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## Mediated territoriality: rural workers and the efforts to scale out agroecology in Nicaragua

Nils McCune , Peter M. Rosset, Tania Cruz Salazar, Antonio Saldívar Moreno and Helda Morales

The Spanish word *formación* can be translated as ‘training’ or ‘education’, but Latin American social movements use it as inspired by Che Guevara’s notion of ‘molding’ the values of the new woman and new man for egalitarian, cooperative social relations in the construction of a ‘new society’. This contribution presents findings on the dialectical linkages between the *formación* processes led by the Rural Workers’ Association (ATC) and the gradual transformation of the Nicaraguan countryside by peasant families choosing to grow food using agroecological practices. We use Vygotsky’s sociocultural historical theory to explore the developmental processes of *formación* subjects and the pedagogical mediators of their transformation into movement cadre. The motivations of active learners to develop new senses and collective understandings about their material reality become a counterhegemonic process of *internalization* and *socialization* of agroecological knowledges and senses. In this paper, we further explore the *formación* process by identifying *territorial mediators*: culturally significant elements within and outside of individuals that facilitate the rooting of agroecological social processes in a given territory where the social movement is active. By placing the territory, rather than the individual, at the center of popular education processes, new synergies are emerging in the construction of socially mobilizing methods for producing and spreading agroecological knowledge.

**Keywords:** social movements; mediators; territory; agroecological transition

We will transform the struggle for land into the struggle for territory, along with developing a new productive model for food sovereignty, based on a more ‘autonomous’ agroecology by using our own local resources and inputs and recovering our ancestral knowledges.

La Vía Campesina, Marabá Declaration, 2016

### Introduction

An incipient literature on agroecological *formación* is emerging among academics who study new generation agrarian movements (Caldart 2002; Sevilla Guzmán 2013; Meek 2011, 2014, 2015; Rosset et al. 2011; McCune, Reardon, and Rosset 2014; Costa, McCune, and Hernández 2014; Rosset 2015a, 2015b). With the consolidation of La Vía Campesina (LVC), an international alliance of peasant, indigenous, rural proletarian, youth, feminist and pastoralist organizations and social movements from 79 countries,

the capacity for rural movements to share ideas and criteria about educational processes has vastly increased, as well as the sophistication of their pedagogical proposals. In Zimbabwe, Mali, Mozambique, Niger, Haiti, India, Thailand, South Korea, Spain – and many more countries in five continents – LVC member organizations are founding agroecology schools based on both formal and informal educational approaches. Indeed, the Coordination of Latin American Rural Organizations (*Coordinadora Latinoamericana de Organizaciones del Campo* – CLOC), the continental expression of La Vía Campesina in Latin America, has even created a series of peasant universities called the Latin American Agroecological Institutes (*Institutos Agroecológicos Latinoamericanos* – IALA) in Brazil, Venezuela, Paraguay, Argentina and Chile, with several more in development (Román and Sánchez 2015). These popular universities are ‘sovereign spaces’ for social movements of CLOC–LVC to develop their own curriculum and organizational structures, based on their original pedagogical theories and methodologies. The organizations of CLOC have converted agroecology into a tool for social and political struggles to recover and transform food systems, using the frame of food sovereignty to challenge capitalism, colonialism, environmental destruction and patriarchy (Wittman 2010; Moyo, Jha, and Yeros 2013; McMichael 2008; Martínez-Torres and Rosset 2010).

Teaching agroecology turns out to be an epistemologically complex task, given its incisive critical nature, wholesale rejection of formulae, and insistence on equal footing for Western and non-Western forms of knowledge (Francis et al. 2003; Toledo 2011; Ferguson and Morales 2010; Sevilla Guzman and Woodgate 2013). Conventional university education in Northern countries increasingly includes agroecology in some form or another, often as action- or participatory education (Lieblein, Ostergaard, and Francis 2004; Méndez, Bacon, and Cohen 2013), but has difficulty foregrounding the knowledge of rural peoples, likely due to the highly diverse knowledges and *ways of knowing the world* found in rural cultures. The organizations and movements of LVC approach agroecology from distinct historical experiences and collective identities, making their agroecological pedagogy (a dialogue between a sociopolitical organization and its members) inherently diverse (Martínez-Torres and Rosset 2014), a point we will return to later. The fact that despite its complex definition, the rural peoples of the world have been practicing agroecology for thousands of years makes the challenge of ‘teaching’ agroecology that much more of a paradoxical and pedagogically rich process within LVC (Rosset and Martínez-Torres 2013). Irene Leon (2010), an Ecuadorian theorist within CLOC, has proposed a creative use of Spanish phrases to suggest that rather than the traditional focus on the future (*‘el porvenir’*) popular movements can look around them and discover the already existing solutions (*‘el ad-venir’*) to social and environmental crises.

Agroecological *formación* by LVC necessarily finds itself within the debate about how to scale out (create many more successful experiences) and scale up (create institutional support for) agroecological farming (Parmentier 2014; Rosset et al. 2011; Rosset and Martínez-Torres 2012; Rosset 2015b; Isgren 2016). Despite increasing recognition of agroecology as a key element of just, healthy, sustainable food systems, there is continuing debate on the political economy and methods for scaling out agroecological farming, which favors the interests of small producers, rural communities and consumers, but not private capital accumulation (IAASTD 2009; Declaration of Nyéléni 2015). Researchers, advocates and social movements look for methods for transforming isolated experiences by dedicated farmers into state-supported, landscape-wide processes of agrarian change (Rosset 2006; Altieri and Toledo 2011; Gliessman 2013). Latin American rural social movements are looking to use their extensive territorial structures and trained cadres to accelerate the transition to agroecological farming, while also pushing for enabling state supports for small

farmers and an end to government subsidies to socially and environmentally destructive agribusiness ‘empires’ (Van der Ploeg 2008; LVC 2013).

In the Rural Workers’ Association (*Asociación de Trabajadores del Campo* – ATC) of Nicaragua, a classic example of a rural proletarian organization within LVC, *formación* has traditionally been a process of developing knowledge and leadership capacities in labor union cadres. After its founding as a clandestine organization in 1978, the ATC taught thousands of its members to read and write in the early 1980s, having been transformed into a mass organization during the Sandinista Revolution, with capacity to push through agrarian reform and give continuity to the historic popular literacy campaign spearheaded by Fernando Cardenal in 1980 (Núñez Soto 1995). Of the Nicaraguan mass organizations, the ATC sent the largest contingent of members to defend the Revolution against the *Contra* armies. It became the organization responsible for political education of all Nicaraguan labor unions, after building a national school in 1986 in Santa Emilia, Matagalpa (CIERA 1989). The ATC’s original curriculum became models for teaching literacy, gender equality and youth leadership, both nationally and in the context of LVC.

After the Sandinista Revolution was voted out of power in 1990, incoming politicians immediately prepared to privatize state farms, combining neoliberal ideology with business interests (Núñez Soto 1995). Having defended the state farms for a decade from *Contra* attacks and recognizing that they would be immediately fired and blacklisted by private owners, ATC workers massively occupied and transformed state farms (*Áreas Propiedad del Pueblo*) into collective worker-owned cooperatives (*Áreas Propiedad de Trabajadores*). Under pressure from the banking sector and neoliberal politicians, many cooperatives were subsequently ‘parcelized’ by their members and turned into individual peasant smallholdings, in which the ATC has established 276 cooperatives (Wilson 2013). The two wings of the ATC – farmworker union locals and peasant cooperatives – represent the same highly marginalized sector of Nicaragua, although one has gained a degree of land access. Despite the process of *re-peasantization* (Van der Ploeg 2008) experienced by its base, the ATC’s rural proletarian ideological and organizational perspectives remain in its core identity. Since 2006, LVC’s regional Central American *formación* programs have taken place in Nicaragua, at the ATC’s ‘Francisco Morazán’ International Worker Peasant School in Ticuantepe, at 15 kilometers from the capital city of Managua.

Most of the scholarship related to the ATC has focused on the worker-owned cooperatives that it created in the chaos of the early 1990s, its attempts to become a participant in Nicaraguan coffee markets, and its role in the marches of unemployed workers and the breaking up of the mortgaged large coffee plantations into individual farms in the early 2000s (Wilson 2013, 2015). More recently, the role of the ATC in the creation of Law 693, the Law of Food and Nutritional Sovereignty and Security, has been discussed by Araujo and Godek (2014). The ATC’s educational work has not received much attention, despite its role as regional leader in *formación* processes of LVC (Costa, McCune, and Hernández 2014; McCune, Reardon, and Rosset 2014).

In this contribution, we explore the linkages and gaps between the critical pedagogical processes generated by the ATC and the landscape-level transition toward agroecological farming in Nicaragua. Using the sociocultural historical approach to learning, as developed by Soviet psychologist Lev Vygotsky (1896–1934), we try to identify the relationships between purposeful transformations at individual and social scales in order to find mediators of a qualitative shift toward collective action in agroecology. Systematizing observations of incipient territorial processes, we reflect on how critical educational processes can contribute to social organizations’ material capacity to change food systems. Specifically, we ask two questions: How do people transform themselves through

participating in agroecological *formación* by agrarian movements? And, how do agroecological *formación* processes transform territories? Our research is based on 26 months of participant-observation as a guest teacher in the ATC's 'Francisco Morazán' International Worker Peasant School, as well as four other schools of the ATC in Nicaragua where agroecology is taught and discussed among youth and adult rural workers and peasants.<sup>1</sup> Socially committed, 'situated' research methods permitted access as a semi-external 'technical team member' to debates and internal studies that took place in the ATC's National Agroecology Commission during the ongoing collective construction of the Agroecological Corridor, a social process methodology intended to scale out agroecological practices. Biographical interviews were carried out with youth and adult peasant farmers and ATC members, and feedback workshops yielded valuable information on knowledge, attitudes and critical perspectives on *formación*.

We argue that the construction of counterhegemonic education strategies using agroecology is a process of emergences (Santos 2009, 2016) that stem from the *diálogo de saberes* that characterizes LVC's use of food sovereignty and agroecology in its highly politicized territorial struggles with agribusiness, the banking sector and institutions that support global capital expansion (Toná 2009; Martínez-Torres and Rosset 2014). Due to agroecology's place-based specificity and insistence on solutions that come 'from below' – from the real, living experiences of rural workers, peasants and indigenous farmers, especially women – we consider that LVC's dialogue-based educational approach has taken on spatial characteristics. The insertion of ATC cadres-in-information as facilitators in real territorial contexts creates social situations of development that permit the internalization of values, knowledge and attitudes. We synthesize the ATC's emerging body of experience in order to draw out lessons that can be used in planning territorial *formación*, both in Nicaragua and more generally in rural social movements' efforts to scale out agroecology. We use the term 'territorial mediators' to identify the political, social and cultural elements that can radically alter the spatial relations of a social movement with its potential mass base in the countryside, allowing agroecological farming to expand quantitatively, and qualitatively to set into play further transformations within individuals and across the rural landscape.

### The sociocultural historical approach to learning

The sociocultural historical approach stems from Russian psychology of the early Soviet period. Lev Vygotsky (1978) analyzed human development, beyond the strictly physical–biological parameters, in terms of interactions with culture; that is to say, our biological inheritance is manifested within a culture that redesigns and reconstructs it to provide socially mediated functions. Learning is not separate from living, but rather is the internal reflection of life activity within the mind. Cognitive and emotive processes intermingle as individuals actively take part in *social situations of development*, in which cultural contents first occur at an interpersonal level, before being reproduced individually and coming to form part of one's personality. As individuals *internalize* the meaning given to behavior and activities in the social interactions that surround us, the development of our minds takes place in dialogue with what Karl Mannheim (1941) calls our 'historical moment'.

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<sup>1</sup>These include the National Cooperative School in Somoto, the 'Rodolfo Sánchez Bustos' Agroecological Technical School of the North in Matagalpa, the Tobacco Workers' School in Estelí and the Mesoamerican School of Agroecology in Santo Tomás.

Vygotsky's theories on the development of language, personality and knowledge are strikingly in line with his contemporaneous thinkers, such as US pedagogue John Dewey (1915) who developed the experiential, *learning-by-doing* approach in the 1910s; Soviet educator Makarenko's (1955) work pedagogy of the 1920s; Leontiev's (1978) theory of activity; and Tolstoy's ideas on experimental learning; as well as the development decades later of critical social action research (Fals Borda 1979; Sevilla Guzmán 2013). Indeed, *activity* as the fundamental learning mechanism is also present in materialist philosophy. As Engels (2012) emphasizes, human acts part from all *preceding human social activity*; that is to say, each individual's activities take place within a historical framework that we can call human experience and which is reflected in individuals as *social consciousness*. In Marxist philosophy, consciousness is fundamentally developed through *transformative practical activity* (Cardentey et al. 2005). The writings of Ernesto 'Che' Guevara particularly emphasize how individuals' perspectives about themselves and their reality change through voluntary participation in collective efforts, developing within them the capacity and necessity to follow through on their convictions with concrete actions (2009). In doing so, conscious collective action changes the objective constraints of social and political struggle, creating possibilities for major structural transformations.

Freire (1970) adds another dimension to this reasoning, by arguing that our process of seeing our relationship to social structures of injustice, our *contextualization*, takes place through *dialogue* with others who also are seeing their relationship with social reality. This pedagogical dialogue among equals produces a pattern of social action followed by collective reflection, followed by more conscious action, in a process known as *praxis*. Transformative, class-based social action is invariably linked to an alternative historical project of human emancipation. Gramsci (2011) writes of *hegemony* as a historical condition present in class society, in which one class leads a historical bloc that is capable of generating hegemonic social consensus around certain ideas or senses. He points to the role of intellectuals in legitimizing or transforming this consensus by assuming and defending key positions before society. Meek (2011, 2015) notes that rural proletarian social movements educate cadres as *organic intellectuals* capable of participating in the *war of positions* by developing and using mobilizing concepts such as 'food sovereignty' and 'agroecology' to advance the struggle of popular classes to transform society by creating new *historically transformative senses* and consensus against Capital. Barbosa (2015, 2016) demonstrates how rural social movements consciously design educational processes as a *political project* to transform rural peoples into *the* political subjects and actors in the transformation of their own realities.

Returning to Vygotsky, the pedagogical component of Capital's hegemony is in the clever *mediators* through which individuals (unintentionally) internalize and eventually reproduce the logic of the dominant system. Consumerism, made possible through global inequality and the speculative economy, is a *socially demobilizing* mode of life that currently threatens human survival. The role of media in internalizing the logic of consumerism is fundamental to capitalist hegemony. Counterhegemonic movements, such as LVC, must create processes of *counter-internalization* and spaces for learning outside the reach of Capital's cultural mediators (Mészáros 2008; Meek 2011). This is exactly the basis for the autonomous peasant schools used by CLOC in Latin America and globally by LVC to develop leadership, social consciousness and agroecological knowledge in movement cadres.

Recognizing that culture provides *pedagogical mediators* used by people to internalize historically constructed behavior patterns, social movements intentionally create social situations and cultural contexts that construct and reinforce qualitatively distinct learning



processes in individuals (Cho 2010). Group cohesion is fundamental to this effort. In the schools of the Landless Workers' Movement (MST) of Brazil, 'school time' is highly organized to create contexts for developing solidarity, cooperation, reflection and transformative action in learners (Caldart 2002; Meek 2015; Barbosa 2015, 2016). Pedagogical mediators may include specific *moments or activities* experienced by learners, or certain *people or mentors* that highly influence *formación* subjects' sense of themselves or their context. While consumerist culture uses exploitative body images and stereotypes to erode individuals' sense of self-worth, processes of *formación* explicitly make the effort to help people understand themselves, collectively and in a sociohistorical context, thereby developing critical self-awareness and self-esteem.

The sociocultural historical approach to learning emphasizes the instruments that transmit knowledge and senses *from* a cultural medium *to* the internal mindscape of individuals. Many of its corollary concepts are applied in agroecological *formación*. Scaffolding learning, for example, is an approach in which peers and teachers carry out activities *with* an individual learner for a period until she is able to perform the activity by herself (Pea 2004). This, which Leontiev (1978) calls *appropriation*, is perhaps *the* classic (indeed, pre-historic) means by which to teach food production and collection activities. Pea (2004, 429) draws the parallel between appropriation in both unrehearsed, necessary life activities and classroom settings:

even the naturally occurring interactions in which the mother scaffolds the baby [are] culturally constituted productions with a history that [makes] them akin in kind to the more historically recent instructional interventions in formal education by which we seek to teach a scientific view of concepts.

Agroecological *formación* draws from the necessary, socially shared activities of food production to discover mediators of human development.

It would be incomplete, however, to characterize the sociocultural historical approach as focused solely on processes of internalization. On the contrary, internalization has its dialectical counterpart in *socialization*, the process by which knowledges and senses are returned to the cultural medium after having been re-constituted within the individual mind (Donato and MacCormick 1994). People construct culture even as culture constructs them, and in doing so, they become carriers of sociocultural patterns and knowledge. Much of the debate with which this contribution engages is on how to create formative processes of internalization and socialization within cultural media that are ripe for agroecological transitions.

### **Agroecological transition, collective action and cadres**

Agroecology is a critical theory, a practice and a movement (Wezel et al. 2009; Van der Ploeg 2011) that inserts ecological principles as well as peasant and indigenous knowledge into food system management, in a scaled, systemic approach that recognizes biological, social, cultural and economic factors of complexity. Stemming from a critique of the negative externalities of the industrial agriculture model, agroecology as a scientific discipline emerged during the 1970s and 1980s (Francis et al. 2003; Parmentier 2014). General principles include nutrient cycling, energy and water efficiency, and above- and below-ground biological diversity, but agroecological practices are context specific, and depend on locally available resources and knowledge (Altieri 1995; Gliessman 2007). The United Nations (UN) Special Rapporteur on the Right to Food recognized in 2010 that agroecological

farming could double food production in many parts of the world, and with lower usage of water and energy resources (De Schutter 2010). Proponents argue that agroecological farming has the potential to slow, stop and even reverse global climate change (Grain 2009).

Van der Ploeg (2011, 48) notes that to qualitatively transform the global food system, agroecology needs a *social carrier*: a group whose ‘own emancipation (the struggle for its own interests and prospects) strongly *coincides* with the defence and further development of agro-ecological practices’ (emphasis in original). He further concludes that the peasantry is the only possible such social driver of the *agroecological transition* (Calle-Collado and Gallar 2010; Sevilla Guzman and Woodgate 2013) on a sociohistorical scale. Agroecological thinking posits a critical interpretation of capitalist development and global inequality, disputing the ‘neoliberal ecological rationality’ (Wittman 2010) that guides agribusiness and the consolidation of the global food system by corporations under the guise of efficiency (Altieri and Toledo 2011). As an offspring of the classical agrarian question, agroecological social theory sees small farmers and the peasantry as part of the working classes, rather than petty bourgeois commodity producers (Sevilla Guzmán 2013; Moyo, Jha, and Yeros 2013). Global resistance to the corporate food regime (Friedmann and McMichael 1989) is growing, in the form of agroecological *labor-based intensification* (Van der Ploeg 2008) as communities re-order natural and social resources to meet local needs into the future.

Despite the collective nature of this struggle, social movements recognize that it is necessary to have individuals with technical, political and professional formation, in order to carry out the tasks of mediation between popular power and existing political and economic powers (Román and Sánchez 2015). Five centuries of colonialism have left their marks: due to the lack of self-esteem, or the lack of class consciousness, or simply due to custom, in daily practice the relations of power reproduce the roles of oppressed and oppressor (Koral 2007). This imposes subjective limits on human emancipation, even when popular sectors make significant political gains, such as in the countries of the socialist-leaning elected governments that participate in the Bolivarian Alliance for the Peoples of Our America (Alianza Bolivariana para los Pueblos de Nuestra America – ALBA) alliance (Santos 2009). Institutionalized reductionist knowledge, superficial mass media stereotypes, and the long shadow of the ‘end of history’ neoliberal finality function as tools for reproducing social differentiation, isolating communities from the ‘technical’ decisions made by political or legal ‘experts’. The middle layers of society, constituted of managers, professionals and bureaucrats, often normalize inequalities in class society, since they give the impression of mobility and meritocracy (Mészáros 2008).

Many movements have discovered that, in practice, it is more convenient to educate their own *mediators* than to depend on individuals trained by the oppressive system (Sevilla Guzmán 2013; Barbosa 2015, 2016). As examples: agrarian reform is mediated by bureaucrats and attorneys; agroecological production by technicians and staff of non-governmental organizations; markets by intermediaries. The conscious creation, by the movement, of a version of the sociocultural category of ‘trained’ person or professional, is not to cede to a mechanism of domination, but rather to subvert it with a subaltern identity, as in the *organic intellectual* described by David Meek (2015) in his study of Brazilian social movements. Having people trained to understand the ‘how’ of the challenges involved in structural and political change, movements are able to carry out actions and incursions into terrain outside of the familiar, such as negotiations with the UN’s Food and Agriculture Organization (FAO), articulate with universities and participation in social media. By reconstructing and transforming the social roles historically reserved for the sons and daughters of the elite or middle classes, popular sectors are ‘occupying’ strategic spaces of the political and class struggle (Patricia Rojas, former Foreign Minister of Honduras, pers. comm.).



According to leading Panamanian peasant leader Erick Fernández (Fernández, Panamanian peasant leader, pers. comm., 14 September 2015), La Vía Campesina inherited the concept of *'formación'* from the proletarian internationalist tradition of the twentieth century. What makes the political and agroecological *formación* of CLOC and LVC historically unique is the level of continental and global collective construction and articulation of formative processes, curriculum and educators, even while each organization's autonomy is maintained. CLOC considers its very *construction* of *formación* processes to be a space of Latin American unity among peasants, indigenous peoples and rural proletarians, in the interest of global working class struggle (Stronzake 2013). The tension inherent in using schools (a colonial construct) to form radical consciousness is partly addressed by Paulo Freire's pedagogical contributions, toward the creation of spaces for popular subjects to take account of their context and 'pronounce' the world using their own experiences as objects of analysis.

In a world still dominated by colonialism, patriarchy and capitalism, knowledge is divided and specialized to the point that it loses its social meaning and relevance (Barbetta 2012). Social movements that work for deep changes in power structures also defend the diverse *ecology of 'other' knowledges* – popular, empirical, traditional, 'magic', peasant, indigenous, Black, feminist, queer – through the *diálogo de saberes* (roughly translated as the 'dialogue among ways of knowing'). Starting off with the recognition that there are many ways of knowing, producing and pronouncing the world – without one being inherently superior to another – the *diálogo de saberes* is a method for co-existence and cross-pollination of knowledges, in function of the collective construction of new senses of struggle (Martínez-Torres and Rosset 2014). The diverse historic experiences of movements and cultural identities in the rural world contribute kinds of knowledge that are necessary for a dialogue on human co-existence in the twenty-first century; however, these knowledges will only emerge from fabricated 'absences' (Santos 2009) once Western science and Cartesian and reductionist knowledge no longer dominate and imperil other ways of knowing. The cadres formed through the vast *diálogo de saberes* that takes place in internationalist agroecological education are highly valued by their movements (McCune, Reardon, and Rosset 2014).

### **Critical pedagogy and individual transformations: pedagogical mediators**

The ATC's 'Francisco Morazán' International Worker Peasant School (*Escuela Obrera Campesina Internacional*, hereafter referred to as Escampi) is an autonomous social movement space, subject to the ebb and flow of diverse courses, meetings and gatherings during a given year, based on need. Some technical educational programs have had support from the Nicaraguan government, while others depend on funded projects or programs, and others are made possible by participants' willingness to shoulder their own costs. In 2014, for example, a partial list of gatherings at the school would include: regional meetings of LVC's Political Commission and Women's Commission; a national ATC youth encounter; a pedagogical gathering of social movement youth of Latin America; the annual planning meeting of the Political-Pedagogical Commission of LVC Central America; several government-funded training programs for tobacco and banana plantation workers; a three-day meeting of the International Coordinating Commission (ICC) of LVC; a summit of women who belong to social organizations in Nicaragua; an emergency meeting of Central American social and political organizations 'against imperialism'; a weeklong course on muralism taught by an educator from a Mexican LVC organization; courses in

jam, wine and honey production for ATC youth; and two two-week *formación* courses in agroecology and food sovereignty for regional LVC youth.

In these regional LVC agroecological *formación* courses, learners create small groups called *núcleos de base* (Barbosa 2016) to share daily chores, carry out agroecological practices, and reflect upon their own learning process. Most days begin with a *mística* ceremony to commemorate peasant and indigenous roots, followed by practical farm and classroom activities and reading time in the evenings, mixed with meals, film showings, guest visits and spaces for reflection. At Escampi, the ATC uses the concept of *learning to learn* as a process for developing in subjects the capacity for dialogue and exchange of knowledges without falling back on preconceived, eternal, Western ‘truths’ (Barbosa 2013) or assumptions. Prejudices and chauvinism are dealt with as part of subjects’ conscious and intentional process of *unlearning in order to learn* and are often used pedagogically within coursework and discussion. In moments between concrete, increasingly complex group activities, learners are asked to reflect based on simple questions: What do I feel? What do I think? What can I/we do? These questions correspond to emotive, cognitive and developmental learning objectives, in the interest of inciting debate, creative thinking and original proposals in subjects.<sup>2</sup>

During growing seasons, Escampi activities involve learners directly in planting, weeding, watering, pruning and harvesting crops, depending on climatic conditions and the frequency of courses in each school. All five ATC schools have *in situ* seed libraries that include medicinal plants. As students plant trees, prepare seed trays, make cuttings, learn the cycles involved in farming, and find pleasure in seeing changes from one day to another, they discover in themselves new characteristics: patience, stewardship, comradery, intense feelings of belonging to the land (Lieblein, Ostergaard, and Francis 2004). Ecological and agroecological education tends to inspire humility and a sense of wonder, as students discover the complex and compelling ecological structures and processes that surround them (Carson 1965). The organization of the educational process provides learners with settings in which they can develop new skills based upon the accumulation of experience and reflection, with growing trust in themselves and their abilities as they gradually combine subject matters with agroecological activities. As *formación* subjects develop their capacity to reflect upon and debate relevant topics, the Freirian principle is reinforced: *in changing the world, we change ourselves*. The connection between the structural transformation of society and the emancipation experienced by individuals in *communion* with one another is a dialectic explored in classic texts of critical pedagogy (Freire 1970, 1973).

Recovering *historical memory* is another strategic objective of LVC *formación* (Cuevas-Marín 2013). This means that the histories of popular struggles, such as indigenous resistance to displacement, Black resistance to slavery, peasant resistance to modernization schemes, and women’s resistance to objectification and violence, are taught in order to put social movements’ current efforts within a historical frame. Historical memory is necessary for constructing collective identity, and, in many cases, developing the self-esteem of students. Many students mention that for the first time in their lives, they feel that they know themselves, or that they can understand and forgive their parents, now

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<sup>2</sup>In 2014, these courses were carried out by 71 students and 12 LVC educators, and then followed by ‘replica’ courses organized by Escampi students in the territories of Central American movements, ultimately involving 1135 people from seven countries as subjects of the ATC’s agroecological curriculum. Although the ‘replica’ aspect was later discontinued as an ATC funding source scaled down its operations, the ATC held onto the concept and applied it in subsequent formulations of agroecological education, as we discuss below in the sections on the agroecological corridor.

that they understand their social and historical context. During classroom sessions on Latin American history, students often make the connection between agroecological farming and cultural resistance. Agroecological practices are about more than producing food; they are sociocultural patterns and knowledges that people can decide to recreate and share in social settings. A creative, intersubjective process of tending animals, coaxing plants to grow, and learning and sharing words of the trade, agroecological activity is also an appropriation by students of their peasant and indigenous roots.

Agroecological curriculum at Escampi refers to, but does not focus on, specific functions of organisms within agroecosystems, energy efficiency of different cropping patterns, specific pest-management strategies, and other topics within what educators call the ‘technical’ aspects of agroecology. Of the various tendencies within agroecology, LVC is most often seen as representing the more ‘political’ tendency, in that agroecology is understood as an alternative to the dominant, top-down agribusiness model (Rosset and Martínez-Torres 2012). While this is true, it would also be accurate to describe LVC’s agroecological thought as particularly focused on the recuperation of ancestral knowledge, rather than promoting the kind of exogenous, ecologically sound technical fixes often supported through FAO and government programs (Declaration of Nyéléni 2015). Without comprehending and recovering their own ancestral practices, LVC youth would have little of their own to bring the *diálogo de saberes* that they develop with Western reductionist thought.

At the same time, lots of empty ‘motivational’ talk about agroecology (referred to variously as ‘rolls’, ‘straw’ or ‘tossing a molar’ by students of different Spanish-speaking countries) is also fiercely rejected in the social setting of the school. Rather, educators highlight changes that occur in students’ attitudes and behavior, changes that are interpreted as signs of readiness to take on responsibilities related to agroecology. For example, a student who adds to an exercise on compost building by explaining how composts function differently in her high-altitude region of Guatemala is likely to win praise from her professor and might be given more responsibility within the course. For Escampi educators, training in agroecology requires a curriculum that strikes the right balance between teaching ecological principles, rooting knowledge in local experiences and practice, and articulating students into strategies for building food sovereignty.

In their post-course reflections, Escampi educators generally use adjectives to describe entire classroom groups, rather than individuals. Among educators’ 2014 notes are phrases describing different groups as ‘overly cautious’, ‘boisterous’ and ‘tired’. The intensity of interactions and collective living creates dynamics of behavior, attitudes and learning strategies that occur first at interpersonal levels, before becoming part of what each person learns from the experience. A student confirmed the importance of the emotive factors in an interview:

After the course, I felt that I brought all that feeling back home with me; it makes me see things with a human feeling, and share more. When [at the course] you converse deeply with people who you never met before and you feel that you are with friends for life, it gives you this joy and you feel that you are struggling in something dignified. (Fran Gutierrez, interview 9 August 2015)

### **From pedagogical mediators to territorial mediators**

The ATC has over three decades of experience as a popular educational subject in processes involving farm workers, worker-owned cooperative members, peasant farmers, women’s groups and youth movements. The integration of agroecological content into ATC

schools has been a gradual and at times tentative process, as the movement's many organizational needs have contended for opportunities. Historically, the priority has been on educational initiatives that develop the capacity for ATC workers to negotiate for better wages and working conditions in monoculture plantations and agro-industrial plants. Escampi's signature programs for many years were courses for coffee, banana, tobacco and sugar cane workers. These courses are financed by the Nicaraguan Government's National Technology Institute (INATEC) and provide a singular chance for farm workers to learn relevant labor legislation and normative conventional practices, to better defend themselves from labor violations and agrochemical exposure. Training field workers in safety procedures, the courses provide spaces for worker dialogue about health, gender, contamination and monoculture. Based on the approach of 'validating empirical knowledge', the ATC's INATEC courses graduate workers with diplomas in their field (as examples: certified cigar roller, certified coffee nursery worker), generating notable shifts in self-esteem and higher expectations for labor negotiation with private-sector agribusiness, although this latter strategy has yet to bear significant fruit in terms of wages.

As national and international funding priorities have moved toward issues like 'youth employability' and 'entrepreneurism', the ATC has responded with educational programs that promote peasant youth and women's self-employment cooperatives of honey, wine and jam producers. These cooperatives generally have a tendency toward low-cost, agroecological production methods, since the Nicaraguan consumer market provides insufficient demand for labeled, processed farm products. As such, in the ATC there are two grassroots tendencies that have generated a demand for agroecological education in the ATC: one from the cooperatives that seek to bring down their production costs and commercialize agroecological products, and another from the farm worker sector that recognizes the social costs of agro-chemical use and exposure within the monoculture model. In addition to these grassroots demands, the ATC leadership's participation in regional and global LVC critical dialogues around agroecology has generated another, exogenous demand on the ATC to offer agroecological education.

One of the challenges that movements face as they educate subjects based on agroecological principles is to connect learning content with real problems in the grassroots of the peasant and rural peoples' movement. While subjects are frequently integrated into the leadership structures of their movements, they are not always able to participate in the transformation of the territory they come from, and often wind up working far from home. It has been a challenge for the ATC to dialectically connect the learning processes in its schools with long-term, landscape-level growth in organizational capacity of rural communities. School activities have been more successful in developing cadres than in the re-integration of those cadres – the *socialization* of their developing senses of struggle – into the actions and strategies of territorial structures such as union locals, peasant cooperatives and related women's and youth movements. Partly due to the several distinct demands for agroecological education, students of agroecology courses are often selected from all parts of the ATC, making invisible important differences in land access, farming experience and responsibilities within organizational structures. Indeed, at times the high level of abstract debate and analysis at social movement schools contrasts sharply with the pace and content of local needs and organizing processes in participants' home communities, leading to an expanding gap between theory and practice, and a sense of frustration in young cadres.

Many former subjects in movement educational processes find it extraordinarily difficult to apply even a small amount of what they feel they have learned, since components of their home reality – such as unemployment, landlessness and poor communication within families – contrast sharply with the movement school's learning content. Many

have learned the lesson on collective action and alienation that one mentioned in an interview: 'I know that alone, my actions have no impact. It is inside, not outside, the organization where I can be useful. But while I am waiting for their call, I have to find [economic] solutions' (Oscar Santana, interview 15 March 2014). In Nicaragua, it is common for returning students to pay frequent visits to their municipal or departmental ATC office at first, but many offices are unable to provide new tasks for cadres-in-training, and some office staff may even see some of the animated, articulate young cadres as potential rivals. Over time, these young people tend to either gravitate toward the activities carried out through national ATC leadership structures, or distance themselves entirely after a few discouraging attempts to involve themselves in local organizational structures. Although some may continue with the movement for years, their sense of power and capacity to impact their own reality is limited. Many feel that they can only apply what they have learned in movement schools if the movement offers them a job and, in fact, several movements carry out enormous efforts to find a little money to provide occasional employment to trained cadres in the effort 'not to lose them'.

In meetings on the political and pedagogical dimensions of forming cadres, national ATC leaders recognize the openness (and reversibility) of *formación* processes: they point to various cases of 'de-formation' of young cadres, who have internalized elements of their social reality – factors both internal and external to the organization – especially macho or ageist attitudes, poor communication skills, and an insufficient sense of belonging to/ownership of movement processes. This problem is compounded by doubt among ATC leaders about whether they all mean the same thing when they speak of the qualities to be desired in a cadre. Despite general agreement on the role of ATC schools and popular education, the concept of cadre is not universal in all ATC spaces. The more radical idea of cadres as mediators in the ascendant democratization and transformation of social reality is especially present in youth and adults who have participated in internationalist spaces. In these settings, including LVC meetings or international courses at Escampí, educators and learners frequently refer to, discuss and even update the Guevarian conception of a principled, critical revolutionary cadre. A more limited idea of cadres, as workers trained mainly in the administrative and legal procedures of unions and cooperatives, persists among many 1980s-era ATC cadres who themselves have had little access to LVC spaces, and particularly among those with administrative roles. For the ATC, temporarily pulling youth from the empirical, 'nuts-and-bolts' labor movement sociocultural learning process and inserting them into the international LVC *formación* dynamic is a method for injecting new energy and ideas into the movement in Nicaragua, thus institutionalizing the concept of cadres as critical transformative subjects. However, this strategy runs the risk of giving the young learners 'more ideas than space to implement them' and causing friction in local ATC offices in the territories.

ATC educators recognize the need to integrate the *formación* of cadres into real, grass-roots processes of *in situ* agroecological learning that complement existing territorial structures of the ATC. In 2013, the Cuban LVC organization, National Small Farmers' Association (*Asociación Nacional de Agricultores Pequeños* – ANAP), taught a first-ever international course on the methodology of *campesino-a-campesino* (CAC) specifically for LVC agroecology trainers, at ANAP's 'Niceto Pérez' National Training Center in Artemisa, Cuba (McCune, Reardon, and Rosset 2014). After the course, the returning Nicaraguan delegation proposed a methodology for combining the more ideological agroecological *formación* already being carried out at Escampí with the social process CAC method. This dialogical learning method, from peasant organization to peasant organization, has been discussed by Martínez-Torres and Rosset (2014). ATC educators used

their relationships with other LVC organizations to retrace the history of the *campesino-a-campesino* method in its evolution from a local program in San Martín Jilotepeque, Guatemala, to a pilot project in the municipality of Santa Lucia, in Nicaragua (Holt Giménez 2006), to a national program of the National Union Farmers and Ranchers (*Unión Nacional de Agricultores y Ganaderos* – UNAG) in the heat of the Sandinista Revolution's interest in popular education (Burgos 1999), to a national agroecological movement within the Cuban Revolution, with over 300,000 peasant families implementing agroecology (Machín Sosa et al. 2010; Rosset et al. 2011).

The ATC study of the CAC method, and specifically the experiences in San Martín, Santa Lucia and ANAP's national school, led in 2015 to the creation of an internal working document called 'The Agroecological Corridor', a methodological proposal that integrates the ATC's strategy of agroecological *formación* of cadres with the territorial effort to scale out agroecological practices. This methodology represents a qualitative change because rather than a formative process based on the individual subject, the agroecological corridor is based on *formación* at a socio-territorial level. Learning is thus doubly mediated: first as a process of *internalization* in youth cadres and peasant farmers; second as a process of *socialization* in the socio-territorial context of peasant farms. The action–reflection–action pattern of popular education is carried out territorially in the feedback dynamic between young, often landless, politically trained ATC cadres, and peasant farmers with land access, with ATC *formación* processes and peasant agroecosystems as mediators. A socially activating educational process is spread out across and linked to *places*: specific socioecological contexts and land-based cultural relations (Martínez-Torres and Rosset 2014; Meek 2015; Barbosa 2015, 2016).

The social method of the agroecological corridor stems from the creation of two differentiated roles: the peasant-multiplier and the cadre-facilitator. The peasant-multiplier is a peasant with land access who is interested in continuing to improve their agroecosystem using agroecological principles and willing to freely teach peers aspects of agroecology. Peasant farmers who are already practicing several principles of agroecology in their parcels spend time at ATC schools and reflect upon popular education concepts, in groups with the accompaniment of trained ATC cadres. These peasant producers study pedagogical methods for teaching agroecology from their own parcels, as local 'multipliers' of agroecological practices using the *lighthouse farms* concept developed by Miguel Altieri (see Montenegro 2014). Later, by carrying out experiments and workshops out on their own land, these peasant-multipliers help expand the use of agroecological principles in the territories where the peasant movement is active. Rather than offering a theoretical explanation, or even demonstrating a couple of agroecological techniques, the social movement facilitates an opportunity for peasant farmers to travel to a farm and feel the soil, taste the fruits and speak with the farmer who is putting agroecological principles into practice. Without using technical language or creating a hierarchical teacher-student relationship, these exchanges motivate would-be agroecological farmers and facilitate learning.

The agroecological corridor methodology uses the term 'multiplier' rather than 'promotor' because the organizational role of 'gender promotores' already exists in all ATC cooperatives. Additionally, the special requirement of the CAC method that peasant-multipliers should have land access means that previously trained youth 'agroecological promotores' may not be eligible. These youth cadres with political training in agroecology from Escampi, however, are indeed the very definition of cadre-facilitators, who in specific territories carry out the role of organizing encounters, exchanges and workshops among peasant farmers. Rather than try to tell peasants how to farm, the cadre-facilitators identify agroecological principles already used on peasant farms and then accompany the territorial



processes of horizontal, place-based learning in a facilitative role. Their activities range from the mundane, such as signing people up for a workshop and negotiating transportation situations, to tasks requiring a high degree of communication skills, such as engaging isolated peasant families to carry out participatory agroecological assessments of their farms. The relationship they develop with peasant families will be a measure of their appropriation of concepts and methods of popular education. Only occasionally do cadre-facilitators intervene during exchanges to clarify concepts or offer examples of different practices in distinct settings, in order to help groups conceptualize the common principles behind diverse agroecological practices. As in Irene Leon's (2010) above-mentioned concept of the *ad-venir*, much of the methodology of the agroecological corridor involves revaluing and re-patterning the territorial resources and grassroots base that the ATC already has, rather than inventing something altogether new and organizationally costly (see Figure 1).

### The workshop

Using an ethnographical example, we can cautiously trace a few of the steps that have occurred in the earliest experiences of peasants' agroecological transformation mediated by the corridor. In a rural community in the department of Managua, there is a part of the population that identifies with the ATC – a cooperative of 32 members within a community of 240 people. From Escampi, young learners are sent out to the territories of the country to carry out agroecological farm assessments. In a parcel of a member of the cooperative, Doña Edelma, a small group of learners identifies two agroecological practices: crop rotation and the use of legumes to improve soil. They speak with Edelma to see if she would be interested in carrying out a workshop in her farm. At first, the peasant expresses her doubts: maybe it would be better if her husband were to explain things in the workshop. The youth invite her to a one-day capacity-building workshop for multipliers that will be held within a month at Escampi, the nearest ATC school. Doña Edelma arrives to the workshop with her youngest son; among the cooks, trainers and other participants, everyone watches the child so that she can participate in the day's activities.

Two months later, the day of the workshop in Edelma's parcel approaches. She has been preparing, saving legume seed to show the group. The students of Escampi have made several visits, and have gotten to know Edelma and her family better. They have learned in these two months about the problems in the community, where drought during two years has forced most of the families to depend on someone earning a salary in the

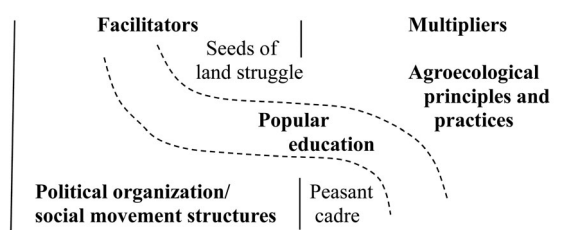


Figure 1. Fields of learning in facilitators and multipliers of the agroecological corridor. The two roles are connected through their use of concepts and methods from popular education. However, facilitators primarily take on political tasks related to the structures of their organization, whereas multipliers take on agroecological production practices. Overlap happens when peasants take on political roles as cadre, or when youth facilitators 'fall in love' with agroecology and develop eventual land demands.

capital. Formal employment is non-existent, and adults are hoping to find any work option that might appear. There are no clinics nearby, and the primary school in the nearby community has class hours so short that many children don't want to walk so far just to turn around and come home.

The day of the workshop, a bus rented by the ATC arrives with 14 people – four male peasant farmers, six women farmers and four students of the regional training program at Escampi. Additionally, seven people from the community have come – three from the cooperative and four who are not cooperative members. During the next five hours, a great deal of dialogue occurs: first a round of introductions and expectations, then a walk through the parcel of Doña Edelma that culminates in a generalized feeling of fascination with her garden of medicinal plants – something the students hadn't noticed in their farm assessment. Several people ask for stems of medicinal and ornamental plants to root in their home gardens. Others ask for Edelma to set aside a few seeds for them. The conversation is at times among everyone present; often it scatters into a dozen side conversations, but it is almost always centered on the phenomena being seen and felt in the parcel. Edelma never stops talking, answering questions, providing orientation and additional information.

Once all are back under the shade of the block-and-zinc house's porch, Edelma's husband serves coffee. This is an unusual role for him, but he seems to make the most of it, tenderly joking around with those he knows and politely serving the rest. Both the technical and the political aspects of agroecology have been present without ever dominating the conversation; on the contrary, the process of trial and error has been in the foreground, as well as a sense of identity, pride and belonging. Edelma has received both the compliments and the suggestions with animated patience. Her children blend into the crowd and attract no special attention.

At the end of the workshop, participants seem to emphasize their commitment to take what they have learned to their farms, parcels and communities. Nearly half mention the recuperation of ancestral knowledge. Several offer up their interpretation of the meaning of agroecology; none mentions food sovereignty, but one hears the concepts of retaking and taking care of 'our health', 'trees', 'the land' and 'the whole community', and the need to 'struggle together' so that 'our children and grandchildren have something to eat, something to live on'. Agrochemical and seed corporations are identified as predators that threaten the peasant family, although several say that 'we are the guilty ones' for having 'vices' and being 'lazy'. The students of Escampi make no effort to dominate the conversation, but do state their opinions once in a while and try to make sure that the women, youth and elders of the community are participating. For their *formación* course, the students will later write a report to reflect upon and suggest improvements to the workshop process.

### **Territorial mediators and scaling out agroecology**

As shown in the ethnographical example, the agroecological corridor is, above all, the re-patterning of grassroots organizing to meet the needs of the 'movement form' of agroecology. While this methodology has not yet been scaled beyond pilot school-territory relations in 14 municipalities of Nicaragua, sociocultural and cognitive processes are indeed emerging. The integration of youth cadres into territories as popular educators who drive the pedagogical development of peasant-multipliers, and help them transform their agroecosystems, is an entirely new conception of work for some areas of the ATC that have had less exposure to LVC and CLOC *formación*. In this sense, the ATC's newsletter, *El Machete*, has played an important pedagogical role in socializing and clarifying the agroecological corridor methodology to grassroots membership and leaders, some of whom have

affectionately taken to calling the methodology *trabajo de hormiga* – ‘ant work’, meaning humble, massive, gradual – in agroecology.

For the peasant-multiplier, the process involves trusting oneself, learning to value certain farm activities – such as seed saving and intercropping – for their ecological basis, gaining communication skills, learning to handle social situations and surprise questions, as well as becoming a more integral part of the movement’s territorial structure. These learning experiences are not as much about processing certain agroecological techniques or *content* as they are about *becoming* an agroecologist – in an ethical, cognitive, cultural, social and political sense. As Lieblein, Ostergaard, and Francis (2004) have identified in the case of university agroecological education, the ability to *envision* a distinct future is part of agroecological learning. For peasant-multipliers, designing their farm’s transition and conceptualizing change that takes place over *agroecological time scales* (Giraldo 2015) is part of the transformation they experience as individuals.

For youth cadre-facilitators, the learning process is more oriented towards the needs of the social movement to eventually replace cadres with a newer generation. It is necessary to have people trained in agroecology, not only as a technical discipline but also as a social process of participation, assessment and inquiry, as well as experimentation and sharing of know-how. Agroecological social processes are broad, plural and dialogical, and so must be the outlook of newly formed cadres. *Learning to learn* and *learning to unlearn* are key developmental steps in the consciousness-raising needed to become relevant actors in a world without fixed truths or definitive knowledge (Lieblein, Ostergaard, and Francis 2004). Escampi educators mention that teaching humility, solidarity, curiosity and patience is necessary for creating cadres capable of *challenging a social reality* damaged by spirals of poverty, a civil war fresh in the collective memory and a decade and a half of neoliberalism.

Territorial transformation is not a subject–object action carried out directly by a social movement; instead, it is a mediated process in which diverse subjects assume specific tasks in specific moments, creating social feedbacks and emergent principles. In systematizing the first set of experiences in the agroecological corridor, we can identify two categories of mediators: those provided by the movement and those that the movement must find in a territory. Mediators of the first category include: the social *movement presence* and local acceptance; local or regional movement *schools* that can be used to propel the territorial process; *cadre-facilitators* with training in agroecology and popular education; a *socially-activating method* that facilitates the interaction of agroecological subjects; and agroecological *organizational structures* that consolidate experiences into accumulated social learning. To diverse degrees, the ATC can provide all of these mediators in the territories where the agroecological corridor is taking root.

Other mediators are beyond the material capacity of the ATC, which must find ways to discover or activate them in a territory. As such they constitute ‘assumptions’ or *a priori* elements for the corridor’s function. These include: *land access*, which is often the major demand of ATC communities but not part of the corridor methodology; *peasant farmers with previous positive experience with agroecology*, whether or not they use the term ‘agroecology’ to describe what they do; and *local markets with direct access to consumers*, which in addition to providing income also offer a meeting space for interactions, and seed and idea exchanges among peasant farmers. The ATC’s membership has less land access than other farmer organizations in Nicaragua, so the corridor’s function requires that either those ATC members with land access take a central role, or that cadre-facilitators work with peasant farmers who are not members of the ATC. This is encouraging the development of territorial alliances with community organizations made up of local peasant

farmers, a particularly important and undermentioned kind of *diálogo de saberes* – between locally integrated, community-focused organizations and national social movements. Alliances with organizations like the Las Diosas Women’s Cooperative Union in Estelí and other important local groups have significantly helped the ATC consolidate the agroecological corridor.

The friendly, long-term relationship between the ATC and Cuba’s ANAP in the context of LVC has enabled constant dialogue and exchange of cadres between the two organizations, allowing them to draw comparisons and contrasts between the two national contexts – including the identification of conditional factors for success of the CAC method in building an agroecological movement in Cuba. While Cuba’s singularity is often noted in the high level of academic preparation of its peasant farmers, the ATC finds an even more important difference in the fact that agrarian reform is an ongoing process in Cuba, allowing people to enter farming without huge initial costs. The massive turning over of land to family usufruct farming in Cuba since 2008 has provided the ANAP with a continuous flow of new cooperative members interested in learning about agroecology. The organizational capacity of ANAP is also an important factor, as peasant farmers in Cuba – in contrast to most LVC members’ experience – have an organization that takes care of their bookkeeping, consistently finds them credit, inputs and markets, and involves them directly in national and local policy-making and revision. ATC leaders also recognize that the lack of a private agribusiness sector in Cuba has allowed the organized peasantry to assume the lion’s share of food production needs of the nation and develop important synergies with the state and with urban productive sectors.

Inspired by the example of ANAP’s Niceto Pérez school, the ATC’s conception of the role of the school within the corridor methodology is as a place for the ‘training of trainers’. ATC schools are slotted to become the base of operations, the theory engine and the facilitator of the learning process that takes place within the territories of the agroecological corridor (Figure 2). The dialectical relationship between the school and the territory is based in dialogue and feedback, to deepen the educational process for cadres involved in territorial work, scale out agroecology and create new ‘quarries of cadres’ that can be polished through their participation in the movement (Román and Sánchez 2015).<sup>3</sup>

With the gradual implementation of the agroecological corridor throughout Nicaragua, youth *formación* subjects are increasingly given concrete tasks that relate to their learning objectives in the territories of the social movement (Lieblein, Ostergaard, and Francis 2004; Méndez, Bacon, and Cohen 2013). As they study the political, social and cultural dimensions of agroecology, they will be responsible for accompanying communities, families and individuals who are learning agroecology and teaching it to others (Leontiev 1978; Pea 2004). The agroecological corridor’s capacity to effectively harness territorial mediators will ultimately be measured by the quantity, quality, distribution and diversity

<sup>3</sup>Notably, the Cuban example is also felt in Nicaraguan public universities, where a long-existing undergraduate program in agroecology (at the National Autonomous University in Leon) and newer master’s and doctoral graduate programs (at the National Agrarian University in Managua) have increasingly filled with students from the Nicaraguan government’s food-related institutions and ministries, organized and coordinated as the National System of Production, Consumption and Commercialization. This ‘sensitizing’ of national political and technical leadership to agroecology is analogous to the courses for government functionaries at ANAP’s Niceto Pérez National Training Center (Machín Sosa et al. 2010), with the obvious difference that in Cuba, the peasant movement itself is training public sector ‘mediators’. Both cases are based on recognizing the need for teaching social and political actors how to play a facilitative role in the scaling of agroecology.

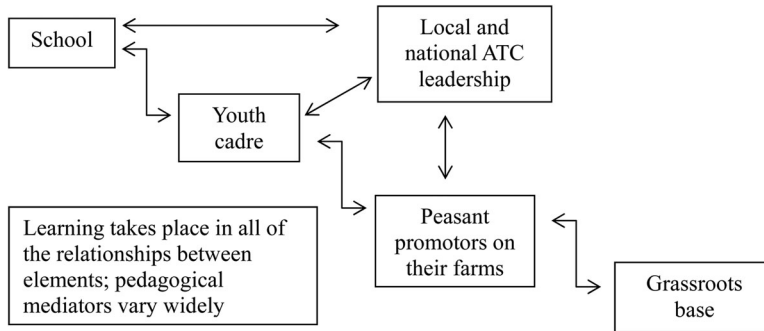


Figure 2. Idealized relations in the school-territory system of the Asociación de Trabajadores del Campo (ATC).

of real experiences of peasant agroecology. The ATC has not yet introduced a methodological tool for measuring the self-propelling character that the peasant-to-peasant method has shown in other contexts. However, it has proposed itinerant *formación* for territorial cadre and multipliers – in which documented farm assessments, workshops and peasant exchanges are all part of the ‘homework’ that subjects carry out in the ‘territory time’ between itinerant courses at the schools – as the preferred instrument to give a systematic quality to the corridor. This, as well as incipient collaborative relationships with academic institutions, government research and extension centers, and community organizations, will likely yield opportunities soon for documentation of the corridor’s territorial impact.

## Conclusions

Like many LVC organizations in Latin America, Asia, Africa, Europe and North America, the ATC is combining its own experience with the best examples it has been able to find among its allies, especially Cuba’s ANAP and Brazil’s MST. Within and around these efforts, there is an emerging body of theoretical and methodological work on what has been called place-based agroecological education (Meek 2014), the *campesino-to-campesino* movement (Holt Giménez 2006; Rosset et al. 2011), peasant pedagogy (Turniawan 2015) and land pedagogy (Jungemann, Guimaraes, and Francis 2014). A merger of several traditions, such as Marxist political education, with indigenous oral histories, action-learning educational approaches, and Freirian problem-posing education, is underway across the globe within social movements that support and defend agroecology as the urgent and necessary path for humanity’s right to a future. The resulting tensions and creative educational practices contribute to an understanding of how rural social movements use agroecology to construct a historical subject capable of developing viable alternatives to capitalism.

While several CLOC agroecological *formación* processes in Latin America have been centered upon the individual subject and his or her transformation into a movement-identified leader or cadre, this paper proposes a methodology based upon the capacities of the movement to generate and sustain processes of territorial transformation toward agroecological farming. Such a focus on territory responds to the need to move beyond efforts that have concentrated solely on developing critical consciousness and leadership qualities in individuals, without necessarily developing social processes that facilitate the integration of these cadres in specific territories and the scaling out of agroecological experiences. The process of curriculum development and reflection present in ATC is a product of

both internal debates and the horizontal learning that takes place as a *diálogo de saberes* among rural social movements in CLOC and LVC.

By using horizontal, action-based education strategies, especially the peasant-to-peasant method, in combination with the territorial structures and massive radius of action of social movements, the LVC schools generate a globally articulated dynamic toward adaptation and innovation in agroecology. Taking agroecology to scale, from isolated experiences into a mass movement among small farmers, requires social actors willing to take on the complex political and organizational challenge. The movements of LVC in Latin America and other continents treat the expansion, promotion and territorial advance of agroecology as an educational task. Organizations like the ATC have dedicated themselves to processes of agroecological teaching and learning among the cooperatives of small farmers and rural youth that make up part of their base. As the ATC's capacity to unite the conditions of territorial transformation grows – including both the harmonization of efforts and demands within the movement, as well as alliances with agroecological actors from universities, government institutions and other farmer unions – the scale of the Nicaraguan agroecological transition will also expand.

At a broader level, agroecological change is the result of societal shifts – peoples' values, strategies and interests changing as a response to new challenges (Isgren 2016). Nicaragua is a vastly different case than Cuba, where in 1990 – the same year that neoliberal reforms in Nicaragua began devastating education, health and human development – the loss of all major trading partners stimulated on the island a unique search for autonomy at a national level, which eventually united the conditions for a globally unprecedented 'massification' of critical agroecological thought and practice (Rosset et al. 2011). Place-based, popular education captures the essence of the agroecological learning process, because it recognizes that popular actors are the subjects of their own transformation. The *diálogo de saberes* is a method of exchanging historically constructed knowledge, know-how and senses in order to collectively produce new meanings and shared struggles.

Limited land access among the membership of the ATC is the most significant obstacle thus identified in the territorial processes of multiplying agroecological farming in Nicaragua. Efforts to globally scale out agroecology must introduce redistributive land reform to the agenda of national governments, particularly for rural women and youth, sectors especially sensitized to the pitfalls of monoculture (White 2012; León-Campos and Mosquera-Góngora 2015; Borras 2016). Agroecological knowledges and senses are part of a counterhegemonic construction that exists but needs to enter into dialogue and be heard, thought, tried, changed, felt and pronounced by the popular actors in rural territories.

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## ORCID

Nils McCune  <https://orcid.org/0000-0001-9040-9595>

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**Nils McCune** is currently a PhD candidate in the Department of Agriculture, Society and Environment at El Colegio de la Frontera Sur (ECOSUR) in Chiapas, Mexico, and a member of the technical support team of La Vía Campesina in Central America. Corresponding author: salud.campesina@yahoo.com.mx

**Peter M. Rosset** is a faculty member at El Colegio de la Frontera Sur (ECOSUR) in Chiapas, Mexico, a researcher at the Centro de Estudios para el Cambio en el Campo Mexicano (CECCAM), and co-coordinator of the Land Research Action Network (LRAN). He is also a member of the technical support team of La Vía Campesina. Email: prosset@ecosur.mx

**Tania Cruz Salazar**, an anthropologist, is a researcher at El Colegio de la Frontera Sur (ECOSUR) in Chiapas, and is a member of National System of Researchers in Mexico (SNI). Email: tcruzs@ecosur.mx

**Antonio Saldívar Moreno** is a researcher at El Colegio de la Frontera Sur in San Cristobal de Las Casas, Chiapas, Mexico. He currently works in topics related to intercultural, values-based and sustainability education. His studies focus on reflections on how to generate sustained, creative processes of innovation and social participation. Email: asaldivar@ecosur.mx

**Helda Morales** is a faculty member at El Colegio de la Frontera Sur (ECOSUR) in San Cristobal de Las Casas, Chiapas, Mexico. She is an agroecologist and her current research focuses on the theoretical understanding for scaling out agroecology. Email: hmares@ecosur.mx