

## Science and Technology Studies and the Historiography of Psychology: Towards a Critical Analysis

Catriel Fierro\*,<sup>1</sup>

Orcid.org/0000-0001-7635-7012

Miguel Gallegos<sup>2, 5</sup>

Orcid.org/0000-0001-6891-7833

Carmen Burgos Videla<sup>3</sup>

Orcid.org/0000-0003-2718-8579

Viviane de Castro Pecanha<sup>4</sup>

Orcid.org/0000-0001-7629-7240

<sup>1</sup>*Universidad Nacional de Mar del Plata, Mar del Plata, Argentina*

<sup>2</sup>*Universidad Católica del Maule, Maule, Chile*

<sup>3</sup>*Universidad de Atacama, Atacama, Chile*

<sup>4</sup>*The Chicago School of Professional Psychology, Chicago, IL, United States*

<sup>5</sup>*Consejo Nacional de Investigaciones Científicas y Técnicas, Buenos Aires, Argentina*

### Abstract

This paper examines the relationships established between the fields of history of psychology, and science, technology and society studies (STS). We first present a brief historical overview to situate the present status of the field of psychology within the broad STS arena. We then describe the influence of STS studies in the field of history of psychology through a literature review that emphasizes Ibero-American productions in these areas. Our findings suggest that STS studies can contribute to the understanding the historical issues in psychology through seven areas of intersecting sociological and historical research, which involve the study of psychological objects, the history of psychological instrumentation, the historical analysis of psychology as a discipline and the study of psychology teaching and education, among others. The paper concludes that STS studies play an important role in advancing the production of historical knowledge, shedding light on the conceptual frameworks used in historical research, clarifying historical inquires, and assisting in the process to define psychological epistemic objects.

**Keywords:** History of psychology, sociology of science, history of science, social studies of science and technology.

\* Mailing address: 25 de Mayo 3220, 9°C, Mar del Plata, Buenos Aires, Argentina. E-mail: Catriel.fierro@gmail.com, maypsi@yahoo.com.ar, fetitzab@gmail.com and vpecanha@thechicagoschool.edu  
Support: Consejo Nacional de Investigaciones Científicas y Técnicas.

## Os Estudos de Ciência e Tecnologia e a Historiografia da Psicologia: Uma Análise Crítica

### Resumo

Este artigo examina a relação entre os campos da história da psicologia e os estudos sociais sobre ciência, tecnologia e sociedade (CTS). Primeiro, apresentamos uma breve visão histórica situando os objetivos da psicologia no amplo campo da CTC contemporânea. Em seguida, descrevemos a influência da CTS no âmbito da história da psicologia através de uma revisão da literatura que enfatiza as produções Ibero-Americanas. Nossos resultados sugerem que as pesquisas realizadas no campo CTS podem contribuir para a compreensão das questões históricas que emergem na área da psicologia através de sete linhas de pesquisa relacionadas a interseção de estudos sociológicos e históricos, que envolvem o estudo de objetos psicológicos, a história da instrumentação psicológica, a análise histórica da psicologia como disciplina e o estudo do treinamento em psicologia, entre outros. O trabalho conclui que os estudos desempenham um papel importante na produção do conhecimento histórico, destacando os referenciais conceituais na pesquisa histórica para esclarecer questões historiográficas e auxiliar na definição epistemológica de objetos psicológicos.

**Palavras-chave:** História da psicologia, sociologia da ciência, história da ciência, estudos sociais da ciência e tecnologia.

## Lo Estudios sobre Ciencia, Tecnología y Sociedad y la Historiografía de la Psicología: Una Evaluación Crítica

### Resumen

Este trabajo examina la relación existente entre los campos de la historia de la psicología y los estudios sociales sobre ciencia, tecnología y sociedad (CTS). Primero presentamos una breve panorámica histórica con los fines de situar el campo de la psicología en la amplia arena de los CTS contemporáneos. Luego describimos la influencia del campo CTS en el campo de la historia de la psicología a través de una revisión de la literatura que enfatiza las producciones iberoamericanas. Nuestros hallazgos sugieren que los estudios CTS contribuyen con la comprensión de cuestiones históricas en psicología a través de siete áreas de investigación, que involucran el estudio de los objetos psicológicos, la historia de la instrumentación psicológica, el análisis histórico de la psicología como disciplina y el estudio de la formación en psicología, entre otras. El trabajo concluye que los estudios CTS juegan un rol importante en la producción del conocimiento histórico, arrojando luz a los marcos conceptuales utilizados en la investigación histórica, clarificando las preguntas historiográficas, y ayudando a definir objetos epistémicos psicológicos.

**Palabras clave:** Historia de la psicología, sociología de la ciencia, historia de la ciencia, estudios sociales de la ciencia y la tecnología.

Over the past five decades, the field of history of psychology has been advancing its professional activities in the United States. Since the beginning of the 1960s, the field has been proposing the development of several formal work groups, and organizing conferences, and thematic seminars. It also produced repositories

and archives along with the establishment of specialized journals, among many other activities (Caphshew, 2014). History of psychology gained visibility in Latin American countries during the 80s, when the field organized conferences, and supported the development of various research groups (Fierro, 2018). Furthermore, it created

scientific journals to publish timely studies expanding the knowledge related to the history of psychology in Latin America. Despite the fact that research studies, addressing the field of history of psychology, have a significant presence in various academic journals, it is important to note that the field only achieved its professional status in the recent years.

Two academic fields have been of crucial importance for the growth of the field of history of psychology. The field of professional history has been proposing essential scientific procedures to access, retrieve and assess historical sources in psychology. Similarly, the field of the history of science has been developing innovative frameworks to examine the historical contexts of the psychology field. Professional historians and scientists working in the field of history of science followed parallel paths to advance their respective fields. Yet, professional historians neglected to study the field of history of science. Consequently, the majority of the professionals investigating the field of history of science included philosophers, sociologists, anthropologists, and psychologists.

During the first half of the 20th century, the philosophy of science influenced the development of history of science, while the sociology of science had a relevant impact in the field, during the second half of the century (Lamo de Espinosa, González, & Torres, 1994). Until the 1960s, philosophers of science led the field of history of science. Discussions in the field highlighted the pragmatic nature of research studies, scientific methodologies, and the empirical validation of knowledge.

Conversely, the second half of the 20th century, marked the introduction of sociological approaches. The sociological approaches were the result of the diligent work of a group of social scientists committed to create innovative perspectives to study and understand the field of history of science since the 1930s. Such perspectives aimed the analysis of critical historical contextual factors (e.g., ideologies, and social, political, and cultural structures) affecting scientific investigations, researchers, and research institutions. The new perspectives presented the

opportunity to examine the contextual factors of many overlooked historical events. Until this moment, the pragmatic logic was mainly used to analyze the historical data, and it did not include the investigation of the contextual factors embedded in the historical events. It is important to note that the establishment and expansion of the field of science, technology and society (STS) was dependent upon the arrival of the new sociological perspectives. In essence, the rise of these innovative sociological perspectives facilitated the development of the field of STS, and its promising scientific theories that were critical to advance the analyses of science and scientific knowledge.

This advent did not only affect the fields of the history of science and professional history. It also influenced the cross-disciplinary fields of sociology, anthropology, psychology, linguistics, and political science. Since the 1960s, the fields of history of science and professional history have been receiving considerable interdisciplinary contributions from the social science disciplines. Such contributions enhanced the process of examining history, and expanded the knowledge of the theoretical and methodological approaches, driving the work of professional historians, in the areas of cultural history, microhistory, social history, and history from below (Burke, 1991). In turn, each of these domains had a profound impact in the work of professional historians. Currently, professional historians acknowledge the existence of several approaches to study historical events. This new position was a departure from the main traditional framework focusing only on the pragmatic nature of phenomena to produce knowledge (Dosse, 2006).

This brief historical overview aids the understanding of the present status of the field of history of psychology in order to examine the various relationships that were and continue to be established with this field of knowledge. Nevertheless, common themes and groundworks between STS studies and the history of psychology are rarely analyzed in historical and sociological scholarship, and thus are yet to be clearly identified and described. With the aim of

identifying and analyzing the diverse theoretical and empirical areas in which sociologists and historians of psychology can contribute, this study identifies and examines several intersecting areas of knowledge demonstrating the existing synergy between the fields of STS and historiography of psychology.

The methodology of our study focused on retrieving and analyzing specialized literature on historical scholarship in psychology published in relevant journals during the past decade, emphasizing the researches generated in the Ibero-America region. To this end, a literature review including databases such as PsycNET, Scielo, Redalyc, and Dialnet was conducted to identify and retrieve existing relevant resources. After examining the literature material, we also identified and analyzed the references cited in these sources discussing the fields of STS and history of psychology. The final sample included 55 original articles.

One of the aims of this study is to discuss the past and current positions of psychology in regards to the field of STS. With this goal in mind, we first describe psychology's current location within social studies of science. Our second aim is to analyze the influence of STS studies in the field of History of Psychology, acknowledging and describing their contributions in understanding historical issues in psychology. We intend to raise questions concerning the field of history of psychology and its relation with the social studies of science. In doing so, this study particularly examines seven intersecting domains of knowledge between STS studies, and the field of history of psychology: The relationship between Psychology, Society and State, The history of psychological objects, The history of psychological instruments, tools, and technologies, historical and epistemological analyses of psychology as a discipline and a profession, discussions on reflexivity, constructivism and historiographic practices, quantitative studies such as bibliometric measures, scientometrics, and social network analysis (SNA), and research on the professionalization, education and training in psychology.

## Psychology, Historiography and Social Studies of Science

What place does psychology have in the field of STS? In order to respond this question, one should have in mind that STS is a field of research including various academic disciplines. For example, the sociology of science, the philosophy of science, the history of science, political science, linguistics, anthropology, and the field of psychology, among many others. As such, the field of STS interacts with scientific and technological organizations informing decisions within the governmental and political spheres (Lamo de Espinosa et al., 1994).

The establishment of STS, as a conceptual framework, and as a field of research, dates back to the 60s. During this time, a group of professionals from diverse disciplines developed innovative perspectives, as they examined different approaches to generate and validate scientific knowledge. The innovative approaches produced new practices to improve the understanding of science, and the impact of past scientific events on society. In essence, the work of Thomas Kuhn on scientific revolutions, the Strong Programme in the Sociology of Knowledge proposed by David Bloor, and his colleague Barry Barnes, and the experimental studies carried out by Bruno Latour, Michel Callon, and Steve Woolgar solidified the field of STS. Further, it is also important to acknowledge the notorious work of Robert Merton, Karl Mannheim, John Bernal, and Karl Polanyi, during the 30s (Gallegos, 2013).

The field of STS is not a specific domain of a given discipline, although, naturally the sociology of science, and in particular, the aforementioned Strong Programme in the Sociology of Knowledge, clearly favored the STS studies. The heterogeneous field of STS does not situate psychology on its core, however, it is not either placed on its periphery. In fact, two distinct views have been appropriately explaining the position of psychology within the STS domain. The first one acknowledges the contributions of the psychology field to the STS

studies, while, the second view, recognizes the advancements in the field of STS considering the well-established psychological knowledge.

In the past decades, psychology has gained important attention in the field of STS in comparison to the other disciplines. The contributions essentially came from Spiegel-Rösing (1977) during the 70s, from the studies published by Golinski (1990), and Weisz and Kruytbosch (1982), during the 80s, and in the recent years with the work of Martin, Nightingale, and Yegros-Yegros (2012). Yet, the majority of the STS scientific production still comes from the fields of sociology, philosophy, and history. The idea to develop an interdisciplinary alliance between the fields of psychology, and STS, gained strength during the discussions held in the Society for Social Studies of Science conferences. Nevertheless, it must be underlined that the Society barely encouraged panel discussions concerning the themes that were fundamentally related to the field of psychology (Fox Lee, 2015). The Website of Cornell University<sup>1</sup> also confirms the restricted interest of the field of STS in producing psychological knowledge<sup>1</sup>. The website presents a list of 110 socio-professional, and postgraduate programs in the field of STS available in 21 countries. Among the 110 programs included in the list, only nine addressed psychological topics or offered students the possibility to conduct STS studies concerning psychology-related themes. These programs are exclusively available in the United States, Canada, and the Netherlands.

Considering the list of institutions hosting postgraduate programs, in the field of STS, the most traditional programs regarding the studies on meta-theory psychology with an emphasis on historical contexts, are the master's degrees in Theory and History of Psychology at the University of Groningen, and at the Institute for Science and Technology Studies (York University). Additional well-established programs in the field include the History and

Philosophy of Science Technology & Medicine studies at Duke University, the Conceptual and Historical Studies of Science Program, and the History of Science and Medicine Program. The last two programs are available at the University of Chicago.

Currently, the traditional Science Studies unit at the University of Edinburgh supports the development of research studies in several social science disciplines excluding psychology. The work of the researchers Crozier and Lafferton are the only exceptions in the unit (Henry, 2008). The Science Studies unit is a historical leading center of excellence generating social-scientific knowledge since the 1970s. The center was once the home of remarkable historians, and epistemologists in the field of psychology, such as Martin Kusch. Theoretically, all these facts reflect a rather discouraging scenario for the field of psychology, narrowing its synergy and dialogue with the field of STS. They may also suggest that the field of psychology did not rise a true interest in the social science research community limiting its potential to offer interdisciplinary contributions.

The collaboration between the fields of STS and psychology have been gradually gaining strength in Latin America. Several STS research studies conducted in Latin American countries have been examining various psychology-related constructs. Some of these studies had theoretical-epistemological natures (Ferreira, 2015; Fierro, 2015b; Fierro & Brisuela Blume, 2016; Gallegos, 2014a), and examined organizational practices within universities, and professional associations (Benito & García, 2010). Other studies analyzed the factors contributing to expand the scientific production and communication (Gallegos, Berra, Benito, & López López, 2014; Jaraba Barrios, 2015; Jaraba Barrios & Mora-Gómez, 2010).

Nonetheless, the STS studies conducted in the field of psychology still represent a very small portion of the efforts between the fields of STS and psychology. In general, the majority of STS research studies address the fields of biology, physics, and engineering (Pettit, 2015). The so-called hard science disciplines are often favored as objects of study when compared to

---

1 Cornell's courses lists is available at <http://sts.cornell.edu/graduate/upload/STS-Programs-Ver-IV-2.pdf>

the disciplines in the field of social and human sciences. Most likely, this occurs because the soft science disciplines usually produce the theories and methods that are required to examine the scientific procedures or occurrences. With that said, one may question the use of the social and human science theories, and methods, to analyze the constructs produced in these very same fields.

### **Psychology and Social Studies of Science and Technology**

Historians have sociological and philosophical research interests aligned with the goals propose in the STS studies. Probably, the mutual interests reflect the fact that historians employ both normative and descriptive approaches to examine psychological theories, epistemologies, and methodologies. The common interests may also speak to the fact that the fields of historiography, sociology, and the philosophy of science use logic and pragmatic frameworks to produce knowledge (Blanco Trejo, 2002; Rosa, 2008; Vera Ferrándiz, 2008). One of the ongoing discussions addressing the definition of psychology, as a discipline, serves as an example to illustrate the case. Psychological textbooks define the concept of psychology in multiple ways.

Some consider psychology as a field of natural sciences (e.g., biology and medicine), while others describe the discipline as a field of social and human sciences (Brock, 2016). As a result, the definition of psychology learn towards the disciplines of natural sciences or move in the direction of social and human sciences, depending on the focus, and perspectives presented in the texts. As noted previously, the interdisciplinary contributions from the fields of psychology and STS are innumerable, despite their slightly different positions, and research interests. Consequently, one may expect that historians of psychology would frequently have collaborative dialogues with sociologists, philosophers, and scholars in the field of STS. Dialogues that could advance empirical historical studies related to the nature and dynamics of science. Against this expectation, STS scholars

and historians of psychology have been working in silos (Vaugh Blount et al., 2009).

The sociology of scientific knowledge inspired and advanced the work of historical revisionism in the field of psychology (Polanco & Fierro, 2015; Talak, 1997). The contributions of the notorious revisionist historian scholars, Kurt Danziger and Allan Buss, were essential to support the development of new ways to look into the history of psychology, and other human science disciplines (Fierro, 2016a). Undoubtedly, the work of revisionist historian psychologists in recovering hypotheses and perspectives of STS studies was an important step towards the recognition of the significant contributions from the domain of historical revisionism. However, in spite of such advancements, the progress made in the field of social studies of science by historians of psychology has been minimal to say the least. The lack of progress may speak to the fact that traditional STS disciplines still question the status of psychology within the broader field of social sciences. According to Pettit (2015), it is still not clear to STS disciplines if psychology is an interpretive tool or an object of analysis.

The field of history of psychology counts with a small number of professionals. However, in the past recent years, the field noticed a relatively increase in the number of historians psychologists (Capshew, 2014), particularly in English-speaking countries. In order to understand this scenario, Fierro (2016b) posits that these countries provide several significant academic and professional opportunities to discuss the field of social sciences when compared to non-English speaking countries. Usually, the encounters highlight the contributions offered by distinct disciplines to advance the field of history of psychology. With that said, one may say that the dialogues in these encounters can sparkle the interest of students to become historians of psychology, potentially increasing the number of professionals in the field. Yet, the literature concerned with the field does not properly address the discussions held in the meetings.

The massive contributions to the history of psychology field came from the sociological reconstruction of the field itself (Ben-David, &

Collins, 1966; Danziger, 1979), rather than the field of intellectual history, as one may think. Not surprisingly, the decline of intellectual history followed the rise of the social historiography of science, and the recognition of the constructivist, and anthropological perspective from the 1960s (Christie, 2005). The emphasis on constructivism, contextual factors, and on the social and scientific historiographies, to examine new post-Mertonian philosophies, and sociologies of science, replaced the previous focus on intellectual and conceptual historiographies. This shift mainly defended the non-replicating nature of scientific knowledge. It also recognized that facts and occurrences are contingent upon the historical development of science (Golinski, 1990). At around the same time, the field of anthropology experienced several changes, as it moved towards the direction of social and human sciences. The transition introduced the era of the new sociological perspective of science (Knorr-Cetina, 1981; Latour & Woolgar, 1979) leading discussions about the norms and the boundaries of social science, along with, the resources available in the cultures to develop their own scientific practices.

The recent theories and methods presented the opportunity to conceive, in different ways, historical practices, artifacts and instruments in the field of historiography of science. They motivated the field of social, sociological, and professional histories to conduct research studies within the field of social studies of science and technology (Fierro, 2015a). They also encouraged the analysis of contextualized histories, rather than intellectual histories focusing on laboratory practices, the relation between sciences and society, sciences and internal cognitive structures, and the idea that scientific knowledge mainly reflected the interactions between human and non-human actors (Lenoir, 1988).

### **The STS Perspective of the Historiography of Psychology**

What is the relation between history of psychology and STS studies? What are the

convergent fields of study, problems, and research topics proposed by historian psychologists, sociologists, philosophers, historians, and anthropologists of science, in the field of STS? How STS research studies are influencing the field of history of psychology, especially regarding the studies including interpretive hermeneutic methodological designs? To respond these questions, it is important to have in mind the relevant contributions generated from the collaborative relationship between the fields of STS and history of psychology, previously discussed in this study. With that in mind, one can clearly recognize the evidences supporting the existence of a relevant interdisciplinary relation between the fields. In addition, the studies conducted by several historian psychologist researchers concerning the development of historical concepts, their problems, and practices confirm the significant synergy between the fields. However, in order to continue progressing with this discussion, it is essential to provide a critical and comprehensive analysis of the themes and topics, examined by the new perspectives proposed in the field of history of psychology, with concrete focus on STS. The following parts of this study will present the themes and research topics reflecting the influence of STS in the field of the history of psychology.

### ***Psychology, Society and State***

Sociologists have always demonstrated interest in correlating scientific and technological advancements with diverse forms of contextualized knowledge. In particular, the knowledge related with political-state organizations and social dynamics. They also have been applying this method to examine the knowledge produced by other disciplines, especially, the knowledge closely related to the field of social sciences. This method dates back many decades ago, from the periods of the sociology of scientific knowledge led by Karl Mannheim, the Mertonian sociology of science, and the years that followed the postMertonian scientific days. In order to advance the scientific production generated in the field of history,

historians decided to adopt the same method used by sociologists. Scholars in the field suggested that the ‘new historiography of psychology’ developed after the 1970s, reflected the social or sociological history of psychology. As a result, the new field of social or sociological history of psychology presented the possibility to use the sociological correlating methods in order to produce knowledge concerning the relation between psychology and society (Araujo, 2017; Fierro, 2015b, 2016b).

The new STS theoretical approaches offered unique opportunities to examine the professional relations that psychology maintained with the state, government and society. In fact, to study the professional relations between psychology, and the state was a mechanism of survival for the psychology field. Most certainly, the advancements of psychological practices were at risk if the field had not acknowledged its relation with the social and political domains (Gallegos et al., 2014). Interestingly, during the 20th century, the field of psychology publically recognized that its growth was contingent upon its multiple connections with the social, political, economic and state spheres (Talak, 2010).

The strength of the approaches employed by historian psychologists to examine the past significantly increased when they decided to use the conceptual frameworks of STS studies. This was especially evident when they proposed to study, in a systematic form, the impact of psychology on society, and the manner in which the discipline shaped its practices concerning the social domains. As a result, the research studies examining the contributions of specific sectors (e.g., military, work, industry, health, and education) and different governmental bodies, to advance the professional development of psychology, received important attention in the scientific field (Danziger, 1979; Gallegos, 2014b). The successful establishment of psychology, as a profession, along with the recognition of psychologists, as the professionals of the field, was only possible because governmental bodies offered political and state support. Certainly, these institutions had influential roles in forming psychologists since they needed professionals

that could effectively intervene and solve social problems and challenges.

### *History of Psychological Objects*

The history of psychological objects is a distinct line of research dedicated to investigate psychological constructs. This line of research is unique because it distinguishes critical history from classical history. It abandoned the philosophical naturalism stance, which conceives psychological phenomena as natural, universal, and pre-determined events. Following this rationale, psychological phenomena are limited to simple expressions of inanimate objects based on the hypothetical human condition. In the history of psychological objects domain, historian psychologists perceive intelligence, memory, personality, the unconscious, among others, as psychological constructs. Psychological constructs that are either partially constructed objects (Talak, 2003) or comprehensively solidified by pragmatic (social) or discursive (theories) scientific practices (Loredo Narciandi, Sánchez, & Fernández, 2007; Rosa, 2008; Stam, 2015).

Historians consider the specific contexts of scientific practices during the process of examining psychological objects. In particular, they analyze the contexts of the scientific practices supporting the development of the psychological objects. In order to have a comprehensive view of the contexts influencing the scientific practices, historians investigate all the participating factors organizing given societies and cultures. Specially, they access the information about the manner the society has been developing its own scientific knowledge. Historians critically reflect about the origin of the field of psychology along with its objects, giving that psychologists were the main responsible in establishing the conventions in the field and claiming its ownership. In this sense, historians are aware that the psychological knowledge, and its applications represent the way psychologists have come to understand society, societal norms, and social practices. Historians also understand that psychologists safeguard the psychological knowledge, ultimately protecting their rights



to produce the knowledge in the field (Stam, 2015). Most recently, Stam (2015) raised ethical concerns related to the investigation of the origin, nature and the development of psychological objects. According to the author, the knowledge of specific subfields of psychology should belong to psychologists. Further, psychology-related knowledge produced in other disciplines cannot overshadow the consensus achieved by psychologists about the very same topics. This line of thought has its own value. To illustrate, one should consider the contributions from the subfields of psychology concerning the role of psychology in understanding the subjective development of human beings. This type of research study must precisely operationalize, and conceptualize the meaning attributed to the construct of subjectivity (Pettit, 2015), ensuring that the psychology-related definition of subjectivity is not reduced to simple expressions of power relations (Rutherford, 2014).

With all said, one can conclude that the field of history is in fact a reliable repository of data capable to respond philosophical questions. To that end, the findings and inquires of historians have the ability to reinforce or refute the philosophical hypotheses (pertaining both naturalist and constructivist positions) posed by sociologists of science. As historians examine the features of psychological objects, they essentially contextualize the scientific practices (e.g. research, professional or interdisciplinary-related practices) used in the process. Their practice often focuses on non-intellectual or conceptual analysis of science and technology. In this sense, historian psychologists invite two critical lines of thought in the process of examining epistemological objects. The first one encourages the analysis of institutional and discursive determinants of given psychological objects. While the second questions the definitions of the psychological objects.

### *History of Psychological Instruments, Tools, and Technologies*

Since the 1980s, the field of history of psychology has been generating innumerable research studies related to the history of

psychological instruments, tools, and technologies. In this sense, historians have been further examining the psychological research generated in the laboratories (Cirino & Lopes, 2015; Escobar, 2016). For example, the methodologies used to record psychobiological phenomena (Borck, 2005), the equipment used in the field of experimental psychology (Sokal, Davis, & Merzbach, 1976), and the development of instruments assessing intellectual and cognitive mental functions (Samelson, 1979). The methodological and theoretical frameworks produced in the fields of sociology, and social science, evidently enhanced the process of examining or revisiting, the observations proposed by historian psychologists, in the domain of psychological instruments, tools and technologies. Certainly, the investigation of the cultural and contextual features of psychological instruments, and technologies also expanded the field of history of psychology. Nonetheless, historian psychologists are not yet investigating these topics in a comprehensive manner (Young, 2015).

In spite of that, historians have examined several alternative approaches to explain the ambiguities rising from the psychological epistemologies, and the terms used in the field to define the technological features of the discipline. Because of these investigations, significant perspectives emerged encouraging the analysis of the several factors embedded in the relation among objects, rather than, mainly relaying on instruments or tools to provide this information. Similar to what occurred with the studies addressing government-oriented disciplinary technologies emphasizing the power and domination of governmental institutions over human bodies, souls, and their collective subjectivity. These studies mainly relay on the ideas of Michael Foucault (Blanco Trejo, 2002; Rose, 2011) to discuss the potential political and moral implications of power and domination. In the recent decades, several scholars have been criticizing the predominant focus of research studies on Foucault's ideas to reconstruct the history of Psychology (Lovett, 2006). Nonetheless, not all the research studies

reconstructing the history of psychology used Foucault's ideas on power and domination. Other interesting studies examined distinct and overlapping arguments recognizing psychology as a technological field (Collins & Stam, 2015). Most likely, the perception of psychology as a technological field relies on the way the field shapes its practices, social discourses and patterns, and on the fact that psychology has a significant impact over society.

### *Historical and Epistemological Analyses of Psychology as a Discipline and a Profession*

The history of the psychology is much older than the history of psychology, as an academic discipline. Psychology rose as an academic discipline only in the last decades of the 19th century. In this sense, the research studies in the field of history of psychology should not be limited to the emergence, development or progress of psychology as a discipline. It is important to examine the several historical periods concerned with the development of the human thought (Ash, 2008).

The most common approach used to analyze the extensive historical data related to psychology, involve tracing distinct timelines to identify the specific historical periods, when important theoretical frameworks emerged. This method assists in the process of pinpointing the development of conceptual frameworks and the establishment of disciplines to understand the scope and delimitation of their boundaries. One can say that the establishment of psychology, as a discipline (including departments in universities and laboratories), and as a profession (through professional associations and journals), represented a discontinuity in the history of psychology. This is particularly true when considering the scope of psychological tasks and responsibilities, along with the development of subfields of psychology, and their respective psychological practices.

The field of STS supported the use of the method to delimit the boundaries of psychology, as a discipline. This procedure was congruent with the work conducted by phi-

losophers, sociologists and historians of psychology. Perhaps, the work of psychologists recovering the different epistemological theories generated by Kuhn, Feyerabend, Lakatos and Bachelard, to produce historical-epistemological knowledge, in the field of psychology, was the most important evidence illustrating the use of this procedure and confirming the alignment between the fields (Gallegos, 2014a). The field of psychology gained its independent status from the field of philosophy towards the end of the 19th century. Since then, psychology has been extensively using philosophical theories to further the development of several psychological constructs and frameworks. It is possible that the studies in the field of STS leveraged the status of psychology, as a discipline, because the field of psychology demonstrated a significant interest in using the philosophical theories to explain the development of the field itself. One may say that this interest advanced the recognition of psychology, as an independent field of study. As a result, the contributions from the psychology field were no longer limited to its interdisciplinary relations with the other social science disciplines.

The fields of philosophy of science and sociology of science have been traditionally studying the scopes, delimitations, and boundaries of disciplines. Consequently, historical research studies conducted in the field of psychology investigated individual (O'Donnell, 1979), and collective psychologies emphasizing institutional (Sokal, 2006), rhetorical (Leary, 1987), and interdisciplinary issues (Coon, 2002). In the process of examining these domains, the field of psychology essentially took the control over the studies of the mind and behavior, progressively excluding the other social science fields deemed as competitor disciplines.

As the field of psychology gradually progressed so did the academic training in psychology. In fact, the academic training in psychology was an important historical occurrence delimiting the professionalization of psychology, and the reproduction of the psychological knowledge, as graduates of the field entered the psychology job market. Market

regulated by several structural factors, and organizations, such as government regulatory, and sponsoring agencies influencing the field of STS. However, governmental organizations are not the only ones modulating the psychology job market. Universities also play a significant role in regulating the psychology job market since they are the driving forces managing the knowledge offered to students.

In this sense, universities can either hinder or facilitate the access to the comprehensive content of psychological theories and practices. Such theories and practices are considered fundamental in Psychology graduate programs in order to train psychology students to become psychologists (Gallegos et al., 2014). Most recently, internationally renowned historians, such as Kurt Danziger, emphasized that the emergence of psychology as an academic discipline, and as a profession constituted historical discontinuities of the 21st century, which demanded proper comprehension of the field focusing on its historical analyses highlighting the contributions of sociological frameworks (Danziger, 2013).

### *Reflexivity, Constructivism and Historiographic Practices*

Two distinct practices have been contributing to improve the investigations conducted in the field of history of psychology. The first practice focuses on reflexivity, as a human cognitive phenomenon, able to influence the production of knowledge (Ashmore, 1989). The second relates to the use of constructivism to analyze the process generating scientific knowledge. Scholars in the field of social sciences are aware of the fact that psychologists-historians claim the ownership of the practice of reflexivity (Pickren & Rutherford, 2010). Even though, they had slightly examined their own reflexive process when researching their objects of study (Smith, 2007). Most recently, Brock (2016) has argued that historian psychologists need to exercise reflexivity as they investigate the past. This practice increases their attention towards the contexts embedded in the development of psychological knowledge. Most

importantly, it prevents historian psychologists to fall into anachronisms.

The practice of (self-) reflexivity and the use of constructivist approaches encouraged the development of studies rethinking the preconceived notions supporting the research practices in the field. They also increased the perception that the analysis of historical data is partially contingent on historians' interests and methodologies (Rutherford, 2014). As the practice of (self-) reflexivity and the use of constructivist approaches became popular, the field of history of psychology began to examine their effectiveness to study historical data. Especially the investigations concerned with the process of ascribing meanings to the procedures embedded in the research practices. The practice of (self-) reflexivity and the use of constructivist approaches also supported delimiting the boundaries of the given psychological categories examining past human behaviors (Blanco Trejo, 2002). Altogether, these procedures had the ultimate goal to shed light into the methods used by historians, and historical agents collaborating to improve the understanding of human beings. Furthermore, these two practices contributed to solidify the application of the STS perspectives and frameworks to criticize the work of historians of psychology rather than build a 'new history' of psychology, considering that recent studies have questioned the very own existence of a 'new history of psychology' (Brock, 2017a, 2017b; Watrin, 2017).

Nonetheless, the advancements achieved in the field of STS were not congruent with the progress observed in the field to understand the historical practices. In the field of history of psychology, it is evident that the practices adopted to expand the knowledge of conceptual, theoretical, and methodological approaches still deserve attention. For example, the studies applying heuristic techniques to enhance the knowledge related to historical practices are scarce. In order to address this issue, historian psychologists should exercise the practice of (self-) reflexivity to maintain, reinforce or challenge the boundaries of the several

historiographic domains of study (Weidman, 2016).

### *Quantitative Studies: Bibliometric Measures, Scientometrics, and Social Network Analysis (SNA)*

Since the middle of the 20th century, the quantitative studies investigating the production of knowledge, the impact factor of academic journals, and the various different methods to disseminate scientific knowledge have become increasingly popular in the academic and scientific fields. Specially, when the field of science transitioned from the so called 'small science' to be the 'big science' field (Price, 1973). Big science reflected the period of large-scale scientific projects. The technical instruments, measures and methodologies developed during this time supported the establishment of field of studies concerned with the procedures of describing, analyzing, elaborating, publishing and disseminating the scientific knowledge. The instruments and methods included the bibliometric, socio-bibliometric, and scientometric quantitative measures.

Several scholars from the field of STS have been using these instruments and methods, to expand the description of various disciplines, in order to address their achievements, in a more precise manner. The measures also increased the scientific collaboration, and supported the development of different work groups, including the notorious Invisible Colleges. The field of history of psychology decided to adopt the same measures used by the scholars in the field of STS (Carpintero & Peiró, 1981). These measures increased the ability of historian psychologists to analyze the historical contexts of several psychological journals (Carvajal & Matamoros, 2012; Gallegos, 2017; Mariñelarena-Dondena & Klappenbach, 2016; Polanco, Gallegos, Salas, & López López, 2017; Ravelo, Mejía, & González, 2016; Romero Croce, 2014; Salas et al., 2017). They also facilitated the development of studies addressing the quality of the psychological journals, the journals' visible, and their competence to reach the international academic public

measuring the global impact of their periodical publishing production (Trzesniak, Plata-Caviedes, & Córdoba-Salgado, 2012). The data produced by historian psychologists permitted the identification of the most cited scholars in the field of psychology, and the ones with the higher number of publications, in different areas of the psychology field (Haggbloom et al., 2002).

The historiographic quantitative studies (e.g. bibliometry, historiometry, and prosopography methods) contributed to advance the approaches developing and reconstructing empirical historical indicators. According to Krampen (2016), quantitative analyses complemented the study of historiographic data in order to enhance the study of the history of intellectual, conceptual, social, institutional, biographical and individual biographies data. The quantitative methods proved their suitability to examine the historical data of academic and social practices presented in the STS studies.

### *Professionalization, Education and Training in Psychology*

During the 20th century, the professionalization, education, and training in the psychology field received considerable attention from scholars. One may say that the dynamic features of psychology, as a discipline, and as a profession, were the most influential factors enhancing the visibility of the field. Indeed, the establishment of academic disciplines providing psychological professional training offered the opportunity to professionalize psychology. The professionalization of psychology occurred first in the United States, during the beginning of the 20th century, and later on, during the 1950s, in European and Latin American countries (Gallegos, 2014b, 2017; Stevens & Wedding, 2004).

The fields of sociology, social sciences, and the evolution of the psychology field itself, supported the progress of psychology, as an academic discipline of knowledge, and as a formal profession (Danziger, 1979). The contributions from the field of history of psychology were also essential in this process.

From a historical point of view, the academic and professional developments of psychology were contingent upon its political and governmental contexts. However, these were not the only contexts impacting the establishment of the field of psychology. Similarly, many other contextual factors (e.g. rules, laws and regulating bodies), along with diverse scientific academic disciplines, and professional fields, have been influencing the discipline, and the profession of psychology. In order to have a better understanding of the professionalization of psychology, historians of psychology have conducted research on the emergence and development of the professional careers in psychology (Bazar, 2015; Vilanova, 1993). For example, the historical analysis of the teaching of psychology along with the obstacles encountered in universities to teach psychology, and to train students to practice psychology (Lloyd & Brewer, 2002).

Directly related with the discussions presented in the previous section, Ibero-American countries, such as Argentina, have often used quantitative approaches (e.g. bibliometrics) to examine the historical research conducted to advance the understanding of psychology as a discipline and a profession. A recent scientific article, surveying empirical studies addressing the teaching of psychology in the past 30 years in Argentina, confirmed that Argentinian researchers have the tradition to use qualitative approach bibliometrics to discuss issues related to the teaching of psychology (Fierro, 2019). In this study, the author elected the qualitative approach bibliometrics to analyze the theories orienting the reading material included in the syllabi of the undergraduate psychology classes in order to identify if the literature was up to date. The research study also had the goal to identify the theories/authors with great impact in the education of undergraduate psychology students in Argentina. Argentinian researchers commonly rely on quantitative indicators to retrieve empirical data of studies concerned with the teaching of psychology.

Several other studies in the field of teaching psychology examined deontological ethics, and the concerns related to the ethical code of

conduct for psychologists. Nonetheless, it is important to mention that the vast majority of the research conducted in the field of history of psychology investigated the organizational structures of academic institutions in the field of psychology, psychology curriculum, and the professional practice of psychologists.

### Final Considerations

This study presented relevant perspectives and meaningful analyses, supporting the conclusion that the social studies on science and technology, addressed in the field of STS, had a significant influence on the development of studies in the field of history of psychology. Many of these research studies examined the unique domains in the fields of STS and psychology adopting heuristic points of view to investigate historical data in the field of psychology.

Certainly, the discussions offered in this study demonstrated that the contributions produced by the field of STS have been supporting the development of historiographic studies concerned with the field of psychology. In this sense, this study identified and examined seven intersecting areas of knowledge to illustrate the strong synergy between the fields of STS and history of psychology. Of course, the collaborations established in the fields are not limited to these seven domains. Several other interdisciplinary studies may also confirm their close and collegial relationship.

Despite the significant progress and achievements in the field of history of psychology, much work remains, especially regarding the practices of (self-) reflexivity and the use of constructivism to analyze historical data. Most certainly, future studies examining the effectiveness of these practices can enhance the work of historian psychologists in evaluating the theoretical and methodological frameworks driving the investigations in the field of history psychology. To that end, future studies should identify the most appropriate theoretical and methodological approaches to investigate research problems. Rather than adopting the theories that have been traditionally contributing

to the field of STS in order to improve the historiographic practices examining the field of Psychology.

### Authors' Contributions

Substantial contribution in the concept and design of the study: Catriel Fierro; Miguel Gallegos.

Contribution to data collection: Catriel Fierro; Miguel Gallegos.

Contribution to data analysis and interpretation: Catriel Fierro; Miguel Gallegos.

Contribution to manuscript preparation: Catriel Fierro; Miguel Gallegos; Carmen Burgos Videla; Viviane de Castro Pecanha.

Contribution to critical revision, adding intellectual content: Catriel Fierro; Miguel Gallegos; Carmen Burgos Videla; Viviane de Castro Pecanha.

### Conflicts of interest

The authors declare that they have no conflict of interest related to the publication of this manuscript.

## References

- Araujo, S. F. (2017). Toward a philosophical history of psychology: An alternative path for the future. *Theory & Psychology, 27*(1), 87-107. doi: 10.1177/0959354316656062
- Ash, M. (2008). Psychological thought and practice. Historical and interdisciplinary perspectives. In M. Ash & T. Sturm (Eds.), *Psychology's territories: Historical and contemporary perspectives from different disciplines* (pp. 1-27). Mahwah, NJ: Lawrence Erlbaum Associates.
- Ashmore, M. (1989). *The reflexive thesis. Wrighting sociology of scientific knowledge*. London: The University of Chicago Press.
- Bazar, J. (2015). Origins of teaching psychology in America. In D. Dunn (Ed.), *The Oxford Handbook of Undergraduate Psychology Education* (pp. 25-32). London: Oxford University Press.
- Ben-David, J., & Collins, R. (1966). Social factors in the origins of a new science: The case of psychology. *American Sociological Review, 31*(4), 451-465.
- Benito, E., & García, L. (2010). Psicología en sociedad. *Psiencia, 2*(2), 60-69.
- Blanco Trejo, F. (2002). *El cultivo de la mente*. Madrid: Antonio Machado.
- Borck, C. (2005). Writing brains: Tracing the psyche with the graphical method. *History of Psychology, 8*(1), 79-94. <http://dx.doi.org/10.1037/1093-4510.8.1.79>
- Brock, A. (2016). The future of the history of psychology revisited. *History of Psychology, 19*(3), 175-191. <http://dx.doi.org/10.1037/hop0000037>
- Brock, A. C. (2017a). The new history of psychology: Some (different) answers to Lovett's five questions. *History of Psychology, 20*(2), 195-217. <http://dx.doi.org/10.1037/hop0000036>
- Brock, A. C. (2017b). The new history of psychology: Some (different) answers to Watrin's four questions. *History of Psychology, 20*(2), 238-250. <http://dx.doi.org/10.1037/hop0000060>
- Burke, P. (Ed.). (1991). *New Perspectives on Historical Writing*. Cambridge, MA: Basil Blackwell.
- Capshew, J. (2014). History of psychology since 1945: A North American review. In R. Backhouse & P. Fontaine (Eds.), *A historiography of the modern social sciences* (pp. 144-182). New York: Cambridge University Press.
- Carpintero, H., & Peiró, J. (Eds.). (1981). *Psicología contemporánea*. Valencia, Spain: Alfaplus.
- Carvajal, E., & Matamoros, L. (2012). Análisis bibliométrico de la *Revista Costarricense de Psicología*, periodo 2001-2011. A propósito de los 30 años de su creación. *Revista Costarricense de Psicología, 31*(1-2), 1-20.
- Christie, J. (2005). El desarrollo de la historiografía de la ciencia. In S. Martínez & G. Guillaumin (Eds.), *Historia, filosofía y enseñanza de la ciencia* (pp. 43-66). México, DF: Universidad Autónoma de México.
- Cirino, S., & Lopes, R. (2015). The role of a laboratory of experimental psychology in the Brazilian education renewal of the 1930s. *History of Psychology, 18*(1), 69-77. <http://dx.doi.org/10.1037/a0038446>
- Collins, B., & Stam, H. (2015). Freeman's transorbital lobotomy as an anomaly: A material culture examination of surgical instruments and

- operative spaces. *History of Psychology*, 18(2), 119-131. <http://dx.doi.org/10.1037/a0039061>
- Coon, D. (2002). Testing the limits of sense and science: American experimental psychologists combat spiritualism, 1880-1920. In W. Pickren & D. Dewsbury (Eds.), *Evolving perspectives on the history of psychology* (pp. 121-139). Washington DC: American Psychological Association.
- Danziger, K. (1979). The social origins of modern psychology. In A. Buss (Ed.), *Psychology in Social Context* (pp. 27-45). New York: Irvington.
- Danziger, K. (2013). Psychology and its history. *Theory & Psychology*, 23(6), 829-239. <https://doi.org/10.1177/0959354313502746>
- Dosse, F. (2006). *La historia en migajas*. México, DF: Universidad Iberoamericana.
- Escobar, R. (2016). El primer Laboratorio de Psicología Experimental en México. *Revista Mexicana de Análisis de la Conducta*, 42(2), 116-144. <http://dx.doi.org/10.5514/rmac.v42.i2.57027>
- Ferreira, A. A. (2015). Tecnologías del yo e introspección experimental: un posible campo de estudios historiográficos. *Revista de Historia de la Psicología*, 36(1), 91-112.
- Fierro, C. (2015a). Las controversias históricas en psicología: ¿Anomalías irracionales egotistas o instancias estructurales de debate racional? *Summa Psicológica*, 12(1), 39-50. <http://dx.doi.org/10.18774/summa-vol12.num1-242>
- Fierro, C. (2015b). La historiografía de la psicología: historia clásica, historia crítica y la recepción de los estudios sociales de la ciencia. *Revista de Historia de la Psicología*, 36(2), 67-94.
- Fierro, C. (2016a). Cuatro décadas de sociología del conocimiento psicológico: historia, sociología y epistemología de la psicología en la obra de Allan R. Buss. *Tesis Psicológica*, 11(1), 52-93.
- Fierro, C. (2016b). Institucionalización y profesionalización de la historia de la psicología como especialidad en Estados Unidos: influencias de la historia, la sociología y la filosofía de la ciencia. *Revista Argentina de Ciencias del Comportamiento*, 8(2), 67-92. <http://dx.doi.org/10.30882/1852.4206.v8.n2.10060>
- Fierro, C. (2018). Pluralism and heterogeneity as criticism: Undergraduate history and systems of psychology courses in Argentinian psychology education (1983–2017). *History of Psychology*, 21(2), 126-150. <http://dx.doi.org/10.1037/hop0000085>
- Fierro, C. (2019). Relaciones Inestables: historia epistemológica y estudios sobre formación en psicología en Argentina. *Quaderns de Psicologia*, 21(1). <https://doi.org/10.5565/rev/qp psicologia.1431>
- Fierro, C., & Brisuela Blume, L. (2016). Políticas psicoanalíticas (II): las controversias en la historia del movimiento psicoanalítico desde el programa empírico del relativismo de los estudios sociales de la ciencia. *Psiencia*, 8(3). doi: 10.5872/psiencia/8.3.171
- Fox Lee, S. (2015). *Call for papers: 4S open panel on STS, technology & psychology*. Retrieved from <http://ahp.apps01.yorku.ca/?p=4991>
- Gallegos, M. (2013). Kuhn y la historiografía de la ciencia en el campo CTS. *Revista Iberoamericana de Ciencia, Tecnología y Sociedad*, 8(22), 153-177.
- Gallegos, M. (2014a). Thomas Kuhn y su vinculación con la psicología: un homenaje de despedida. *Revista de Historia de la Psicología*, 35(2), 65-92.
- Gallegos, M. (2014b). La génesis de la profesión psicológica. *Eureka*, 11(1), 134-148.
- Gallegos, M. (2017). La *Revista Cubana de Psicología* de 1955: una historia previa a la revolución. *Revista de Psicología*, 26(1), 1-7. doi: 10.5354/0719-0581.2017.46511
- Gallegos, M., Berra, M., Benito, E., & López López, W. (2014). Las nuevas dinámicas del conocimiento científico y su impacto en la psicología Latinoamericana. *Psicoperspectivas*, 13(3), 106-117.
- Golinski, J. (1990). The theory of practice and the practice of theory: Sociological approaches in the history of science. *Isis*, 81, 492-505.
- Haggbloom, S., Warnick, R., Warnick, E., Jones, V., Yarbrough, G., Russell, T., ... Monte, E. (2002). The 100 most eminent psychologists of the XXth Century. *Review of General Psychology*, 6(2), 139-152.
- Henry, J. (2008). Historical and other studies of science, technology and medicine in the University of Edinburgh. Notes and Records. *The*

- Royal Society Journal of the History of Science*, 62, 223-235. doi: 10.1098/rsnr.2008.0005
- Jaraba Barrios, B. (2015). Saberes y prácticas psicológicas desde los estudios sociales de la ciencia y la tecnología. *Summa Psicológica*, 12(1), 5-7. <http://dx.doi.org/10.18774/summa-vol12.num1-248>
- Jaraba Barrios, B., & Mora-Gámez, F. (2010). Reconstruyendo el objeto de la crítica: sobre las posibles confluencias entre psicología crítica y estudios sociales de la ciencia y la tecnología. *Revista Colombiana de Psicología*, 19(2), 225-239.
- Knorr-Cetina, K. (1981). *The manufacture of knowledge: An essay on the constructivist and contextual nature of science*. Oxford, NY: Pergamon Press
- Krampen, G. (2016). Scientometric trend analyses of publications on the history of psychology: Is psychology becoming an unhistorical science? *Scientometrics*, 106, 1-22. doi: 10.1007/s11192-016-1834-4
- Lamo de Espinosa, E., González, J., & Torres, C. (1994). *La sociología del conocimiento y de la ciencia*. Madrid: Alianza.
- Latour, B., & Woolgar, S. (1979). *Laboratory Life: The Construction of Scientific Facts*. Beverly Hills, CA: Sage.
- Leary, D. (1987). Telling likely stories: The rhetoric of the new psychology, 1880-1920. *The Journal of the History of the Behavioral Sciences*, 23(4), 315-331. doi: 10.1002/1520-6696(198710)23:4<315::AID-JHBS2300230402>3.0.CO;2-V
- Lenoir, T. (1988). Practice, reason, context: The dialogue between theory and experiment. *Science in Context*, 2(1), 3-22. <https://doi.org/10.1017/S026988970000047>
- Lloyd, M., & Brewer, C. (2002). National Conferences on Undergraduate Psychology. In A. Puente, J. Matthews, & C. Brewer (Eds.), *Teaching Psychology in America: A History* (pp. 263-284). Washington, DC: American Psychological Association.
- Loredo Narciandi, J. C., Sánchez, J. C., & Fernández, T. (2007). 'Versiones que capturo del olvido'. Reflexiones sobre el sentido de la historia de la psicología. *Revista de Historia de la Psicología*, 28(1), 45-66.
- Lovett, B. (2006). The new history of psychology: A review and critique. *History of Psychology*, 9(1), 17-37. doi: 10.1037/1093-4510.9.1.17
- Mariñelarena-Dondena, L., & Klappenbach, H. (2016). Enseñanza de la psicología positiva en la Argentina: un estudio socio-bibliométrico. *Psiciencia*, 8, 1-21. doi: 10.5872/psiciencia/8.2.141.
- Martin, B., Nightingale, P., & Yegros-Yegros, A. (2012). Science and technology studies: Exploring the knowledge base. *Research Policy*, 41, 1182-1204.
- O'Donnell, J. M. (1979). The crisis of experimentalism in the 1920s: E. G. Boring and his uses of history. *American Psychologist*, 34(4), 289-295. <http://dx.doi.org/10.1037/0003-066X.34.4.289>
- Pettit, M. (2015). Subject matter: Human behavior, psychological expertise, and therapeutic lives. *Social Studies of Science*, 45(1), 146-158.
- Pickren, W., & Rutherford, A. (2010). *A History of Modern Psychology in Context*. New York: Wiley.
- Polanco, F., & Fierro, C. (2015). Recepción de la sociología del conocimiento y de la ciencia en la historia de la psicología. *Revista de Psicología*, 5(1), 13-35.
- Polanco, R., Gallegos, M., Salas, G., & López López, W. (2017). Las revistas de psicología en Chile: historia y situación actual. *Terapia Psicológica*, 35(1), 81-93.
- Price, J. D. S. (1973). *Hacia una ciencia de la ciencia*. Barcelona, Spain: Ariel.
- Ravelo, E. L., Mejía, S., & González, M. E. (2016). La producción científica de Acta Colombiana de Psicología: análisis descriptivo del período 2010-2014. *Acta Colombiana de Psicología*, 19(2), 298-314. doi: 10.14718/ACP.2016.19.2.12
- Romero Croce, J. (2014). Estudio bibliométrico de la revista *Liberabit* en el periodo comprendido entre 1995-2013. *Liberabit*, 20(2), 368-372.
- Rosa, A. (2008). El inútil combate entre la Psicología y su Historia. *Revista de Historia de la Psicología*, 29(1), 31-66.
- Rose, N. (2011). *Inventando nossos selfs*. Petrópolis, RJ: Vozes.
- Rutherford, A. (2014). Historiography. In T. Teo (Ed.), *Encyclopedia of critical psychology* (pp. 866-872). New York: Springer.



- Salas, G., Ponce, F., Méndez-Bustos, P., Vega-Arce, M., Pérez, M., López-López, W., & Cárcamo-Vásquez, H. (2017). 25 Años de Psykhe: un Análisis Bibliométrico. *Psykhe*, 26(1). <http://dx.doi.org/10.7764/psykhe.26.1.1205>
- Samelson, F. (1979). Putting psychology on the map: Ideology and intelligence testing. In A. Buss (Ed.), *Psychology in social context* (pp. 103-168). New York: Irvington.
- Smith, R. (2007). Why history matters. *Revista de Historia de la Psicología*, 28(1), 125-146.
- Sokal, M. (2006). The origins of the new psychology in the United States. *Physis Rivista Internazionale di Storia della Scienza*, 43(1-2), 273-300.
- Sokal, M., Davis, A., & Merzbach, U. (1976). Laboratory instruments in the history of psychology. *The Journal of the History of the Behavioral Sciences*, 12(1), 59-64. doi: 10.1002/1520-6696(197601)12:1<59::AID-JHBS2300120107>3.0.CO;2-L
- Spiegel-Rösing, I. (1977). Science Studies: Bibliometric and Content Analysis. *Social Studies of Science*, 7(1), 97-113.
- Stam, H. (2015). The historical boundedness of psychological knowledge and the ethics of shared understandings. *Journal of Theoretical and Philosophical Psychology*, 35(2), 117-127. <http://dx.doi.org/10.1037/teo0000018>
- Stevens, M., & Wedding, D. (2004). *Handbook of international psychology*. New York: Brunner-Routledge.
- Talak, A. (1997). Comentarios sobre la historia crítica de la psicología y la sociología del conocimiento. *Anuario de Investigaciones de la Universidad de Buenos Aires*, 5, 572-581.
- Talak, A. (2003). La historicidad de los objetos de conocimiento en psicología. *Anuario de Investigaciones*, 11, 505-514.
- Talak, A. (2010, August 9). *Psicología, sociedad y nación. Proyectos y usos de la primera psicología en la Argentina*. Paper presented at the Conference on Universidad Nacional de Colombia, Bogota.
- Trzesniak, P., Plata-Caviedes, T., & Córdoba-Salgado, O. (2012). Qualidade de conteúdo, o grande desafio para os editores científicos. *Revista Colombiana de Psicologia*, 21, 57-75.
- Vera Ferrándiz, J. A. (2008). Puente de plata para un provechoso encuentro entre la nueva historia y la psicología contemporánea. Pretextos para un diálogo necesario. *Revista de Historia de la Psicología*, 29(1), 7-29.
- Vilanova, A. (1993). La formación de psicólogos en Iberoamérica. *Acta Psiquiátrica y Psicológica de América Latina*, 39(3), 193-205.
- Watrín, J. P. (2017). The “new history of psychology” and the uses and abuses of dichotomies. *Theory & Psychology*, 27(1), 69-86. <https://doi.org/10.1177/0959354316685450>
- Weidman, N. (2016). Overcoming our mutual isolation: How historians and psychologists can work together. *History of Psychology*, 19(3), 248-253. <http://dx.doi.org/10.1037/hop0000042>
- Weisz, D., & Kruytbosch, C. (1982). *Studies of scientific disciplines. An annotated bibliography*. Washington, DC: National Science Foundation.
- Young, J. (2015). Test or toy? Materiality and the measurement of infant intelligence. *History of Psychology*, 18(2), 103-118. <http://dx.doi.org/10.1037/a0038862>

Received: 04/08/2018  
1<sup>st</sup> revision: 18/04/2019  
Accepted: 23/04/2019

