:

> The usual way in which the self-evident method presents itself in historical practice is more subtle – not as a set of explicit claims about the rise, acceptance, and institutionalization of experiment, but as a disposition not to see the point of putting certain questions about the nature of experiment and its status in our overall intellectual map (Shapin & Schaffer 1985, p. 5).

The poetic voice of the canonical historian is a romantic voice which promises to speak of the noble, and of origins and ends. It is memory, it is the story-teller, it is history itself (Clark 1995, pp. 7-10). By means of this resource, canonical history produces an effacement of the verbal devices that it employs in order to create the effect that the stories are implicit in the historical events.

Now, if *LAP* is the stranger's story and comes to deactivate the canonical narrativization, then it must push Hobbes from the stranger's place –given that he was established as the opposing party by the historian member of the experimentalist tradition– and assume a new figure of the stranger. At the moment that *LAP* has to take a position as a re-writing of the past in dispute with the canonical history, the figure of the viscous – as a representation of the stranger, whose anomaly reinforces the fixity of the established limits – does not have the necessary force of a tool to intervene in the historiographical field. The performative

act of establishing oneself as the stranger requires different conceptual resources from those offered by Mary Douglas' anthropology.

The model of strangeness derives now from sociology. The figure of the stranger by Alfred Schütz constitutes the selected resource: "the term 'stranger' shall mean an adult individual of our times and civilization who tries to be permanently accepted or at least tolerated by the group which he approaches. The outstanding example for the social situation under scrutiny is that of the immigrant" (Schütz 1944, p. 494).

Why does the stranger take the figure of the immigrant? According to Schütz, the immigrant has learnt through bitter experience the limits of his *thinking as usual*. He knows that "a man may lose his status, his rules of guidance, and even his history and that the normal way of life is always far less guaranteed than it seems" (Schütz 1944, p. 507). This is the new resource that *LAP* exploits to approach the culture of the experiment *itself* – to behave as the Schützian immigrant stranger does:

> The cultural pattern of the approached group is to the stranger not a shelter but a field of adventure, not a matter of course but a questionable topic of investigation, not an instrument for disentangling problematic situations but a problematic situation itself and one hard to master (Schütz 1944, p. 505).

I consider that it is at this point that the intransitive writing of *LAP* becomes visible. Literary technologies incarnating this figural strange historian fulfill the metatransitivity of its writing. The historian accepts "responsibility for the construction of what he had previously pretended only to discover" (White 1999b, p. 27) and enthrones himself by means of the deconstruction of the entire historiographical narrative.

> In the course of controversy [*the historical actors*] they attempt to deconstruct the taken-for-granted quality of their antagonists' preferred beliefs and practices, and they do this by trying to display the artifactual and conventional status of those beliefs and practices. Since this is the case, participants in controversy offer the historian resources for playing stranger (Shapin & Schaffer 1987, p. 7).

Through the same act that prefigures the historical actors as deconstructors of scientific discourses, the historian performs himself as the deconstructor that at the same time exhibits the artifactual character of the scientific and historiographical productions.

As a metaphor of the historiographical story itself, the stranger's story expresses the awareness of contingency. As a stranger, he knows that there exist alternatives to the beliefs and practices that the story of the members had shown to have the privilege of being self-evident. The story of the stranger is a strategy of detachment from the past through which he distances the past as a resource to operate in the present. Distance makes the past strange and opaque. By this act, he also makes strange the present of members of the experimental tradition, with their transparent vision of the past. He develops a strangeness sensitivity towards *the scientific culture* in order to foster awareness of the conventional and

contingent character of the historiographical productions. Thus, the establishment of the past's distance entails ideological implications: the historiography of science constructed from the story of the stranger is a political and moral act of intervention focused on breaking with the hierarchy of the prevailing canon, not to create a new canon but to signal its figurality.

Now, I would like to comment on the second historical distance strategy to which I have previously referred: the metaphorical pair member/stranger which acts in the prefiguration of the historical field of *LAP*.

The new historical distance strategy means the same starting points as the story of the member. The historian who plays the role of a stranger has a tradition, the experimental culture, its emblematic figure –Robert Boyle– and a stranger – Hobbes – at hand: "How can the historian play the stranger to experimental culture, a culture we are said to share with a setting in the past and of which one of our subjects is said to be the founder?" (Shapin & Schaffer 1987, p. 6). His operation lies in separating the elements of the self-evidence method and reconfigurate them in order to make the contingent character of any scientific story become the centre of narration.

Given that *LAP* does not explicitly state any appropriation from the social sciences field, I suggest interpreting the figure of the historian, who plays the stranger in the prefiguration of the historical field, by means of Georg Simmel's stranger:

> The stranger is thus being discussed here, not in the sense often touched upon in the past, as the wanderer who comes today and goes tomorrow, but rather as the person who comes today and stays tomorrow. He is, so to speak, the potential wanderer: although he has not moved on, he has not quite overcome the freedom of coming and going. He is fixed within a particular spatial group, or within a group whose boundaries are similar to spatial boundaries. But his position in this group is determined, essentially, by the fact that he has not belonged to it from the beginning, that he imports qualities into it, which do not and cannot stem from the group itself (Simmel 1971, p. 143).

Simmel's stranger adds the peculiarity of altering the sense of distance/proximity of social relations to the Schützian immigrant, who is aware of the contingent character of the stories:

> The unity of nearness and remoteness involved in every human relation is organized, in the phenomenon of the stranger, in a way which may be most briefly formulated by saying that in the relationship to him, distance means that he, who is close by, is far, and strangeness means that he, who also is far, is actually near (Simmel 1971, p. 143).

The purpose of playing the stranger is to answer the questions that history subtly prevented from being formulated: why were experimental practices considered appropriate and how were these practices taken into account in the production of reliable knowledge? When playing the stranger, his strangeness demands that he *be there* at the center of the experimental program tradition. However, the distance in the relation with the past of the experimental philosophy is a detached one. The use of this device does not seek to establish the incommensurability of

the past. Rather, it highlights the figural dimension of language: the artifactuality of constructing itself in the distance from that which is closed in order to deconstruct a closed past: "institutionalized beliefs about the natural world are like the ship in the bottle, whereas instances of scientific controversy offer us the opportunity to see that the ship was once a pile of sticks and string, and that it was once outside the bottle" (Shapin & Schaffer 1985, p. 7).

At the same time, and as part of the same deconstructive operation "we shall be adopting something close to a 'member's account' of Hobbes's anti-experimentalism [...] we want to put ourselves in a position where objections to the experimental program seem plausible, sensible, and rational" (Shapin & Schaffer 1985, p. 7). By assuming the member's perspective, the distance from another past is reduced, the past which was excluded by the limits crystallized by the canonical tradition. Hobbes' view – which fiercely condemns experimentalism – is now the distant which is close. The signaling of Hobbes does not entail a genealogical construction:

> Of course, our ambition is not to rewrite the clear judgment of history: Hobbes's views found little support in the English natural philosophical community [...]. They [Hobbes' views] were not widely credited or believed – but they were believable; they were not counted to be correct– but there was nothing inherent in them that prevented a different evaluation (Shapin & Schaffer 1985, p. 13).

However, a figural causation relation operates in the sense that this previous event – Hobbes' anti-experimentalism – is retrospectively raised to the category of an element of its own past, "a past on the basis of which a specific present is defined" (White 1999a, p. 90). The signaling shows the novelty of this historiographical present which creates itself as "a denial of the fixity of texts" and at the same time as a denial of "the fixity of the line supposed to exist between ideological and objective versions of historical reality" (White 1999b, p. 37). Stories are not implicit in the historical events.

5. Recapitulation

Golinski's question "What kinds of stories ought we to be telling?" led us to examine to what extent this historiographical narrative emphasizes the self-consciousness of the figural character of any representation of the past of science and to which extent it assumes the performativity of both the re-writing of the past and of self-writing, in the awareness that *selecting a past is selecting its corresponding present*.

The device of metaphorizing the stranger and the member of a group makes evident an appropriation of theses from social disciplines that goes beyond the mere empirization of history of science to which Kuukkanen refers. The commitment of the sociology of scientific knowledge – the Edinburgh School – with the finitist conception of the application and development of concepts, opens the game to multiple strategies of dissociation from the conceptual structure and re-

configuration of available resources from anthropology, sociology or related disciplinary field. According to the finitist perspective, neither is there anything in the nature of things, nor in the nature of language, nor in the previous uses of concepts to determine how we must employ them correctly. This means that it is our decisions which determine what must be taken as a convention. It is our decisions that support, develop or change a structure of conventions. Conceptual stability or change comes from collective decisions of their creators and users. Assuming that classification systems and general knowledge are social institutions enables the appropriation by the historiography of science of the artifactual character of both historical texts and the epistemic, ethical and aesthetic commitments implicit in every re-writing of the past. However, if the appropriation of the resources coming from social sciences led to an empirization of the historiography of science or to the acceptance of the fictional character of historical narrative, our examination of the metaphors of the stranger as devices of historical distance aims to support the second thesis.

Now, the novelty of a historical representation leads us to the controversial mode of the historiographical practice and to the movement through which a historical work constructs itself in relation to the previous re-writings of the past. We interpret that innovative character on the basis of figural causation relations that a historical text establishes in the prefiguration of the historical field and in the signaling of previous texts.[9] However, every new re-writing of the past must be interpreted as the renewed promise of a better representation of the past, not as the best representation of it. In a first sense, the metaphor of the stranger and the member of the group operates in the establishment of a *negative* figural causation that signals the depletion of a historical re-writing that presents itself as the final version of the past. In response to the canonical stories that close down the past, *LAP*, invested with the figure of the stranger, bursts in to show the artifactuality of historiographical representations. Its intervention in the present evidences, according to White, that we are responsible for our own project of self-creation. In a second sense, the metaphor of the stranger explores the prefiguration of the historical field in order to exhibit the conventional and artifactual character of our modes of knowledge and by means of that recognition, "we put ourselves in a position to realize that it is ourselves and not reality that is responsible for what we know" (Shapin & Schaffer 1985, p. 344).

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[9] In an earlier work, I interpret a set of historiographical writings by Steven Shapin as the fulfillment of a series of figure-fulfillment mediations which were shaped in relation to the origin of modern science in seventeenth-century England (see Martini 2013).

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