

# LACANIAN PSYCHOANALYSIS AND PEDAGOGICAL TRANSFER: AFFECT AND COGNITION

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## ABSTRACT

*We contend that some representative studies about affect, even if they seek support based on psychoanalytical theory, miss the interpretation of cognition in terms of transfer. We introduce Lacan's concepts of transference and affect which make it possible to touch the dimension of love. For the sake of the reader's understanding we add an example from our psychoanalysis-inspired learning experience. This is a theoretical paper with one example from practice to facilitate understanding.*

## INTRODUCTION

After gathering data showing that “student writings convey an overwhelming sense of fear and anxiety engendered by their encounters with mathematics”, Breen [2000] points out that “the links between psychoanalysis and mathematics education seem to have largely been silent themes at PME with only a few discernible exceptions (...) and neither of these directly address the encountered dominance of fear in the mathematics classroom” [Breen, 2000:108].

Fear and anxiety are signifiers that fall under the general heading of *affect* in a vast research literature. McLeod's survey [McLeod, 1992] displays an impressive list of 219 references with none referring directly to psychoanalysis; Freud is mentioned *en passant* in the article. McLeod says that “the affective domain refers to a wide range of beliefs, feelings and moods that are generally regarded as going beyond the domain of cognition” [576], however “research on affect in mathematics education continues to reside on the periphery of the field” [575], “a major difficulty being that research on affect has not usually been grounded in a strong theoretical foundation” [590]. Indeed, from the survey we get the feeling that the affective domain is a union of its common sense connotations such as: *Aha!*, *anguish*, *anxiety*, *attitudes*, *autonomy*, *beliefs*, *confidence*, *curiosity*, *dislike*, *emotions*, *enthusiasm*, *fear*, *feelings*, *frustration*, *gender*, *hostility*, *interest*, *intuition*, *moods*, *panic*, *perseverance*, *sadness*, *satisfaction*, *self-concept*, *self-efficacy*, *suffering*, *tension*, *worry*. We note a remarkable absence: *love*. It is a small paradox that the alleged intellectual unemotional Lacan, as we intend to show, is the one whose theory allows the restoration of this omitted dimension.

Affect and its connotations have been the capture object of research reports in recent PMEs. Vinner [1996] reports on teachers' discussions about their professional lives brought about by their written answers to a set of questions. Analysis of videotapes led to interpretations under the headings of frustration, humiliation and hope connected to the cause and the way teachers coped with difficulties in teaching several content topics. DeBellis and Goldin [1997] use the term self-acknowledgment

referring to a learner's willingness to acknowledge an insufficiency of mathematical understanding in a context of problem solving. Da Rocha Falcão and Hazin [2001] compare measures of self-esteem with mathematical performance and conclude that there is a need to take into account both affective and cognitive aspects in research about mathematical learning.

The two reports under the framework of psychoanalysis [Baldino and Cabral, 1998, 1999], as remarked by Breen [2000], do not directly address any of the affective connotations listed above. There are, however, some attempts in the literature to approach affect issues from the psychoanalytical perspective. The most consequential ones, Blanchard-Laville [1997], Wilson [1995] and Breen [2000], evoke the concept of *transfer*.

Blanchard-Laville [1997] postulates a certain *psychical reality* that could only be known through its effects, while remaining unknown in itself, like Kant's thing-in-itself. She acknowledges the paradox that, in order to study the human psyche, we must pass through another human psyche, namely, our own. The solution she proposes to the paradox consists of a direct appeal to the conscious ego: "A minimum of conscious intentions is required of the observer in order to perceive the unconscious dynamic of exchanges and its reflections and let oneself impress by the implicit aspect of messages among the participants of the didactical exchange" [Blanchard-Laville, 1997:158].

Wilson [1995] aims at studying his own feelings in his relationship with the students. He describes his method thus: "At the end of each day, or week, I sat quietly and allowed an incident from my teaching to enter my mind (...) writing (it) as objectively as I could" [Wilson, 1995:1]. To this introspective method he adds the concept of transference described in these terms: "The transference relationship describes distorted perceptions of counselors which arise because of clients' previous relationships" [Wilson, 1995, quoting C. Lago, Notes from Manchester Counseling Course, Sheffield University].

Breen [2000] reports on his teaching experience with adults who were seeking a primary school teaching diploma or who have blocks about doing mathematics and were given a second chance. Transfer is considered as "the imposition of an actual or imagined previous relationship onto a present one" [Breen 2000:110].

In spite of all appeals for the need to approximate research on Mathematics Education and affect, we could not find any learning experience organized according to, and interpreted in terms of, psychoanalytical theory. The foci of the studies are not on the direct interaction of student or teacher with the mathematical object that characterizes cognition studies. Whenever the interaction between the subject and a mathematical object is brought about, the focus is on the subject's feelings, described from the point of view of a superior conscious ego who relies on introspection to evaluate imaginary distortions from an exacting pattern. It seems researchers strongly

believe that psychoanalytic theories and affective studies refer to what happens on the periphery of cognition and have nothing to say about cognition itself.

In all the above-mentioned works about affect or its connotations, using either a direct approach or via psychoanalysis, the researcher assumes an exterior position either as an observer and interpreter, as in Vinner [1996], Da Rocha Falcão and Hazin [2001] or assumes a conscious position of judge, as in DeBellis and Goldin [1997], Blanchard-Laville [1997], Wilson [1995]. In doing so, the researcher approaches the transfer via an “alliance with the healthful part of his own self” [Lacan, 1973 chap. X.4] which generally runs in an opposite direction to the unconscious reality that psychoanalysis is meant to actualize.

In addition, all the research on affect seems to be pervaded by a more or less explicit intention of improving practice. For instance, Breen [2000] concludes his paper appealing to “the need for further work to be done to identify and research contributions that a knowledge of psychoanalytic processes can make to understanding and improving the teaching of mathematics” [Breen, 2000:112]. If psychoanalysis were to be called for in such circumstances, it would start by asking: *Why do you think that the teaching of mathematics should be improved? Why is it not good as it stands?* These questions, as far as we know, have never been addressed in PME. In calling on psychoanalysis to solve the distressing problem of practice, the teacher becomes part of the problem to be solved, a not very comfortable position. We intend to show how Lacan’s theory allows us to cope with this discomfort.

## THE THEORETICAL BACKGROUND

The theory elaborated by Lacan in order to orient and explain the dialogic encounter with his patients may be characterized as the *dialectics of the subject and the other* [Lacan, 1973: 205, 239]. This theory models what happens whenever a human subject address an audience in a common language. In particular, it is fit both to explain and orient the learning/teaching experience in a mathematics classroom provided its concepts are conveniently specialized.

According to common-sense opinions about psychoanalysis, the transfer is a substance *transmitted* between subjects via communication such as the “transmissions psychiques” of Blanchard-Laville [1997], or a catharsis of unconscious elements displaying a distortion to be rectified by the counter transfer, as in Wilson [1995], or “the imposition of an actual or imagined previous relationship onto a present one” as in Breen [2000]. The transfer is also thought of as an affect that may be positive or negative. Positive transfer is identified with love. Lacan [1973] starts from this last common sense conception and takes it elsewhere. According to its meaning in the clinical experience, “the transfer is a phenomenon where both the subject and the psychoanalyst are included together” [210], hence two unconscious are simultaneously involved and it cannot be separated to “transfer” and “counter transfer”; “the transfer is the actualization (*mise en acte*) of the reality of the unconscious” [137] with all the implications the unconscious presupposes, including desire and sexuality. What has

to be analyzed in the clinic is the transfer itself. In addition “according to its nature, the transfer is not the shadow of something that has been lived in the past. On the contrary, the subject as subjected to the analyst’s desire, desires to cheat him about this subjection making himself *loved by the analyst*” [229, our emphasis].

The four fundamental concepts of psychoanalysis, the *repetition*, the *unconscious*, the *transfer* and the *triebe*<sup>1</sup>, should not be treated separately. However, due to lack of space, we will only take up the transfer, and this only under the aspect of *imaginary and symbolic identifications*. What we lose in fidelity we hope to gain in clarity.

Specializing the transfer to the teaching/learning mathematics experience leads to the concept of *pedagogical transfer* [Cabral, 1998]. The pedagogical transfer implies that listening is not unrestricted, as it is in the clinic, but is *restricted to mathematical listening*, that is, restricted to the possibility of attributing mathematical meaning to what is heard. Mathematical listening is defined as occurring when the listener is able to *repeat the speaker’s discourse* until the speaker agrees that it is exactly what he meant. Of course, the speaker can always disagree and say that something else was meant. Therefore the activation of restricted listening presupposes an agreement, tacitly established prior to the talking situation.

The pedagogical transfer occurs when 1) the student manages to adjust the image of himself that he sees in the mirror to his expectation of being loved by the teacher and 2) the teacher accepts this image as capable of being loved. This love is to be distrusted, since the student is only seeking the way to produce the right answer, so that the teacher and the parents will be satisfied, and he will be recognized as one who knows and will get credit for this. The identification process of the subject with the image that he supposes to be loved by the teacher is called the *imaginary identification* and denoted *i(a)*, a “i” for “image” and “a” for the object of desire around which the image is built. Schematically, in pedagogical transfer, this object is represented by the ability displayed by the teacher in producing answers and deciding what is right or wrong, an ability offered to the student as one to be imitated.

Whereas the image produced by *i(a)* is perfect, the unconscious reality that commands the production of this image is not so nice. This is an obscure reality that the subject perceives as his own qualities and commitments. He needs to love what he perceives, so he fabricates a high representation of himself out of ideological commitments that the culture offers him. The process leading to these commitments is called the *symbolic identification*, or the *super-ego* and denoted *I(A)*, a “I” for identification and “A” for the Other, approximately, the culture.

In the pedagogical transfer, the commitment is mingled with the ability to produce answers, leading generally to strong rote learning efforts. Lacan [1973] says that this mingling of *I* and *a* “is the safest structural definition of hypnosis that has ever been produced” [245]. Plainly: in transfer, the student is in a state of hypnotic trance, a

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<sup>1</sup> This German word has tentatively been translated by *instinct*.

most delicate situation. However, the teacher's object of desire may well be represented by a student who produces the right answers *according to mathematical canons*, not by rote. She may be incapable of including among the representatives of her object of desire a nonsensical student-mathematics relation. Up to a certain point she may pretend that the student's rote answers are produced according to mathematical principles and accept them... up to a certain point. At this point she snaps and the student awakes from his trance without having been prepared for this moment by an adequate analysis of the transfer. It is not only the student's love message  $i(a)$  that is rejected, it is the student's unconscious commitments  $I(A)$  that supported  $i(a)$  that are impaired: his super ego crashes. Hence the emergence of fear and anxiety. If this does not happen as intensely with other subject matters, it is because rote learning is easier to disguise in them and, in certain cases, is compatible.

On the other hand, if the teachers desire is related to the analysis of transfer, than affect comes in: "What the psychoanalytical discourse leads to is that there is only one knowledge about affect: affect is the capture of the talking being in a discourse that determines him/her as object. (...) Of this object we know nothing except that it is the cause of desire". [Lacan, 1991:176-7].

This implies, first, that, in dealing with affect and its connotations, language is absolutely primary, not a "means of communication", since the constitution of the subject (students, teachers, researchers) depends on it. Second, if we want our practice to have anything to do with affect, that is, if we want the student to be captured as an object of desire in the discourse of our practices, we had better *stop talking and start listening to him*. Stopping talking requires the modification of our own commitments  $I(A)$  that support our cherished self image as good explainers  $i(a)$ . However, we must assume the initial position that installs the pedagogic transfer, indicating to the student our position as the subject supposed-to-know (*sujet supposé savoir*). The student must believe that the teacher knows about his learning. It is from this initial position that we must provoke the student to work towards the production of his own knowledge. Like Blanchard-Laville [1997:168] we do not seek to eliminate suffering because it is what commands the moments of successive opening and closing of the unconscious whose reality transfer is expected to actualize, so that the subject can check his  $I(A)$  and assume it.

The capture of the nonsensical student-mathematics relation as an object of desire inverts the hypnotic situation. It is the teacher who must be hypnotized by the student's discourse, trying to make sense of it to the satisfaction of the student. In this way the teacher keeps himself at the largest possible distance from the object  $a$  around which the student seeks to constitute his imaginary identification [Lacan, 1973:245]. Let us see how this theory works in an example from practice.

## THE SETTING AND THE EXAMPLE

The basic unit of our psychoanalysis-inspired learning experience is a weekly meeting assembling teachers and graduate students of a mathematics education

program, undergraduate students of a mathematics teacher formation program, and mathematics teachers from the neighboring school district, totaling about 10 to 15 people. We call these meetings *integrated sessions*. They started several years ago when an undergraduate student asked for help in solving his special difficulties: he had failed all his freshmen courses. Gradually, other undergraduates joined in and took advantage of the teaching dispensed to him. Now these meetings provide course credits for undergraduates as well as research material for graduate dissertations and papers. They provided us with the experimental base to adapt Lacanian concepts to the classroom.

In these sessions, teacher and student are not labels attached to people, but positions of speech. Whoever is at the blackboard, generally an undergraduate student, is called “the student”. The student is expected to work in order to produce some sort of knowledge in the connection of the mathematical object and his ignorance. “The teachers” are those who put restricted mathematical listening into practice and provide guidance. The teacher’s position consists of sustaining the student’s speech. We follow a lemma: “It is through speaking that one learns and through listening that one teaches” [Leal et al. 1996:243]. In the sessions the didactical, pedagogical and mathematical objects are treated simultaneously.

We shall report on the integrated session of August 24, 2001. In the dialogue, “teacher”, of course, does not always refer to the same person. The student who volunteered, proposed a problem from his mathematical analysis course: *every interior point of a subset of  $\mathbb{R}$  is an accumulation point*. Following the teachers’ orientations, the student reproduced the definitions and concluded that, if  $x$  belongs to  $\text{int}(X)$ , then  $x$  belongs to the derivate set  $X'$ . When everything seemed to be over and done with, the student expressed the following doubt:

Student:        Alright, I have proved that if this  $x$  is in  $\text{int}(X)$  then it is in  $X'$ , but this is not enough, since here, in  $X'$ , I have ALL the accumulation points and I proved only for this particular  $x$ .

Notice that he did not say that “here in  $\text{int}(X)$  are all interior points and I only proved for this  $x$ ”. If it had been so, any of the teachers would have been able to help. Everybody offered suggestions but the student remained immovable:

Student:        I understand that I have proved for this  $x$  which is any generic one, so that it is proved for all  $x$ . But there, in  $X'$ , *are all the accumulation points, not only this  $x$* .

What now? The discussion lasted for more than one hour. Everyone was eager to make a contribution. Voices grew louder, from student and teachers, denoting enthusiasm. But at each turn the student said:

Student:        I know what you want me to say, but I am not convinced.

And he repeated his doubt. When the session time was over, one of the teachers asked permission to try her approach without interruption. In a low voice, she asked

the student to repeat the whole reasoning. He summarized it while the teacher wrote on a clean black board what the student said, always asking him: – “Like this?” or “Is this right?” The teacher exhibited a genuine effort to understand every word the student said and did not write anything beyond what she heard. Finally the teacher expressed her doubt.

Teacher: Where do I write this “all”? Here, at  $\text{int}(X)$  or there at  $X$ ?

Student: At  $X$ .

Teacher: This is the difficult point for us. If this “all” were here at  $\text{int}(X)$  we would know how to orient you. It is the old story about proving that every cat has a tail. It does not suffice to pick one cat. You have either to bring them all or to consider that something is nothing more than a cat, a generic cat, and so on. OK?

The student agreed and the teacher went on, always in a low voice.

Teacher: But since you put the “all” here, at  $X$ , we don’t really get you. Can you explain?

Her mood was of attentive invitation. The student thought for a while and looked embarrassed.

Student: I do not know what I want to say, confessed the student.

Teacher: Try and say it, insisted the teacher.

The essential point is that this “*try and say it*” was not uttered in a mood such as to mean: *now do you understand?* or *do you see your nonsense now?* The meeting ended in a happy mismatch.

When the session was over, the ability of the teacher was praised, but she replied that she was really curious to see what was the student was thinking. She had assumed that there was indeed a meaning and she wanted to find it out. Since the student could no longer remember the content of his doubt, she confessed that she felt somewhat deceived. She had been playing the hypnotized party, the nonsense produced by the student playing the role of her  $a$ . The evaluation was made that in every previous attempt to orient the student, the teachers always presumed that they knew something about the student’s difficulty (assumed the position of the subject supposed to know) or intended to reach some foreseen point (rectify the transfer). These evaluations were made live, in the presence of the student.

Later on, the authors conjectured that the student was mostly demanding some sort of affect, inserting himself as the object of desire of our discourse, which he knew was possible from our previous joint experience. Being recognized in his attempt he received a form of love that was not feigned. However, he was not spared his suffering: no one told him that what he was saying was nonsense, nor was he praised for abandoning his previous view. He had to take responsibility for his  $I(A)$ .

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