

MATHEMATICS EDUCATION OUT IN THE RURAL SCAPE: EXPERIMENTING WITH RADICAL DEMOCRACY FOR COMMONS

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Abstract: The purpose of this paper is to discuss a pedagogic experimentation in the rural scape at a Greek village that tends to challenge the neoliberal and capitalist politics of economic austerity in the area. A group of young educated people in their 30s instead of migrating to the 'West' for a secure job have opted to return at their place of origin for a way of living around the values of a common ownership economy. They experiment with a vision of radical democratic pedagogy as vital for life. It unfolds in their relations, first with children as part of an after-school workshop and second with the adults in varied interactions as part of sharing knowledge for manual work in the land and with hand-made constructions. As such mathematical ideas, skills and competences are being entangled in diverse opportunities of life reorganisation around what they perceive as their commons.

INTRODUCTION

Due to an increased societal and environment crisis, in recent years, there has been a need for radical political engagement and action around collective reorganisation that involves experimentation with alternative economies and pedagogies. In many parts of the world, coalitions of parents, students, educators and activists have sought to confront and challenge the intensification of privatisation and austerity measures in both economy and public education through organised occupations of educational spaces, educational strikes, testing boycotts, and mass demonstrations, but also through vital projects of coming together and reclaiming human rights and dignity for accessing what is considered as 'common' goods. A central challenge for educational theorists and activists has been how to reconcile the need to defend and strengthen public educational institutions while simultaneously trying to find a new language and set of principles from which to reimagine these institutions in ways that do not reproduce their historical and/or present limitations. Questions posed with increasing frequency are: How might we reconstruct common educational institutions against their imaginative and political enclosure? How educational institutions and local economies may work together around commons? And, how could cultural capital based on academic knowledge, such as the deployment of varied forms of mathematical skills or competences and mathematising processes, might contribute in this endeavour?

In Greece, specifically at the precarious times of crises, a move is being performed, mainly by young people, from private and public institutions to common ownership collectives where 'common' αγαθά (αγαθόν=good) such as land, water, food, education, arts, crafts and technologies are commonly used, shared, preserved, protected or even produced (Kostakis, 2013, Kioupiolis, 2014, Pechtelides, 2016). Such projects denote the urge for creating new spaces for economy (i.e. οικονομία: ο

νόμος του οίκου: home rule) redirected from a high dependence on the state and the markets –held responsible for the ‘tragedy of commons’- towards a more self-organised community based on democratic participation, equity, respect and autonomy (Ostrom, 1990, De Angelis, 2017). We want to argue, by means of this study, that for this to happen, community self-organisation around economy as ‘commons’ and pedagogy in the form of a radical democratic pedagogy need to go hand-in-hand and work closely. Specifically, two levels of creating pedagogical spaces can be noted, *first* amongst people in the community around issues of reclaiming their ‘commons’, and *second* with children and youth around varied micro-contexts of activity for commons.

This is the case of a collective of five young educated people in their 30s who returned to the rural scape of a Greek village, after having studied and worked in urban states, with the vision of contributing to a life that challenges economic and pedagogic austerity through radical democratic participation. The village is located in a northern mountainous area and is now inhabited mostly by Albanian immigrants or elders with most younger population having immigrated in ‘west’ countries. Despite precarious conditions, the collective opted to return at their place of origin aiming to create a space for a democratic commitment with land, knowledge and people. They have spent a few years working with the land and launching an after-school workshop where children from 3 to 17 year olds engage in manual activity, crafts and constructions, as well as, outdoor walks and coming together festivities. A core aspect of their co-engagement with children and adults in the rural scape is their focus in a serious experimentation with the potential of radical democracy in the village at a temporality of crisis.

In this context, we enacted with an ethnographic study in order to explore how such a commitment may affect pedagogic relations and, in turn, how pedagogy, and mathematics pedagogy in particular, may contribute towards envisioning this radical democratic project. Although mathematics education, along with other specialised subject areas was not the specific focus of the after-school workshop, we have denoted the tacit, but yet agentic, presence of mathematical knowledge (see Chronaki, 2010) in the realm of working with children towards creating new realities through making new objects and generating new activity. However, our experience of being there and attempting to interpret what has happened with children’s knowledge in relation to contemporary social theorising in mathematics education troubles any essentialist onto-epistemologies of knowledge/power in democratic relations and raises a number of questions that we wish to discuss in this project presentation.

THE STUDY: A PEDAGOGIC EXPERIMENT FOR COMMONS

The study took place in an after-school workshop organised by this collective in a 700 inhabitant’s village located at the rural scape of one of the high mountains in Greece (see table 1). People are mainly elders or immigrants from Albania who work in small-scale, yet globalised, agriculture domain whilst most educated youth have departed abroad or closer cities for securing a job in domains of high specialisation. The building where the collective lives and works is located a bit outside of the village and they

make use of an old school provided by the municipality. Renovations involved the construction of yards, playgrounds and garden space and emphasis was placed on reorganising space and time to accommodate communal life and openness for children to visit and stay with them. Work was geared towards land cultivation around sustainable environmental oriented principles for their everyday living. Specifically, their philosophy involved cutting down consumption needs, becoming less demanding, recycling, reusing and producing the necessary quantity and quality of goods they needed for food, as well as for making their own constructions.



Table 1. Varied views of the location and the after/school housing

The after-school workshop, based on practical, hands on or manual work and outdoor activity, provided a micro-scale pedagogical laboratory for children to engage with similar values of living. Children were involved in making practices where they are responsible of constructing their own games using wheels, planks, ropes or any available material. Children created a balance game by placing wheels at some distance and then a plank to make a beam of balance. At other times, they created a tend to use in outdoor activity or crafts that involved knitting and jewellery making. Gardening, domestic animal care and constructions in relation to these are of high priority.



Table 2. Children's after-school engagement with activity around commons

Woodwork provided also a context for children to develop explicitly skills that cut across competences in varied areas including mathematics as Ermis explains:

‘If you get any wood first you definitely have to go through these four five stages which are punching, cutting, grinding and joining woods together. Counting and marking on the woods is a very important part in which mathematics can be found. So, there is all the design and at the same time there is planning on paper what we are going to do’.

From a mathematics education perspective, all these micro-practices can be seen as providing occasions to discern the embedded and embodied mathematical activity in which one denotes the growth of skills, competences, reasoning, critique, language and concepts as shown by Alan Bishop (1998), Ole Skovsmose (1994), Rico Gutstein (2012) and Rik Pinxten (2016). However, one may wonder how the discursive context

of such this experimentation with economy as commons in which the mathematics education of children is being placed might matter, in what ways and for whom? As well as, what emergent subjectivities for children and adults are being co/configured?



Table 3. Woodwork and the making of constructions

PLACING MATHEMATICS EDUCATION WITH/IN A RADICAL DEMOCRATIC EXPERIMENTATION OF A PEDAGOGY FOR COMMONS

Whilst the notion of democracy is an almost impossibility, its semantic tensions can be traced in early Greek and Roman times in the idea of ‘demos’ as an expression of people in the city holding power or ‘civitas’ where life is constituted through a system of rights (see Etienne Balibar’s reading of democracy in Greek and Latin etymology). The assumption of ‘demos’ engagement directly in the political life contests a view of democracy as a constitutional or juridical-legal process applied unproblematically without considering a wider nexus of conflictual positions due to an increased globalised, neoliberal and capitalist world. Radical democrats in the 1950s and 60s like Cornelius Castoriadis (1991) attempt to reconnect democratic theory to the notion of the political as a socio-material order defined by antagonistic discursive positions forming the constitutive ground of politics. Laclau and Moufee (2001) have advanced this into an ongoing antagonistic process for achieving anti-essentialist and plural positions. To this, Hard and Negri (2000) suggest the Deleuzian notions of rhizome and multitude as alternative ways of envisioning the maturation of social movements as nomadic collective subjectivities. Such vision may bring forward a new political subject that is yet to be configured through radical democratic efforts. We could see, in the realm of our study, that the everyday efforts of the young people collective upon their return to the village are constantly geared towards a strategic re-organisation for a political subjectivity focused on valuing the protection of commons.

How, then, we might realise the placing of mathematics education in this realm? How could a radical democratic experimentation of a pedagogy for commons may require (or not) mathematical knowledge? In what ways cultural capital through academic knowledge as mathematical skills and competences may participate in this endeavour? At this place, our study may suggest two considerations. *First*, a radical democratic pedagogy embedded in a local context of economy for commons needs first of all to espouse relations of radical ethics of equal participation that respects people and land. Respect for people and land go together. They are based on awareness of how the tragedy of commons has come about and its effects on global and local contexts. This

double gesture of respect needs to denounce a top/down relation with expertise and experts, but still resorts on a process of articulation that involves mathematics in the forms of de/re/constructing ideas and objects, problem posing and solving, reasoning as ir/rational argumentation im/pure logic for the need to protect economy as commons. For example, we have been aware of discussions where members of the collective have tried to convince people in the village of sustainable ways of cultivating the land or, of how global capitalism has enforced ways of working that harm local land and these become re/contextualised in ways of working with children in the after-school workshop. *Second*, mathematical knowledge such as skills and competences for making constructions and even for articulating a viable reasoning process evolve not as formal education but through emergent activity where ‘more knowledgeable others’ share knowledge and expertise upon demand in a non-hierarchical manner. This was evident at a number of occasions when groups of children across ages were involved into making complex constructions (see woodwork in table 3) but also when they had to articulate arguments for convincing each-other. One may ask how such knowledge is being circulated, shared amongst the bodies of children and adults and how does it contribute towards reconfiguring collective subjectivities.

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