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Operating with Bourdieu's concepts: research productivity and academic hierarchies in education^{1*}

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Abstract

This article is an exploratory study on the empirical field of education. The construction of the research object aimed to *put theoretical objects into play* and operate with the concepts of Pierre Bourdieu. The research object is the universities in the composition of the academic-scientific hierarchies, which is also embodied in the volume and structure of capital of their researchers with Research Productivity 1A (PQ-1A) and Senior Productivity (PQ-Sr) fellowships of Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq – National Council for Scientific and Technological Development). Its development drew on readings of reference texts and collective debates on the work of Bourdieu entitled *Os usos sociais da ciência: por uma sociologia clínica do campo científico* (The social usages of science: a clinical sociology of the scientific field), the main reference used in this article. The empirical data were produced from information on *Lattes Platform* (CNPq) and gave rise to hypotheses about the capitalization of forces internal and external to the higher education field to characterize capital strategies and structures which guarantee (or guaranteed) prominent positions in this field. The highest levels are considered the hierarchical tops which the levels below aim to achieve, and this analysis intended to map the configuration of institutional hierarchies in the field of education. Far from seeking a conclusive analysis, this product is the first step in the construction of the research, because of the volume of information that can still be explored and of the awareness that the complexity of social phenomena makes any claim to truth in the scientific field unfeasible.

Keywords

Pierre Bourdieu – Education – Academic hierarchies – Research productivity – *Scientific field*.

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Introduction

The “pure” universe of the “purest” science is a social field like any other. [...] as a system of objective relations between positions won (in previous struggles), the scientific field is the locus of a competitive struggle, in which the specific issue at stake is the monopoly of scientific authority, defined inseparably as technical capacity and social power.

Pierre Bourdieu

Our objective is to investigate the production of hierarchies in the academic-scientific field of education. This is an exploratory study developed in the discipline *Leituras de Pierre Bourdieu: atividades no campo da educação* (*Readings by Pierre Bourdieu: activities in the field of education*), in the Graduate Program in Education of Pontifícia Universidade Católica, Rio de Janeiro. The research is linked to a project⁴ funded by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq – National Council for Scientific and Technological Development) and developed by Grupo de Pesquisa em Sociologia da Educação (SOCED – Sociology of Education Research Group).

The research drew on readings of reference texts and discussions of concepts of the sociology that Pierre Bourdieu (1930-2002) proposed, including the collective debate on the work *Os usos sociais da ciência: por uma sociologia clínica do campo científico* (*The social uses of science: a clinical sociology of the scientific field*) (BOURDIEU, 2004b), the main reference used in this article. We present an exploratory data analysis aimed at developing a study homologous to that of *Homo academicus* (BOURDIEU, 2008), considering the internal dynamics of the field of education in Brazil.

Our research object are the universities in the configuration of the academic-scientific hierarchies, which is also embodied in the volume and structure of scientific capital of their researchers with CNPQ fellowships Produtividade em Pesquisa 1A (PQ-1A – Research Productivity 1A) and Produtividade Sênior (PQ-Sr – Senior Productivity), classified according to CNPq criteria. Our starting point is the research of Vera Henriques (1998), who, inspired by Bourdieu’s theoretical-empirical framework, focused on the establishment of Associação Nacional de Pós-Graduação e Pesquisa em Educação (ANPED – National Association of Graduate Studies and Research in Education) and its struggle for autonomy through participation in the definitions of norms and policies of the evaluation by official bodies: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES – Coordination of Improvement of Higher Level Personnel) and CNPq.

The establishment of CNPq in 1951, within the Ministry of Science and Technology, provided an important impetus for the regulation of and the financial support for graduate programs and research activities in universities. However, the acquisition of resources and positions of decision-making on the production standards and criteria (of the production of researchers, institutions and graduate programs) requires strategies that, rather than restricted to scientific capital, are linked to the field of power – implying a set of social, political, symbolic, and legal capitals – and confer scientific authority. We start from the hypothesis advocated by Bourdieu that scientific authority is a mixture of technical competence and recognition by peers mediated by official bodies.

4- *A construção das hierarquias na área da educação: um estudo de bolsistas de produtividade do CNPq* (The construction of hierarchies in education: a study on CNPq productivity fellows), led by Professor Zaia Brandão.

Based on some characteristics of the research agents with PQ-1A and PQ-Sr fellowships registered in the Lattes curriculum (CNPq), the empirical data gave rise to hypotheses about the capitalization of forces internal and external to the university field to characterize the strategies and capital structures that guarantee (or guaranteed) prominent positions in the field of education. Our objective was to draw a configuration of the prevalent universities – also as agents – in these trajectories to develop a configuration of the relative weight of these institutions in the struggle for academic-scientific hegemony. Aware of the reflective or mirror effect present in the analysis of a field we are part of and in which we occupy a specific position, from where we observe such field and experience it (BOURDIEU, 2004b, 2004c), we relinquish any objectivist/realistic intention of this preliminary analysis.⁵

The fact that an experienced researcher presents preliminary paths or the paths of the entire research, but which are commonly discarded when completing a work like the one of *homo academicus*, is a generous contribution. The discipline *Leituras de Pierre Bourdieu* has provided lessons on how to do research. The collective construction of this work illustrates how we still deal with this requirement. May this exercise bring a conversion of the look, provoke some rupture in the orthodoxies that we incorporate. Far from seeking a conclusive analysis, we consider this product the first step in the construction of the research, due to the volume of information that can still be explored in the construction of the work hypotheses. We are aware that the complexity of social phenomena makes any claim to truth in the scientific field unfeasible.

The characteristics and dynamics of the scientific field in the logic of Pierre Bourdieu

Some of the main contributions of Pierre Bourdieu are the links between education and culture in the field of sociology, especially with regard to the production of differences and social hierarchies in social production and reproduction. The author also developed a critical sociology of the conditionings of science, notably of the scientific fields, which are places of confrontation between two forms of power, corresponding to two species of scientific capital: social (or institutionalized) capital, linked to holding prominent positions in scientific institutions; and a specific scientific (or pure) capital, which lies in the recognition by peers (BOURDIEU, 1983, 1989a, 1989b, 2004a, 2004b, 2004c, 2008, 2011, 2013, 2015).

Bourdieu (1989a) tells us that the researcher's work is a rational act and not a mystical quest, and situates the figure of *homo academicus*. The author explains that, in order to grasp the scientific production mode, it is necessary to develop a perception, a view of the operation, which he calls scientific *habitus*: the perception of meaning of the scientific field that allows the agent to do what must be done without having to reason about it. A kind of proper conduct learned and that becomes intrinsic to the agent. The scientific habitus can be embodied/learned as the agent/learner relates – in practice, in

5- It is worth mentioning the extensive debate in the sociology of science from Merton to the constructivists, such as Latour and Woolgar (1988).

direct and lasting contact – to a more experienced agent. The notion of field, in turn, breaks with finalisms by introducing a philosophy of dispositions (BOURDIEU, 2004c).

Bourdieu (2013) considers a sociology of the scientific universe to be necessary for one to understand that the ideology of the *scientific community* as ideal *polis*, whose citizens supposedly have as their sole aim the search for truth, involves interests beyond the simple search for knowledge. The analysis of the operation of the scientific *polis* and of all the mechanisms that prevent pure and perfect competition and at the same time scientific progress could greatly contribute to an increase in scientific productivity.

Based on this, the author warns about the *illusio* – interest that seems *disinterested* –, research for the sake of research: an agent's attitude to producing disinterestedly, knowing that s/he can climb up the ladder in the field. If, on the one hand, pure scientific capital can be acquired insofar as one contributes to science and it is transmitted through long and slow training, on the other hand, the scientific capital of institutions is acquired by means of specific political strategies. Although the two species of scientific capital can coexist, Bourdieu (2004b, 2008) points out that the accumulation of both is very difficult, but that the relative weight of scientific capital in its pure state, that of researching, can characterize the position of the agent in the field structure.

A sociology of the scientific field is necessary to clarify that, far from being essences totally conceived by human thought, scientific truths are historical products of a certain work subjected to the constraints and controls of the scientific field – a very particular social world –, with its rules and regularities (BOURDIEU, 2013). The actions of the agents in the scientific field materialize:

[...] in the social determinants of the selection of selection committees and of the criteria of the evaluation committees, in the social conditions of recruitment and in the behavior of science managers, in the social relations of domination that take place under the aegis of relations of scientific authority, often braking or stopping rather than releasing the inventiveness and creativity, especially of the younger, in national networks and currently places of cooptation, which protect some of from the rigors of scientific evaluation and prohibit others from fully expressing their creative possibilities. (BOURDIEU, 2013, p. 27).

Therefore, we see that the scientific field, like any other field in social space, is a place of competitive struggles for a position, aiming at preserving or transforming the present relations of force. The field allows changes, but the possibilities of transformation vary according to the position occupied by the agents. Thus, the interest in science occurs as the investment in a game, created and reinforced simultaneously by the game itself (BOURDIEU, 2004a, 2011).

The struggles for recognition⁶ are fundamental parts of the social life in which the accumulation of some form of capital is at stake and the logic of reproduction is that those who have power tend to preserve it (BOURDIEU, 2004a). Wacquant (2013) calls

6 - Bourdieu (2008) gives an example of such recognition struggles by explaining that, during the 1968 university crisis in France, professors from more traditional disciplines began to question educational institutions and the market that previously guaranteed their monopoly, in the face of the threat of other disciplines.

this position of Bourdieu in relation to the scientific field a *contradictory relation*, since, despite having received distinctions (*Collège de France*, in 1981, and gold medal of CNRS⁷, in 1993), the French sociologist questioned, during his inaugural speech, the legitimacy of the consecrating authority of the academy.⁸

The structure of the scientific field is defined every moment by the state of relations of force between those that Bourdieu calls *struggling protagonists* – individuals or institutions – and by the structure of the distribution of specific capital, the latter being the result of previous struggles and objectified in the institutions and in the dispositions that command the strategies and the objective chances of different agents. Therefore, the structure of distribution of scientific capital is at the basis of the transformations of the field itself and is manifested, in turn, through the strategies of conservation or subversion of the structure that the structure itself produces (BOURDIEU, 1983, 2008).

The struggle for scientific authority owes its essential characteristics to the fact that the greater the field's autonomy, the more products tend to have only their own competitors as *clients*, since the more autonomous the field is, the more it escapes external social laws. However, even if a field is autonomous, it will never be totally independent. The autonomy of the field is directly related to its specificity; therefore, the more specific the scientific field, the less it is subject to imperfect competition, that is, to purely social non-scientific forces. In addition, the degree of autonomy of a field is also measured by its refractive capacity, its ability to retranslate – in specific forms – external pressures and demands (BOURDIEU, 2004b).

As in other fields of the social space, and in relation to other types of capital, the volume of scientific capital acquired by an agent, whether in its social or pure/specific form, grants a more or less privileged/strategic position in the space of the game of the competitive struggle in science. Therefore, the best-positioned agent is granted the recognition and the possibility of exercising scientific authority in the field, and this specific type of capital is accompanied by others, granting a certain structure and volume of capital, which, in turn, generates symbolic power and capital. According to Nogueira and Nogueira (2016), symbolic products are organized as hierarchies that reinforce the structures of social domination insofar as they restrict the social mobility of agents. Therefore, it is not enough for an agent to have specific technical knowledge to gain access to dominant social positions.

Bourdieu's theoretical-empirical tools and the scientific field of education

According to Bourdieu, a field is structured by the objective relations between the positions occupied by the agents, and such positions determine the form of their interactions. What configures a field are the positions, the competitive struggles and the interests; and in the field of science these struggles take place around scientific authority. In the early 1970s, Bourdieu reformulated the notion of intellectual field as part of a larger

7- Centre National de la Recherche Scientifique, the highest prize in France.

8- In this regard, see Wacquant (2013).

structure that constitutes the field of power. The field is structured from the relations of power, which translate into the opposition of forces distributed between dominant positions and dominated positions (CATANI, 2011).

As we argue about the existence of a field of power, our reader can infer conceptual homologies with the work *La Noblesse d'État* (BOURDIEU, 1989b), in which Bourdieu constructs rational knowledge on the domination through the relation between the French high *intelligentsia* – institutions of higher education of the elite – and the bourgeoisie and large corporations, delineating characteristics of the field of power in the French context. In this work, Bourdieu analyzed the structure of the French elite education organized in *grandes écoles* and universities. The former are very selective undergraduate schools, with special classes that allow access to top jobs; the latter are open universities aimed at all upper secondary school graduates, but not necessarily linked to the world of work.

Bourdieu explains the division in the *grandes écoles* between the best and the worst, between those which prepare for intellectual values – such as *École Normal Supérieure* – and those which prepare for economic-political positions – such as *École des Hautes Études Commerciales* and *École Polytechnique*. There are also institutions that are halfway between the two poles of the French elite schools, mixing cultural and economic competencies, such as *École National d'Administration* (WACQUANT, 2007). Based on this classification, Bourdieu explains the field of power as a network of structural and functional links that intertwine the spaces of the elite schools and of the ruling classes. He speaks of the emotional and experiential costs of being an heir, due to the heavy demands of the elite schools, to which not everyone is able to or wants to subject. In the same work, Bourdieu highlights the inability of the State to make its power secret. State violence is exercised through the educational system, inculcating the categories through which we construct the social world (CATANI, 2011).

In this sense, we agree with Catani (2011) that *La Noblesse d'État* offers a research program which can be applied to any national field of power in which universities, together with an entire institutional apparatus that gives them legitimacy and social strength (ministries, funding agencies, professional and business corporations, etc.), play a crucial role in the training of unique subjects who will act in a unique society project. In order to develop such research program, *homological* work is necessary to make the transposition and raise hypotheses that allow comparative research with another country.

Understanding institutions as agents, as Henriques (1998) does, we admit that the struggle for filling and maintaining positions and the consequent social position assumed by an institution can mean a strategy when, through this struggle, institutions gradually affirm themselves with a view to transforming intellectual and/or social capital into symbolic capital. The structure of the scientific field is also defined by the volume and structure of the scientific capital of the agents of a given field, a symbolic capital that is based on the degree of recognition attributed to each agent by his or her peers/competitors. Different researchers and their respective studies are able to define what is important to be researched and on which issues they will concentrate their efforts. It is important to note that no agent can *manipulate* a field. According to the volume and the structure of capitals, the time, the path, and the position occupied in the field, the agents

can orient themselves towards preserving the distribution of the capital or subverting it (BOURDIEU, 2004b, 2008).

Therefore, in relation to institutions, their structure and their volume of scientific and political capital are also conditioned by the group of their researchers, which is added to their symbolic goods. The recognition by peers – individuals and institutions – of the prestige conferred by the possession of research fellowships feeds and reproduces symbolic capitals and hierarchies, which, in turn, confer scientific authority on these researchers and their institutions in the game of scientific hierarchies. The set of scientific, political, social and symbolic capitals of researchers is incorporated into the structure and volume of capital of their institutions. On the other hand, the prestige gained by an institution due to all its capitals also generates symbolic products for its researchers. And, in the field, the set of capitals of both agents is mobilized in strategies to keep prestigious positions in the game (BOURDIEU, 2008).

Considering the constitution of education as a specialized field, Brandão (2010a) points out three fundamental moments: the search for scientific status, scientific identity and theoretical hegemony. In all of them, the expansion of graduate education⁹ contributed significantly to such constitution. The author comments that the expansion of graduate courses in Brazil, in the second half of the 20th century, was supported by government research agencies. However, as more groups began to compete for resources, a struggle arose, which also impacted the field of education.

In this setting, the hegemonic speech within the specialized community became increasingly important, since it meant access to the evaluation committees of the programs and projects that struggled for the support of the funding bodies. It also meant the constitution of a consumer audience of the same speech (social scientific capital) by means of privileged access to specialized forums, that is, political capital, which in turn secured a permanent place in the main technical publications, as well as publishers' interest. Such conditions favored the increase in the symbolic capital and the visibility of the groups that had the theoretical hegemony of the field (BRANDÃO, 2010a).

According to Henriques (1998), the establishment of ANPEd in the 1970s is also an important moment of political capitalization. ANPEd sought autonomy from the research interests of the field itself in relation to the Brazilian State, even though it depended on its resources through funding agencies (CAPES and CNPq). Our premise is the condition of ANPEd as a center representative of graduate programs and research in the Brazilian educational field. Therefore, the prestige gained by the universities that founded ANPEd, which participated in the evaluation committees and were the ones that first organized their graduate programs kept such universities in strategic positions in the field.

Research productivity fellowships

In this section of the text, we consider the normalization provided in Normative Resolution RN-028/2015, a CNPq official document for the regulation of individual fellowships in Brazil (BRASIL, 2015). CNPq's main attributions are to foster scientific

9 - Translator's note: In Portuguese, *pós-graduação*.

and technological research and to encourage the training of Brazilian researchers. One of CNPq's various incentives is Produtividade em Pesquisa (PQ – Research Productivity) fellowship, which is awarded to researchers who stand out among their peers, and seeks to value their scientific production according to specific normative criteria, comparative merit analysis and classification of proposals by the body's specific Advisory Committees. CNPq monitors the researcher's performance by analyzing reports or by other forms of monitoring defined according to the specificities of the modality.¹⁰

Available since 1976, the PQ fellowship has been more attractive in the academic world since the mid-1990s, when public spending on Science and Technology activities in the country increased. To have access to the fellowship, some prerequisites have to be met, namely: having a doctor's degree or equivalent; being Brazilian or a legal foreigner; dedicating oneself to activities related to the fellowship; if retired, developing academic-scientific activities linked to research and teaching institutions. The fellowship is awarded individually, depending on the merits of the proposal, to the researcher who satisfies the prerequisites established by CNPq and the qualification criteria defined by the Advisory Committees of each area.

Advisory committees are responsible for the classification and progression of the PQ fellow, by category and level, as well as the recommendations of level lowering and/or dismissal from the system.¹¹ These criteria are renewed every three years, always considering some specific aspects, such as: scientific production; training of human resources at graduate level; contribution to science, technology and innovation; coordination or leading participation in research projects; participation in editorial and scientific management activities; and administration of institutions and centers of scientific and technological excellence.

The first prerequisite stated above – holding a doctor's degree or equivalent – invites reflection. In most of Brazil, a master's degree is sufficient to work as a professor, to be part of a research line and to produce in academy. Nevertheless, the doctoral requirement is not an obstacle in the great centers of the Southeast and South regions, where there are many graduate programs at that level, and where such requirement is passed on to the public notices for professor positions. The consequence of that in the distribution of fellowships among the Brazilian regions is the hegemony of the Southeast and South in the scientific field.

The PQ fellowship has two categories: 2 and 1. They require a minimum length of time: three and eight years after obtaining a doctoral degree respectively. Category 2 has no levels and is based on productivity and supervision over the past five years. In turn, category 1 has levels A, B, C, and D and is based on the productivity of the past ten years and on the capacity of continuously train human resources. The distinction between levels is made based on the five items above, considering the quality and the whole work of the researcher:

10- For further information on these criteria, see Annex III of Normative Resolution 028/2015, available at: <http://cnpq.br/view/-/journal_content/56_INSTANCE_OoED/10157/2958271>. Access on Feb 12, 2017.

11- The specific Advisory Committee judgment criteria for Education are available at: <http://cnpq.br/web/guest/view/-/journal_content/56_INSTANCE_OoED/10157/50453>. Access on: Feb 12, 2017.

These researchers are also expected to increasingly interact with other researchers in Brazil and abroad by means of lectures and ad hoc advisory services to Brazilian and international journals and of research funding bodies, and to be involved in scientific management activities, including the organization of events, participation in state or national advisory committees, scientific societies, scientific journals, advisory services to state or federal government bodies, and lectures given as guests and/or in plenary sessions of congresses. (BRASIL, 2015, p. 1).

PQ-1B and PQ-1C fellows are not evaluated not only by their productivity, contribution to the organization of research groups and graduate programs only. They are expected to significantly participate in research activities, and, in the case of researchers with a PQ-1B fellowship, they are expected to participate in research funding bodies. These criteria demonstrate that, in order to climb the hierarchy ladder, the researcher has not only to be productive, but also to accumulate political capital (participate in the politics that governs the academic field).

Level A is reserved for researchers who “have demonstrated continued excellence in scientific production and human resources training” and who, in addition, lead consolidated research groups. It is considered a position of not only academic but also political-academic leadership, and of ability to explore risky projects, doing relevant research in their area. The number of level 1A fellows is limited to 10% of the total number of PQ fellows. PQ-Sr is a distinction granted to researchers who, being at the top of the hierarchy, prove to have previously been productivity fellows category 1 at levels A and B for at least 15 years, be they consecutive years or not. Aimed at researchers who stand out among their peers as leaders and paradigms in their areas of activity, PQ-Sr fellowships value their scientific and/or technological production. The analysis of the application for a PQ-Sr fellowship is done by Advisory Committees, which also issue an opinion with emphasis on the quality of the scientific and technological project and on the academic and scientific production of the applicant throughout his or her career.

PQ fellows receive a monthly amount that varies according to their category and level and, in category 1, they also receive an additional amount for expenditures on equipment or air tickets and stay, which varies according to their level. In addition, this resource can be used for expenses on national and international congresses in which the researcher's production is disseminated and discussed, as required for keeping the fellowship. Therefore, the higher one gets in this hierarchy, the more benefits one has to keep in that position; the more academic capital, the more economic capital for keeping it.

Bourdieu (2004a, p. 23) comments on the natural distinction of dominant subjects, those who need not strive to be distinct, “having somehow been born in a positively distinct position, their *habitus*, socially constituted nature, adjusts itself immediately to the immanent requirements of the game”. In the Brazilian academic field, there is an analogous situation with regard to the PQ fellowship, since its criteria were created based on those that already had the dominant academic-scientific *habitus*. Therefore, when the criteria of distinction arise, the distinct ones appear with them: “to be what it is necessary to be, all they have to do is to be what they are” (BOURDIEU, 2004a, p. 24).

A preliminary analysis of academic hierarchies in the field of education

The data presented below were produced from surveys made in the Lattes curriculum of the PQ-1A and PQ-Sr researchers in education. We have developed an empirical framework in which we grouped the relevant information using Excel, and for the descriptive statistics we used SPSS. We worked with two units of analysis, which are our agents: researchers and institutions.

We calculated the total number of PQ researchers by category and level in the area of education in 2016 (table 1). Our analysis used data from 42 fellows: 12 PQ-Sr and 30 PQ-1A ones. Taking into account that PQ fellows form an elite group in Brazil, the 11% that we analyze here are an elite within this elite; a group that has accumulation of not only academic capital, but also symbolic capital, which gains privileged position within the field of education. That the highest concentration of fellows appears respectively in categories 2 (214) and 1D (80) suggests a certain selectivity in the changes of categories and levels.

Table 1 – CNPq PQ fellows in the field of education, in 2016

Categories		Number of fellows	%
Senior		12	3
1	A	30	8
	B	25	6
	C	32	8
	D	80	20
2		214	55
Total		393	100

Source: *Lattes Platform* – CNPq, 2016. Developed by the authors.

Table 2, whose unit of analysis is also researchers, shows a cross-tabulation between them and their regions of origin, according to the official division of Instituto Brasileiro de Geografia e Estatística (IBGE – Brazilian Institute of Geography and Statistics), considering the location of their current institutions. We considered current institution the one that researchers pointed out in their curricula and/or the one in which they remained the longest, even if retired.¹² We observed that there is a concentration of PQ-1A and PQ-Sr researchers in the Southeast; among the PQ-Sr researchers, this location is almost the only one. The South region appears in second place and the Northeast region has only

12- For some cases, we collected other data related to what we called institution II, referring to the second most important institutional link of the researchers. However, since this variable is not present in all of them, we decided not to use it.

one researcher. In the North and Central-West regions, there was no researcher of the aforementioned type.

Table 2 – Regional distribution of PQ-1A and PQ-Sr researchers in the field of education

Research Categories	Regional Distribution			
	Northeast	Southeast	South	Total
1A (%)	0	23	7	30
	0.0	76.7	23.3	100
Senior (%)	1	10	1	12
	8.3	83.3	8.3	100
Total (%)	1	33	8	42
	2.4	78.6	19.0	100

Source: *Lattes Platform* – CNPq, 2016. Developed by the authors.

Regarding regional distribution, Henriques (1998) presents a historical datum: among the 21 institutions that had a graduate program in education in 1976, only one institution was located in the Midwest: Universidade de Brasília (UnB), in the Federal District. And among the universities in the North region, none had a master's and/or doctoral program in education until that year. Such historical information indicates that the academic-scientific field of education was slow to form in these regions. Researchers had to move to the Southeast or South regions to accumulate academic capital and reach higher levels in the hierarchy of the field.

In fact, the 1970s, marked by the expansion of higher education, were very important for graduate programs in education. In 1970, Centros Regionais de Pós-Graduação (Regional Graduate Centers) were established and CAPES structure was altered: it became a central superior body, enjoying administrative and financial autonomy, with decision-making power over the national policy on graduate education. Until then, the expansion of graduate education had been *partially spontaneous*, but pressed by conjunctural reasons and by a developmentalist rhetoric. Successive military governments established measures to ensure its systematic development, giving rise to Conselho Nacional de Pós-Graduação (National Graduate Council), in 1974, whose objective was to formulate and implement graduate education policies, and to the Plano Nacional de Pós-Graduação I (I PNPG – First National Graduate Plan) for the 1975-1977 period (SANTOS; AZEVEDO, 2009).

In the same decade, due to the expansion of graduate programs in education and the need, expressed in I PNPG, to train and qualify professionals and avoid regional inequalities, the first evaluation process of graduate programs by Capes came about (in 1976). In the same year, CAPES also instituted Programa Institucional de Capacitação de Docentes (PICD – Institutional Program for the Training of Professors), granting fellowships for university professors to pursue degrees in master's and doctoral programs in the main graduate education centers of the country. The data in table 3 show that

more than half the researchers (61.9%) completed their doctorate in only four Brazilian institutions, which are located in the Southeast and South of the country: PUC-SP, USP, PUC-Rio, and UFRGS.

Table 3 – Institutions where PQ-1A and PQ-Sr researchers completed their doctorate in the field of education

Institutions	Number of researchers	%	cumulative %
PUC-SP	9	21.4	21.4
USP	9	21.4	42.9
PUC-Rio	4	9.5	52.4
UFRGS	4	9.5	61.9
Cornell University (EUA)	3	7.1	69
UNESP	3	7.1	76.2
University of London (United Kingdom)	2	4.8	81
PUC-RS	1	2.4	83.3
<i>Pontificia Università Gregoriana</i> (Italy)	1	2.4	85.7
Stanford University (USA)	1	2.4	88.1
UNICAMP	1	2.4	90.5
<i>Universidad Complutense de Madrid</i> (Spain)	1	2.4	92.9
<i>Universität Frankfurt am Main</i> (Germany)	1	2.4	95.2
<i>Université de Paris V - René Descartes</i> (France)	1	2.4	97.6
University of Glasgow (United Kingdom)	1	2.4	100
Total	42	100	

Source: Lattes Platform – CNPq, 2016. Developed by the authors.

The concentration of doctoral dissertations in a small number of Brazilian institutions, and also in foreign institutions, suggests a relation with the existence of few doctoral courses in education in Brazil until a few decades ago. This is in line with the data presented by Henriques (1998), who, considering the distribution of the number of graduate courses in the different areas of knowledge in the 1970s in Brazil states that the educational area was the one that grew the most between 1975 and 1977. According to data provided by CAPES, in 1977 this area increased by 47%, from 19 master's and no doctoral programs in 1975 to 24 master's and 4 doctoral programs in 1977.¹³ In 1978, the year ANPED was established, the area of education had 29 graduate programs: 25 of them were master's programs and only 4 were doctoral programs (FERRARO, 2005).

Among the PQ-1A and PQ-Sr fellows, 11 received degrees abroad (26.19%). There is a significant relation between this quantity and the fact that the offer of doctoral courses did not expand in Brazil until the 1980s. In addition, the Brazilian government encouraged higher education researchers and professors to obtain a doctorate abroad through Parecer Sucupira (Sucupira Opinion)¹⁴. The institutions with more than one PQ-

13- See Henriques (1998, p. 2).

14- Opinion 977/65, when graduate education was recognized as a new level of education.

Available at: <https://www.capes.gov.br/images/stories/download/legislacao/Parecer_CESU_977_1965.pdf>. Access on: April 3, 2017.

1A and/or PQ-Sr researcher with a doctoral degree completed abroad are: UFRJ (3), UFRGS (2) and UFMG (2).¹⁵

According to Saviani (2000), the first doctoral programs in education in Brazil were established between 1976 and 1978. They are the programs of: PUC-Rio and UFRGS, in 1976; PUC-SP and USP, in 1977. The number of doctoral dissertations produced at these institutions – nine at PUC-SP, nine at USP, four at UFRGS and four at PUC-Rio – shows the relevance of those institutions both in the constitution and the expansion of graduate studies in education, since they were able to train 26 elite researchers in that field. This represents well over half those trained in Brazil and is equivalent to about 80% of the PQ-1A and PQ-Sr fellows. Table 4 presents the decades of training of the researchers analyzed. In it we can also observe a higher concentration of researchers who completed their doctorate in the same period of expansion: 16 out of 42 researchers completed their doctorate in the 1970s and 14 did it in the 1980s.

Table 4 – Decade when PQ-1A e PQ-Sr researchers completed their doctorate in the field of education

Decade of doctorate completion	Number of researchers
1960	3
1970	16
1980	14
1990	9
Total	42

Source: *Lattes Platform*– CNPq, 2016. Developed by the authors.

Table 5 shows the current institutions of the PQ-1A and PQ-Sr fellows. The data point to a concentration of these researchers (59.5%) in five institutions only: USP, UFMG, UFRGS, UFRJ, and UFSCar. Such institutions may have been pioneering, especially for having some researchers with doctoral degrees obtained abroad. We can say that, because they are the most represented among the researchers of the elite of the academic-scientific field of education, such institutions are some of the dominant agents in the hierarchy of this field.

Comparing our data to the empirical data of Henriques (1998), we observed that the institutions that concentrate most of the researchers also participated in the foundation of ANPED¹⁶ and that the majority had members in positions of ANPED's board of directors¹⁷. The prevalence of these institutions over the others corroborates what was said previously: such institutions put themselves from the beginning in privileged positions in this field, from where they had powers to dictate the rules of the game and thus stand out with a distinction that added political capital to the scientific capital of their fellows.

15 - Observations and comparisons of the tables with the researchers' Lattes curricula. Access on: April 2017.

16 - See Henriques (1998, p. 100).

17 - See Henriques (1998, p. 126).

Tabela 5 – Current institutions of PQ-1A e PQ-Sr researchers in the field of education

Current institutions	Number of researchers	%	Cumulative %
USP	7	16.7	16.7
UFMG	6	14.3	31
UFRGS	4	9.5	40.5
UFRJ	4	9.5	50
UFSCar	4	9.5	59.5
PUC-Rio	3	7.1	66.6
UNESP	3	7.1	73.7
UERJ	2	4.8	78.5
UNISINOS	2	4.8	83.3
PUC-Campinas	1	2.4	85.7
PUC-RS	1	2.4	88.1
UECE	1	2.4	90.5
UFF	1	2.4	92.9
UFPEl	1	2.4	95.3
UFPR	1	2.4	97.7
UNIFESP	1	2.4	100
Total	42	100	

Source: *Lattes Platform* – CNPq, 2016. Developed by the authors.

The data in tables 3 and 5 indicates that there is a small but recurrent group of institutions positioned at the academic-scientific top of the field of education: USP, UFRGS and PUC-Rio. Such distinction exists because they are the original or current institutions of the majority of the fellows analyzed, and therefore, the most represented. Currently some institutions – UFMG, UFRJ and UFSCar – have a significant number of researchers, but they are not recurrent among the original ones. This is probably linked to the period of establishment of their doctoral programs in education. However, the Brazilian institution that stands out the most among the original ones – PUC-SP – does not appear among the current institutions.

Reading these data leads us to think about the strategies that are used to maintain the relative position of who is or has always been at the top of the hierarchies and about the strategies that one can use to get there. In the intellectual field, regardless of the PQ fellowships, there are always hierarchies of positions regarding legitimacy, of which agents are not aware, because their principle is not globally located within the field itself (BOURDIEU, 2011, 2015). The position occupied by an agent – researcher or institution – and the way of occupying it depends on an entire path in which the initial position (especially with regard to the institution of origin), which is also defined by social factors such as the nature of capital acquired, has value.

Peer reviews confirm the idea of the French sociologist, who recognizes relations as a form of production of symbolic goods. These researchers play the game and help control the rules of the game; therefore, they are more likely to benefit from them. The degree of legitimacy and the power of distinction are established through exchanges between

members, always through a particular field of social relations. We must understand that exchanges are symbolic and operated by an internal valuation, by laws and rules of the agents inscribed in the field. Therefore, the success achieved by a production directed at the external public does not make credit increase within the scientific community. The scientific field is governed by other laws; and the very logic of that field's operation protects it (BOURDIEU, 2011).

Our research focused not on the researchers themselves but on the positions of the institutions to which they are linked in the dynamics of power, capital and scientific authority. This implies differentiating the intellectual prestige of some institutions from their power over entities in education (partner institutions with their researchers and/or consultants, such as non-governmental organizations, research funding entities, associations of researchers, etc.), which may at certain moments participate in the discussion and/or proposal of public policies and educational decisions in the national scene.

Final thoughts

This article presents an exploratory analysis of data that is being worked on with the objective of developing, in the Brazilian context, a study homologous to that of *homo academicus* of Pierre Bourdieu for the internal dynamics of a specific field: education. We recognize the mirror effect in data construction and analysis, which causes a tension between a unique and unprecedented view and the danger of not realizing that this is not the only look possible (BOURDIEU, 2004b, 2004c). Along with this, we are aware of the challenges faced in the construction of data in the Brazilian case.

We analyzed part of the Brazilian academic-scientific field in education considering CNPq PQ-1A e PQ-Sr researchers and the positioning of their original and current institutions using the distinction that CNPq grants them. This is symbolic, academic and scientific capital and power that distinguishes them from their peers. In further research, relations with other categories, especially PQ-1B and PQ-2 ones, will be fundamental for understanding the current internal dynamics of the field.

After the preliminary data production phase, we intensified readings aiming to acquire in-depth knowledge on the conditions of operation with Bourdieu's concepts, in permanent tension between theory and empirical work. Bourdieu (2004a) struggled to make the notions he developed work in empirical analyses; they are not the result of a conceptual work only and thus he kept the concepts open and provisional. Operating with concepts implies the challenge of empirical translation, that is, of retranslating concepts when using them as building tools for the empirical phenomena investigated (BRANDÃO, 2010b). For Bourdieu, good research is about putting into play theoretical things in relation to precise empirical objects, with the rigor that this practice requires. The author emphasizes the importance of showing the nascent, or even confused, state of a work, and recommends adopting a realistic attitude in the definition of a research project aiming at better using resources, starting by the time available (BOURDIEU, 1989, 2004a).

The provisional character of this research is also due to its exploratory characteristic and to the complexity of its object. However, the exploration of the preliminary data

suggests some hypotheses: the researchers studied have a long history of work and production in the field of research; the great majority of PQ-1A and PQ-Sr researchers belong to institutions that co-founded graduate programs in education and ANPEd, and hold prominent positions in the history of the field; another important characteristic of these researchers is their training time, which made them pioneers in obtaining the doctorate degree, whether in Brazil or abroad; therefore, their current institutions benefited from their scientific and symbolic capital by incorporating their careers as professors and researchers.

We must also consider that the organization of graduate programs, even before the establishment of ANPEd, gave prominence to a small number of institutions, given the distinction that having a graduate program meant before the 1970s, that is, before the expansion promoted by the National Graduate Plans. The establishment of ANPEd in the 1970s only confirmed the position of the pioneering institutions, since they already had prestige derived from the scientific, symbolic and political capital gained. Our preliminary findings point out that the prestige acquired by pioneering institutions not only kept them well positioned in the game for academic-scientific recognition but also legitimized them to grant recognition, through government research funding agencies, to other institutions and researchers.

The recurrence of a small number of institutions – among those of origin and the current ones – of the PQ-1A and PQ-Sr researchers cannot be considered a coincidence. Just as the researchers analyzed here are dominant agents in the field of education, so are these institutions, in a dialectical movement. In other words, the presence of researchers with research productivity fellowships in these institutions elevates them in the academic-scientific hierarchy, and at the same time being part of them also positions researchers well in the field.

Once well positioned, research agents establish and reaffirm the specific rules of the field, by laying down certain rules and criteria for another researcher to be eligible for a PQ fellowship. In homology with what happens in the elite families analyzed by Bourdieu (1989b), those who are born in a position of prestige, that is, who already start their academic career in dominant institutions and are advised by dominant researchers acquire (or at least would have better means to acquire) the necessary *habitus* to be eligible for research productivity fellowships and to obtain the most prestigious ones.

The academic-scientific field of education is a field of unequal struggles, because it is composed of research agents and institutions with different structures and volumes of scientific, political and symbolic capital, and Bourdieu's theoretical-empirical framework on the sociology of the scientific field enables us to interpret these configurations. In spite of the mentioned expansion of the graduate courses and the quantity of PQ-2 researchers (55%), the data suggests a preservation of the positions. However, the retention of researchers at the initial levels indicates that there is room for transformation in the hierarchies in the field.

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