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Being in the diversity and going through the infinity

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Introduction

The debate on visual culture raises questions that have been stressed in the educational research, such as the role of the image in the process of subject-formation and the visuality as a form of knowledge. Visual Culture is an interdisciplinary field that combines arts, philosophy, anthropology, and cultural studies. The main point of this field is the question of visuality, which means focusing on the relationship between the seen and the seer. In short, the target of Visual Culture Studies is not an object at all, but it “consists of things we can see or whose existence is motivated by their visibility; things that have a particular visuality or visual quality that addresses the social constituencies interacting with them” (Bal, 2003). Thus, the term of visuality has become an important keyword for this field (Mirzoeff, 2006), because it refers to the vision and visuality are both socially and historically constructed.

With regards to mathematics education research, Flores (2012) has proposed this perspective of visuality to investigate how images, particularly paintings, affect and are affected by Cartesian perspectivalism visual practices, as well as to grasp the fabrication of a certain mathematical rationality to look and to think within the realms of culture. The author has considered

the term ‘visuality’ instead of ‘visualization’, because the former leads to a deconstruction of the founding principles of sense of vision and perception. In contrast, visualization is understood as a process of construction and transformation of mental images, whereas visuality is the sum of discourses that inform how we see. Thus, while the latter is concerned with learning geometry’s concepts and visual skills, visuality discusses visual practices in the context of history and culture. (p. 7060).

Thus, at stake is a kind of mathematical thinking presents in contemporary school practices and that is provoked notably itself through images of arts (Flores, 2016).

Going through infinity

In response to this, we have been examining historically the artistic practices of infinity considering, particularly, those involving the discussions of perspective in renaissance painting. Furthermore, we have analysed modern paintings exhibiting characteristics of a classical system of visuality, which means using concepts of harmony, symmetry, parallelism and perspective. On a whole, we have found not only that our way of looking is shaped within an already built field of techniques and discourses, but also that mathematics ideas play an important role in the constitution of how we think.

Being in the diversity

In the methodological path of cartography, Schuck (2015) has developed an intervention plan with alcohol and drugs dependents in treatment on a Psychosocial Care Center in Florianópolis, Brazil, in 2014. Four workshops were conducted and each one was centered on images suggesting the infinity idea. By focusing on discourse analyses, interpreting multi-faceted narrative, looks and affections by the subjects involved, it was possible to highlight the effects of looking at infinity rather than ‘truth’ *per se*. For instance, seen from the perspective of the people involved, the ways of looking at infinity deal with reflections situated between the mystical and the emotional experiences such as nothingness, emptiness, freedom. In this regard, we call attention to two points: “mathematical mind-set” is not the sole result of a schooling regime; and subject’s visual subjectivities emerge in the entanglement of the individual in discursive formations. In order to discuss this, we, in the poster, displayed some information concerning on the visualization and visuality, the cartography as research methodology, the workshops itself, and the discourses about infinity staged by the people involved in the intervention mentioned above.

Following Foucault’s assumptions, we consider that by a better understanding of how a certain kind of mathematical visualization has been constituted within the sociocultural practices might contribute not only teacher education but also mathematics learning practices. In sum, we bring under our attention that both mathematical rationality and visualization are staged and configured within the diverse sociocultural practices.

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