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ORIGINAL ARTICLE

Economy: the absent centre of mathematics education

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Abstract Social and political turns in mathematics education research have brought into the field postmodern theorisations that researchers have been using to dismantle traditional philosophies of mathematics, to posit mathematics in the sociocultural terrain, and to spell out the role mathematics has in school exclusion. Sociopolitical perspectives constitute a privileged field of research to address the influence of economy on mathematical achievement. However, instead of investigating the role of economy in students' achievement, sociopolitical studies have been contributing to a disavowal of the economic dimension of school mathematics. This paper synthesises a set of investigations carried out by the author in the last 5 years endeavouring to posit mathematics education in the political and economic spectrum of our time. It takes advantage of the contemporary combination of Hegel's dialectics, Lacanian psychoanalysis and Marx's critique of political economy, carried out by Slavoj Žižek, to develop a critique of the way research within the so-called 'sociopolitical turn' deals with the issue of equity; and marks out the contours of mathematics education's ideological belonging.

1 Mathematics education research within postmodernism

The emergence of the so-called s*ocial* (Lerman 2000) and *sociopolitical* (Gutiérrez 2013; Valero 2004) turns in mathematics education research is characterised by a concern with the way particular groups of people are systematically excluded from a meaningful mathematics education. Among the various features that influence students' achievement in school mathematics is what is usually referred to as the "socioeconomic status" or "social class" which, coupled with race and gender, has been one of the categories often referred to by researchers concerned with issues of social justice and equity (Bishop and Forgasz 2007; Gutiérrez 2013; Lubienski and Gutiérrez 2008; Reyes and Stanic 1988). But what is exactly the role played by economy within these studies, particularly within the sociopolitical turn? By reading papers that provide an overview of the field—such as the ones from Gutiérrez (2013) and Valero (2004), who have been stressing the importance of a sociopolitical approach to mathematics education—one realises that "class" is something that is mentioned but not investigated.[1] Within the sociopolitical turn, prominence is given instead to *identity* and *power*. The idea is that we should move beyond a Marxist idea of social justice, based in the inequalities generated by capitalism, to an idea of social justice revolving around the way modern institutions and discourse formations fabricate the modern subject (Gutiérrez 2013; Valero and Stentoft 2010; Valero 2004; Ernest 2004). Studies that directly deal with socioeconomics (e.g. Lubienski 2003; Baldino and Cabral 2006) are not seen as part of the sociopolitical turn. As a result, studies within this turn, although concerned with equity,

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[1] For example, in the very recent *JRME* Special Issue on equity none of the articles deals with the socioeconomic, class or other categories susceptible of economic analysis. As surveyed by Lubienski and Bowen (2000), the lack of studies dealing with social class is a common feature not only of the sociopolitical turn but also of mathematics education, and educational sciences, more generally.

leave unaddressed a crucial factor of inequity in schools: economy.[2]

As a result of not taking into account the economic dimension, the problem of failure in school mathematics fails to be understood as an all-encompassing reality permeating the whole of schooling, and is instead formulated as having to do with the particularities of specific groups of students, arranged in terms of race, ethnicity, class, sexuality, gender, religion, language, and so forth (Gutiérrez 2013; Sriraman et al. 2010). As mentioned by Gutiérrez (2013), "those who espouse sociopolitical perspectives tend to move beyond Marxist views of power" (p. 49) and "from examining school structures and institutions to examining discourses and social interactions" (p. 3). Moreover, "educators who take a socio-political perspective stance recognise that mathematics education is identity work" (p. 17), engaged in transforming mathematics education in ways that favour more socially just practices towards marginalised students. The strategies for bypassing failure are thus orchestrated in terms of developing better classroom strategies in order to guarantee a successful mathematics education for all, according to students' own particular identities (Pais and Valero 2012).

This disavowal of a central organising principle—which in Marxian theory is played by the economy—is the main characteristic of *postmodernism* (Brown 1995; Eagleton 2001; Jameson 1991; Žižek 2008b). Against the old-fashioned categories of labour, class and political economy, postmodern educational research favours issues related to sexuality, gender, race, disciplinary issues, normalization, subjectification, administrative control and consumerism (Seidman 1994). Mathematics education research for social justice and equity within a postmodern trend refuses to be tied down to a simple model, but offers many domains of action. In line with the postmodern paradigm, change is not conceived as a change in the totality—a change in the global mode of school accreditation, for example—but as being based in local struggles which take into account the complexities of particular contexts (D'Ambrosio 2003; Gutstein 2003; Skovsmose and Borba 2004; Ernest 2004; Knijnik 2007). As defended by Ernest (2004), the metanarratives that dominated scientific discourse in the 20th century are now being replaced by a multiplicity of accounts, which are related to social groups and their political agendas.

2 The ideological charm of equity

Elsewhere (Pais 2012; Pais and Valero 2011), I have argued that such a proliferation of reasons for failure in school mathematics has impoverished a structural understanding of the role school mathematics plays in today's society. By systematically analysing how "equity" has been investigated in mathematics education research in the last decade, I concluded that failure is not a contingent occurrence of a system that thrives to achieve the ideal goal of "mathematics for all", but a *necessary* feature of this same system. The problem of equity is not exclusive to people who are positioned as being in disadvantage due to their association to some category (ethnicity, gender, linguistic, socio-economical, etc.). Instead, I argued for a displacement that conceptualises inequity not so much as a problem affecting particular groups of people, but a generalised problem of the school system, that affects everyone by the way schooling is involved in social stratification. The paradox is that such systematic "social selection" is happening at the core of a school organised around democratic and inclusionary principles. While these principles are seen by researchers as the ones we should strive for, I argued that they rather function as an ideological shield against the traumatic necessity of exclusion within current schooling (Pais 2012; and also Valero 2007).

Take the slogan "mathematics for all" as an example.[3] As I discuss in Pais (2012), "mathematics for all" has to be posited as a necessary goal if researchers, teachers and politicians are to find some meaning in their task of providing an equitable mathematics education. The fact that people continue to fail in school mathematics is seen by researchers as an "excess" introduced from the outside; its elimination would enable us to obtain an inclusive school mathematics (pp. 60–65). All obstacles impeding the full actualisation of the Ideal are aliens to the Ideal, thus susceptible to being overcome through a correction of "empirical" intruders. However, although the goal should be easily within our grasp, it appears as if, to paraphrase Žižek (2008b, p. 164), the entire universe has somehow been adjusted to produce, again and again, the unfathomable

[2] This is obviously also the case with the vast majority of mathematics education research (which disavows not only the economy but also shows a historical tendency to disavow the social and cultural dimensions, by being centred in a psychological approach). As Valero and I explored (Pais and Valero 2012), even socioculturalism and its use of Marxist psychological theories such as the ones of Lev Vygotsky and Alexei Leontiev, end up focusing on the cultural and historical dimension of learning, thus completely obliterating its economic dimension. Nonetheless my criticism concerns also research that, although seeking to go beyond a 'didactical', 'psychological' and 'sociocultural' perspective of school mathematics, by means of emphasising 'political' issues, refrains from analysing the relation between school mathematics and the economy.

[3] A slogan propagated in the last decades by national policy and curricula (e.g. the UK's national curriculum, see http://www.education.gov.uk/schools/teachingandlearning/curriculum/secondary), professional organisations (e.g. NCTM 2000) and researchers (e.g. Presmeg 2010) alike.

contingency of failure blocking the full actualisation of "mathematics for all". The kind of dialectical twist I am suggesting is one that posits this "unfathomable contingency" as a *necessity*. Žižek articulates the argument in this way:

> The other side of this necessity which realizes itself in the guise of a series of contingent intrusions which again and again prevent the universal notion of the project from realizing itself (…), is the necessity, the absolute certainty, that within the field of a universal Lie the "repressed" truth will emerge in the guise of a particular contingent event. (p. 165)

In our case, the "universal Lie" is no more than the slogan "mathematics for all", the "repressed truth" being the crude reality of those who year after year continue to fail in school mathematics. The systematic failure of people in school mathematics points towards the system's antagonistic character: the condition of impossibility of realising the common goal (mathematics for all) is simultaneously its condition of possibility. That is, the motto "mathematics for all" functions as the necessary ideological double concealing the crude reality that mathematics is not for all. This "social fantasy", as Žižek (2008b) calls it, keeps us on the "right track" by avoiding putting in question the system as a whole: who will dare to challenge a system that seeks the Common Good, in this case, "mathematics for all"? Ideology simultaneously conceals its "motives" whilst making them actual and effective. It is in this sense that Žižek says that ideology always appears in its sublated form, that is, its injunctions make effective what it "officially" conceals. The official claim of "mathematics for all" conceals the obscenity of a school system that year after year throws thousands of people into the garbage bin of society under the official discourse of an inclusionary and democratic school. It is in this discrepancy between the official discourse and its (failed) actualisation that ideology is made operational. Within the official discourse, what is *necessary* is the abstract motto of "mathematics for all", all the exceptions to this rule (the ones who fail) being seen as contingencies. However, from the dialectical viewpoint I am deploying here, what is *necessary* is precisely the existence of those who fail, the abstract proclamation being a purely contingent result of the frenetic activity of individuals (researchers, teachers, politicians) who believe in it. The antagonistic character of social reality—the crude reality that in order for some to succeed others have to fail—is the *necessary* real which needs to be concealed so that the illusion of social cohesion can be kept.

Ideology can thus be conceptualised as a "totality set in effacing the traces of its own impossibility" (Žižek 2008a, p. 50); and an ideology critique seeks not to show "how things really are" but rather to pinpoint what in the midst of a symbolic edifice stands for the specific exclusion, the pertinent lack. Whereas traditional ideology critique (e.g. Engels 1968; Althusser 1994) seeks to unravel the particular interests behind a given ideological statement by analysing its inconsistencies in order to pierce the actual mode of its functioning, it does so in an ineffective way since—and this is the main contribution of Žižek to ideology critique—it neglects the relation of ideology with what Lacan (2007) called *jouissance* or, in its anglicised form, *enjoyment*. Every ideology attaches itself to some kernel of enjoyment which, however, retains the status of an ambiguous excess (Žižek 2008b, p. 63). What the spectre of ideology conceals is not reality but its "repressed", the "irrepresentable X on whose 'repression' reality itself is founded" (Žižek 1994, p. 20). What we usually call ideology—the "hidden" agenda that reduces school mathematics to a mechanism of accountability and credit—is not "ideological" but real in the precise Lacanian sense: something that remains unchanged notwithstanding our awareness of it.[4] In our case, the real is the worldwide school accreditation system that is indifferent to the didactical, curricular and even cultural innovations introduced by researchers, governors and practitioners. What is usually seen as "ideological" is indeed the real of schooling. This repressed real, which stands for the economy of schooling, is simultaneously what is excluded from research and what gives consistency to this same research. My argumentation in the following pages intends to show that what we enjoy that hinders us from acting according to what we know is precisely this repressed economic core of schooling. By being repressed, the economics accounts for its efficiency. It functions as the "concrete universal" determining the relation of the subject with the real of its enjoyment.

3 Where is exclusion?

In the paper *Inclusion and diversity from Hegel-Lacan point of view: Do we desire our desire for change?* Baldino

[4] When Lacan (seminar of 23 April 1974, in Le séminaire, Livre XXI: Les non-dupes errant, unpublished, cited in Fink 1995, p. 142) says that "[t]he real is what does not depend on my idea of it", he is pointing to the dimension of human subjectivity that is independent of our knowledge of it—the Freudian unconscious. Such a conceptualisation is what allows Žižek to transpose the real qua psychic dimension to social analysis. His argument is that we may very well know that our economic system is unfair, that schools are subjected to economic pressures, but nonetheless its functioning is real, that is, it does not depend on our knowledge of it. The same point is made by Lundin (2012) apropos of mathematics education: "[m]easurements, grades, and examinations have consequences only inside the system in which they play a central role (…) it should be as obvious that opinions, thoughts and feelings towards this system do not affect its proper functioning" (p. 83).

and Cabral (2006) create a parody concerning where one can find exclusion in school. The authors suppose that we enter an elementary school and ask the staff where the so-called "exclusion" is happening. Who will be able to answer such a question? Where to locate exclusion in schools? It seems as if exclusion has no "materiality", no precise site where it is happening. It seems as if it is a name to represent some structural impalpable reality, resulting from several complex factors, having to do with teacher engagement with the students, with the quality of the mathematics learning, with issues of race, gender and social class, with lack of resources, and so on. Equity is understood as a complex phenomenon involving several dimensions, not identifiable in some place or in some practice. From this perspective, achieving equity means to fight in different battles (for groups of people considered to be in disadvantage, inequity of resources, teacher formation, mathematical content for social justice, etc.). I argue that such dissemination of the problem of inequity disavows its materiality. Although exclusion may be related with all these different aspects, one should insist that exclusion has a materiality visible in assessment.[5] In the story of Baldino and Cabral (2006) we have the chance to meet a special girl:

> Suppose we enter an elementary school and ask the staff where the so-called "exclusion" is happening. We will get no answer, but if we are lucky to meet the child who told us that the king was naked she will take us directly into Mr. Smith's office where the teacher is grading students' final exams. (p. 33)

No matter how much autonomy a teacher can have in preparing her or his classes, and no matter the variety of problems experienced by teachers and students in schools, there is, by the end of the year, something that unites all these different worlds: grading, putting a number or a letter on a student. This process, often euphemistically tailored as the just consequence of a watchful evaluation (Baldino and Cabral 2006; Pais 2012), posits each student all around the world within a structure of equivalences where her or his *value* can be gauged:

> Students are organized into classes and subjected to classification through criteria of evaluation. Certificates are the final prizes. With higher or lower pressure this system is the fundamental organization of schools at all levels and all around the world. (Baldino and Cabral 2013, p. 11).

Such accreditation system is what Vinner (1997) referred to as the *school's credit system*, and subsequently developed by Roberto Baldino and Tania Cabral.[6] Their research bears witness to schools' role in the reproduction of a special commodity, the labour-power, which makes schools subject to the needs of global capital. As posed by Baldino and Cabral (2013, p. 11):

> [I]n the social practices that occur at school, students, teachers and the administrative personnel participate in a process of transformation of students' labour-power, initially simpler and less qualified, into a commodity of higher value, to be sold in the future for a higher salary, which is expected to pay off the investment of muscle and nerves of students as well as salaries of teachers and staff. In the process of qualification of their labour-power, students exert a double function: while actively engaged in the work of raising the quality of their labour-power, they *function* as labourers; while owners of the commodity in process of increasing quality, they function as *capitalists*.

A rigorous economic reading of mathematics education evinces the contradiction involved in a system that, although struggling for equity, *needs* to produce a certain amount of failure. This may explain why failure in school mathematics persists worldwide, despite all the efforts of a research field that has been growing exponentially in the last two decades (Pais and Valero 2012).

Notwithstanding the critical awareness that the sociopolitical turn brought to the field, I argue that the problem of failure in school mathematics can be better understood if we take it not as a problem affecting particular groups of students but as an *endemic* feature of current schooling, thus affecting *all* students. This implies moving from a conceptualisation of students' failure in terms of "learning deficit" (as has been the case with the research stemming from a psychological referent) or "subjectivities" (as has been the case with sociocultural and sociopolitical approaches) to a conceptualisation where failure is properly speaking a political and economic problem, having to do with the way schools are structured as credit systems, where year after year teachers are asked to mark students with a grade that will determine their future possibilities.

Apparently, there is no way of getting out of such an accreditation system, and mathematics education research ends up taking it for granted. The struggle against inequity is then elaborated in terms of what is called "identity politics" (Butler et al. 2000), concerning the emancipation of

[5] This is not to say that all these aspects are not important for equity and social justice. They are important, as various studies have been showing, but it is only through assessment that they become actualised as excluding factors.

[6] Which, notwithstanding their use of so-called poststructuralist theories, particularly Lacanian psychoanalysis, are not regarded as part of the sociopolitical turn.

particular groups of people considered to be in disadvantage; or by addressing issues of power. That is, the problem of inequity is largely thought in terms of changing the "culture" (Radford 2011), the "discourse" (Valero 2004) or the "frame of mind" (Gutiérrez 2013) by means of which we research in mathematics education. To struggle not only for a change of mathematics education in terms of what Marx called the *superstructure*—culture, politics, discourse as emphasised by sociopolitical perspectives—but also a change in the *base*, that is, in the economy of schools, seems to be out of reach. Indeed, by realising that exclusion is something inherent to school, we realise that ending exclusion implies finishing schooling as we know it. In the current myriad of world social organisation, this does not seem possible. The problem of equity requires a fundamental societal change, which we experience as impossible. The question is, thus, how can the community continue to develop research after acknowledging that exclusion is an endemic feature of current schooling? I will return to this question in the last part of the paper. Meanwhile, I address why knowledge is not enough when dealing with exclusion, and expose the ideological mechanisms that allow researchers to endure notwithstanding their awareness that the problem of achieving equity goes beyond mathematics education.

4 Knowledge is not enough

We cannot say that researchers are not aware that failure is a necessity of school. The increasing use of social theory that characterises the sociopolitical turn has furnished researchers with the theoretical tools to investigate how mathematics is involved in processes of academic accreditation and social selection (Atweh et al. 2010; Bishop and Forgasz 2007), in excluding groups of people considered to be disadvantaged (Martin 2011; Secada et al. 1995), in providing a clear social mechanism of accountability (Brown 2011), or in fostering the appropriation of behaviours and modes of thinking and acting that make every child governable (Popkewitz 2004). Yet, as shown elsewhere (Pais 2012; Pais and Valero 2011), although these studies make evident the role played by mathematics in capitalist schooling, the strategies put forward to deal with the problem of failure are thought of in terms of improving the quality of the mathematics education provided to students. Gates and Zevenbergen (2009) identify a common basis for such measures:

> What might we all agree on then as fundamentals of a socially just mathematics education? Perhaps we can list: access to the curriculum; access to resources and good teachers; conditions to learn; and feeling valued (p. 165). Mathematics and social justice has been the focus of much research—however this has largely focused on such issues as the process of learning, the content of the curriculum and its assessment. (p. 162)

The question then arises, why do researchers continue to emphasise mathematics itself as the solution for problems that in their very nature are economic and political ones? As I explore elsewhere (Pais 2013), it is because the importance of mathematics is conceived in terms of its inherent characteristics, whether it is related to the development of mental functions, the utility of this school subject for people's lives, its beauty, cultural richness, or the ideals of citizenship. By focusing the importance of mathematics in terms of mathematics itself—that is, in terms of the knowledge and competences that the learning of mathematics might bring to people—researchers disavow its importance as part of a broader structural arrangement (which, in the way I am theorising, is played by capitalist economics).

Such disavowing has been studied regarding the importance of mathematics in terms of its "use-value" (Gerofsky 2010; Lundin 2012; Mattos and Batarce 2010; Pais 2013). Lundin (2012), after analysing how "word problems" are researched in mathematics education, concluded that the usefulness of mathematics for solving real-life problems is not a consequence of any direct properties of this science, but results from the workings of mathematics education itself. Moreover, the *symbolic discourse*[7] around the importance of mathematics for everyday activities conceals the real importance of mathematics as a testing and grading device. What is seen as a direct property of object mathematics—its utility—is indeed the result of the place mathematics occupies within the structure of capitalist economics. Mattos and Batarce (2010), when discussing the intricacies between mathematics education and democracy within a context of Marxian theory, also conclude that "[t]he *use value* of knowledge, mathematics for instance, is first of all an alibi for its consumption" (p. 3). Moreover, they point out how little has been said in mathematics education about its political-ideological belonging. Sociopolitical perspectives can be thought of as being the most apt for making a critique in respect to this issue; however, these perspectives have "been developed through concepts such as inclusion and multi-culturalism which may draw deeply from an idealistic sense of democracy and 'education for all'" (p. 8).

In Pais and Valero (2012) we distinguish between politics and Politics with a capital P, in order to distinguish

[7] Understood as the ideological material that allows researchers to assert the importance of mathematics for everyday activities, notwithstanding all the evidence that mathematics is not used by people in their daily activities (Lundin 2012; Pais 2013).

what has been in fact a "politicisation" of a series of domains previously considered "apolitical" by sociopolitical research in mathematics education, from a Political conceptualisation of mathematics education itself. While the former is centred on the issue of change conceived in terms of what Seidman (1994) calls "politics of difference",[8] and concerned with changing identities (Gutiérrez 2013), the latter opens the possibility of calling into question the very structuring principles orienting what it means in today's society to teach and learn mathematics. Thus, when Sriraman and English contend that a sociopolitical approach "forces one to re-examine the fundamental nature and purpose of mathematics education in relation with society" (2010, pp. 25–26), one could not agree more. However, one has to emphasise how the very notion and form of the political within which a sociopolitical perspective operates is grounded in the *depoliticisation* of research.

5 We need to enjoy

When researchers know that mathematics is used as an economic measure (Tsatsaroni and Evans 2013), a technology of subjectification (Kanes et al. 2014) or as a mechanism of social selection (Jorgensen et al. 2013), and still insist on the importance of mathematics as a knowledge or competence, they are performing what Žižek (2008b) calls a *fetischistic disavowal*: one knows, but one does not really believe what one knows, and thus keeps acting as if one does not know. The attachment to a Cause (Žižek 1993, p. 202)—in our case, the naturalisation of the importance of mathematics in terms of mathematics itself—cannot be reduced to a performative effect of the discursive practices that refer to it. As posited by Žižek (1993):

> The pure discursive effect does not have enough "substance" to compel the attraction proper to a Cause—and the Lacanian term for the strange "substance" which must be added so that a Cause obtains its positive ontological consistency, the only substance acknowledged by psychoanalysis is of course enjoyment. (p. 202)

What secures a given ideological edifice, what binds us to explicit ideologies, is not so much a rational decision but a mode of enjoyment. As noticed by Morgan (2013), although sociopolitical perspectives tend to recognise the complexity involved in the teaching and learning of mathematics, researchers often disavow such complexity for the sake of research. The "practical demands of research practice" (p. 2) end up prevailing over any knowledge researchers may have. The crucial question about ideology is thus not to be posited in terms of knowledge—what people need to know in order to break the ideological spell—but in terms of enjoyment: what do people enjoy that prevents them from changing? The attachment to something we know is "wrong" can only be explained in terms of enjoyment: after the ideology has been exposed we still do not change our behaviour because we *enjoy it*. It is a clear indication of the material force of ideology which makes us reject what we see and know. This happens because for some reason we enjoy not believing in what we know (Pais 2013).

What do researchers enjoy that keeps them attached to the belief that mathematics is important in itself? Mathematics has a privileged position in the eyes of society. There are obvious benefits from the belief that mathematics is a precious knowledge, a keystone of modern society, and an inescapable tool for citizenship. This makes mathematics education a privileged area of research among educational sciences, with all the concomitant benefits of funding, working conditions and possibilities for research. As rightly acknowledged by Kanes et al. (2014), even a dreadful instrument such as PISA can give researchers the opportunity (that is, the funding) to develop research. To assume that school mathematics is more about credit than about mathematics itself implies questioning the entire discourse sustaining mathematics education research, thus jeopardising the central role mathematics has in education, with all the consequences this will have for our work. We can risk saying that what researchers enjoy is university credit, an expression more and more in tune with the current functioning of academic life, where terms such as "knowledge production", "quotations index" and "number of publications" dictate the overriding goals of a whole swathe of social, cultural and intellectual activities that can be understood and valued in other terms.

6 Implications for mathematics education research

To compensate for the pessimism that this paper may convey to the reader, I outline in this section three implications for research in mathematics education that may offer some way out of what may appear as a deadlock.

Firstly, it is important to dismantle the spell conveyed by the societal demand for "mathematics for all". As any teacher knows, in a class of thirty students, there will always be some—or many—who fail. Instead of running after the hysterical[9] societal demand of mathematical

[8] But also "politics of recognition" or "identity politics". See Butler et al. (2000) for an account of the terms in which the relation between "politics" and "Political" is carried within contemporary theory.

[9] Hysterical because it is impossible to satisfy.

equity, developing increasingly refined stratagems to better teach and learn mathematics that only seem to function in the controlled reality of a research setting, perhaps we should acknowledge the crude reality that mathematics *is not for all.* Schools, however uncomfortable such awareness may be, are places of selection and teachers are agents of exclusion. These are the conditions of today's schooling, and research cannot afford dismissing them as being beyond its field of action. Publicly assuming that mathematics is not for all may not solve any problem, but at least does not mask it.

Secondly, as I addressed before, by positing the importance of school mathematics in terms of *knowledge* and *competence*, research provides an ideological screen against the role school mathematics plays within capitalist schooling. While presenting school mathematics as an important subject in terms of knowledge and competence—that is, in terms of what Marx called the *use-value*—the other, surreptitious, functions of mathematics, its *exchange-value*, can actually become operative. My suggestion is to conceive the importance of mathematics not in terms of mathematics itself, but in terms of the place this subject occupies within a given structural arrangement (Pais 2013). That is, to conceptualise the importance of mathematics not in terms of its inherent characteristics—problem solving, utility, beauty, cultural possibilities, etc.—but in terms of its attendant submissions to political as well as economic criteria and goals. In short, I suggest that school mathematics should be investigated as a crucial element in what I called the accreditation system, and not so much, as it is today, as a precious knowledge aimed to empower people and to enable societal development.

Although sociopolitical perspectives, with their use of social theory, have the potential to operate this displacement on the way the importance of mathematics is perceived, its locus of critique is not mathematics itself, but the way this school subject gets contaminated by a set of policies that undermine its genuine role (Lundin 2012; Pais and Valero 2012). However, it is my contention that a sociopolitical approach cannot separate mathematics from the places where it is used. A radical use of social theory in mathematics education has to conceive the value of mathematics as an effect of the place mathematics occupies in society. Mathematics itself is nothing outside the different places where it is used. There is nothing to be saved in school mathematics. Research usually proceeds by throwing out the dirty water (all the political and economic pressures that tend to reduce mathematics to the format of the test) and keep the healthy baby (mathematics). But a social approach invites us to throw away the baby, and deal with the dirty water. To throw away mathematics is of course not easy for a field that has been living a privileged existence within educational sciences precisely because of the specificity of mathematics (Pais and Valero 2012). But perhaps this is the price to pay if we really want to do social theory in mathematics education. There is something inherently wrong in the way researchers use social theory yet still behave as ambassadors of mathematics. No matter how much we would like mathematics to be an adventure into knowledge, the ultimate problem-solving technology or a crucial dimension of critical citizenship, this is not what school mathematics is.

Finally, more research efforts should be made to study *failed* attempts to promote a meaningful mathematics education for all. As a result of seeing the persistent failure in school mathematics as a contingent occurrence of a system that officially aims at equity, researchers focus on the exploration of successful experiences. It will not be easy for the reader to find a study that takes failure in itself and uses it to shed light on the contradictions of the whole system. Research is animated by a sense of "positivity", and values situations where, notwithstanding all the difficulties, a breakthrough was possible (Gutiérrez 2013; Presmeg and Radford 2008; Sriraman and English 2010). As posited by Gutiérrez, "it is important to highlight the features of practice that coincide with certain kinds of students engaging/succeeding in school mathematics (and this form is much more productive than focusing on failure and/or disengagement)" (2013, p. 52). Though this approach may be convenient, it makes impossible a broader critique of the equity model in which current schooling is based. Moreover, it provides the ideological frame against which researchers can continue doing their work without questioning the economically rooted reasons of failure (Pais 2013). Through the exploration of situations where attempts to provide a meaningful mathematics education have failed (e.g. Baldino and Cabral 2005, 2008; Pais et al. 2012; Straehler-Pohl and Pais 2014), one has the possibility to posit failure not only as a particularity of certain groups but also as a transversal feature of contemporary schooling.

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