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The Architecture of Social Relationships and Thinking Spaces for Growth

Anne-Nelly Perret-Clermont

Introduction

Psychologists who spend a lot of time observing children know how much effort it requires from their parents, teachers and others to help them develop the capacity to listen, to make their own points and desires clear, and then to find ways to negotiate perspectives and actions that can satisfy all partners and not only their immediate wish. This is a long way towards the managing of frustration and the discovery of the world. It requires the learning of both self-control and the understanding of social order. In doing so, individuals interiorize the expectations and moral values of their family and group of belonging. Under certain circumstances, they are likely to develop a critical reflection of these concepts. This social and cognitive development starts with play and toys, personal belongings and common properties (Rosciano, 2008); includes making friends (Selman, 1980); and continues with joint activities (Rubtsov, 1989), exploratory talk and dialogue in school situations (Mercer, 2000; Mercer & Littleton, 2007; Littleton & Howe, 2010), group work (Schwarz et al., 2008; Howe, 2010; Tartas et al., 2010; Buchs et al., 2013), informal spaces of cooperation (Ghodbane, 2009) and involvement in youth based organizations (Heath, 2004). Only with the careful training of their social and cognitive skills and with rich "symbolic resources" (Zittoun, 2006) can young people be raised into cooperative adults patient enough to invest time in discovering ways to resolve their conflicts or overcome disruptive events with "imagination" (Zittoun & Cerchia, 2013) and hence to expand their futures.

Emotional competence develops within the cradle of emotionally secure situations in which lessons learned from past experiences can be turned into resources to build the future. Of course, adults have to pave the way for that, not only by the strength of their own personalities but also because they have experience in managing difficult situations, in mediating conflicts, and in creating open spaces for dialogue and joint work – issues that this chapter will address.

First, to return to the legacy of Jean Piaget and of his own Swiss masters, I will try to examine critically their present relevance. Then, in order not to dismiss their useful contributions despite criticisms regarding their limits, in line with the efforts of the other contributors to this book, I will reconsider them within a larger theoretical perspective that not only centres on individual or interindividual processes (as Piaget usually did) but also considers other levels of analysis, including the embeddedness of sociocognitive processes in intergroup relations, norms, values, semiotic resources, social representations, power and economic asymmetries. These are absent from Piaget's perspective but importantly structure the "architecture" of the growing children's environments and the meaning that events can have for them. In these structured contexts, children are not just "interchangeable individuals" but persons who take an active part in the construction of their own understandings and meanings.

However, sociocultural influences extend beyond the analysis of the child's environment. The efforts of the researchers who try to advance their theories and observations are equally permeated by current trends in their scientific disciplines, by norms and representations of their milieu, and by their own concerns. In the present case, it is interesting to consider what the concerns are in two contexts: the present one (a contribution to a book imagined in the Home for Co-operation of the UN Buffer Zone in Cyprus in May 2011) and the past one of Piaget and his own masters (in Geneva in the early 20th century). It is interesting to see that they are different, and yet joined by some common lines of thought and of commitment: a concern for peace and mutual respect even in conflicting situations that are emotionally loaded; the role of education in the development of mutual understanding and in particular in the learning of conflict-management skills; and the quest for a better understanding of what allows knowledge-building and meaning-making. Both contexts have in common the important dedication of researchers who, as persons, are not only concerned with the cognitive impact of their results but also equally interested in the consequences for society and peace of what they learn. They take the responsibility to promote

actions and institutions, and to sustain such goals: intercommunity contacts nowadays in Cyprus (see Psaltis, Chapter 5, this volume); and in the past in Geneva, foundation of the Institute Jean-Jacques Rousseau[1] (1912) and the International Bureau of Education[2] (after the First World War). During the 2011 meeting in the Buffer Zone of Cyprus, a zone that is under the guard of the UN, it was impossible not to remember that some of the active founders of the International Bureau of Education were themselves in contact with the founders of the League of Nations, the predecessor of the UN. It was striking also to hear how the original ideas of Piaget had attracted the attention of a new generation of Cypriot researchers concerned with present problems of education, epistemology and intergroup relations, and making important theoretical advancements (Makriyianni & Psaltis, 2007; Psaltis, 2012; Psaltis & Zapiti, 2014).

The social, cultural and political context of Piaget's study of social relationships and psychological development

When Edouard Claparède, Adolphe Ferrière and Pierre Bovet invited Piaget to Geneva in their newly founded institute named after Jean-Jacques Rousseau, they were not only offering him a way to continue his promising academic research but also expecting him to contribute scientifically to their own project: the promotion of peace and responsible citizenship via education – not any kind of education, but programmes sustaining a respectful socialization of the growing child (Martin, 1986; Oelkers, 2008; Perret-Clermont, 2012). These intellectuals were active in Geneva, the city that was hosting the Red Cross (since 1863), the Geneva Conventions (1864, 1906, 1929) at the core of humanitarian laws, and the newly founded Society of Nations (1920). They were themselves involved in several international organizations sharing concerns for peace, education, development and social welfare. Pierre Bovet had become a member of the Society of Friends, a religious organization promoting horizontal relations of cooperation between human beings, and non-violence, with special attention to education and to the art of conflict mediation (on this point, see Greco Morasso, 2011, p. 149). The same Pierre Bovet was translating Baden-Powel into French, to promote his Scouting movement – a youth-based organization that trains young people in self-government and life skills. The International Bureau of Education (of which Piaget was the first director) was founded to convene ministries of education from all over the world in order to join efforts in developing an education sustaining

citizenship and international cooperation. It is in this atmosphere and with these concerns that Piaget and his colleagues developed their innovative perspective on child development and education that is now known internationally (Perret-Clermont & Barrelet, 2008b).

In Geneva, Claparède, Bovet and Ferrière were important protagonists of the New Education Movement. Pierre Bovet is said to have coined the term "active education" (Robert-Grandpierre, 2008). After the troubled years of the First World War and the fear created by the Russian Revolution, they were concerned with the promotion of an active education that would contribute to the development of autonomous, reflective and responsible adults who could contribute to the construction of world peace. They considered that teachers needed to be trained in child development and that research, both in psychology and education, could help to clarify the extent to which the social milieu could provide opportunities for the personal growth and proper socialization of children. Intellectual development meant for them a capacity to develop one's curiosity and interests, to take initiatives, and to critically reflect in order to depart from fearful submission to authority and ideologies.

Called to Geneva to contribute to this project, Piaget became actively involved in empirical observations of the growing child. He formalized a theory that accounts for the different steps that a child has to go through, starting as an active but dependant toddler and ending as a reflective, autonomous citizen. The active child is encouraged to feel and explore, to stop and anticipate his actions (and her actions, though Piaget never paid specific attention to gender differences), to express his understandings and interact with others, to explore the world with trials and errors, and to be attentive to the feedback of experience. From these basic conducts the growing child gradually learns to deal with contradictions, to understand them not as failures of his intelligence but as teasing his curiosity. Contradictions are not barriers to his understanding but obstacles that the dynamic course of life encourages him to jump over. The goal of education is not to repress children's initiatives and questions but, on the contrary, to support them. Initiatives and questions are the "motor" of children's constant movement towards a better understanding of themselves, others and the wider world. More fundamentally, this dynamic "equilibration process" – as Piaget used to call it – not only helps the child to develop as a "discoverer" of the world but also as a "builder" of cognitive tools ("mental operations") to comprehend the world. Hence the general movement that Piaget and his colleagues describe and want to sustain is

a development from heteronomy and passive obedience to authority, to a capacity to autonomously think of oneself, society and the world as a concrete present occurrence of "a possibility among others". An essential step towards the capacity to reflect on the present, anticipate the future and understand the past is to be able to imagine alternatives and hypothetical worlds (Harris, 2000; Zittoun, 2012). Hypothetical and imaginative thinking frees humans from their immediate dependency on the contingencies of the here and now, and opens the space to critically reconsider prejudices, pseudodeterminisms, philosophies, and "laws" of nature and of society, and to invent alternatives. Although he would not express this very often publicly, Piaget was also a committed person, neither naïve nor only "academic", but moved by the desire to be an active and responsible citizen in a time of totalitarianism and fascism (Perret-Clermont, 2008) – an awareness stemming from the specific political experience that he had gained by growing in a small and decentralized democratic country (Piaget, 1976).

Another important legacy from the early days of Genevan psychology is the concern for the skills of self-government reflected in Piaget's writings about sociology and education, and particularly in those addressing the issue of the development of moral judgement in children. Piaget considered "cooperation" to be a central process for individual development and for society. During the same period, the Russian psychologist Vygotsky was researching the importance of interindividual coordination. Joint activities imply social interactions in the zone of proximal development and common use of semiotic tools, which are essential for the development of higher psychological processes.

However, all of these processes can occur only if children and adults are given opportunities for cooperation. This implies raising children with a sense of Self and a respect for Others, with opportunities to discover the "Otherness" of Others and the multiplicity of perspectives within an environment whose architecture offers such opportunities. Authoritarian schools based on competition and extrinsic rewards don't have space for such an education. Children have to experience the benefit of coordinating efforts. Piaget liked to repeat how important decentration from one's own perspective is to learn to encompass the partner's point of view, and that it requires both social and cognitive skills that are interdependent. His (1932) studies reported, for instance, how taking part in collective decisions about the rules of a game provides children with an opportunity not only to get along much better when playing together but also to have a feeling of what a rule should

be – not an arbitrary imposition by an authority against which the only way to express oneself is to rebel, but a basic instrument of social life (i.e. a "contract" – Piaget had Jean-Jacques Rousseau's social contract in mind) that can be modified by both parties when needed. If young people are invited to be active in setting rules, they will be given the opportunity not only to organize their own behaviour but also to modify their social environment and society. They can then experiment, by trial and error, with the consequences of their choices and reflect critically on them to learn to adapt their norms, expectations and contracts. Piaget experienced this in the Friends of Nature, a youth-based organization founded by Pierre Bovet (Vidal, 2008). Nowadays, with the intense changes brought about by globalization, world tensions, new social needs, nuclear catastrophes and climate change, these sociocognitive skills are central but probably still underestimated: youth-based organizations are not numerous; and school policies (as seen, for instance, in the Programme for International Student Assessment (Rychen & Salganik, 2003), seem to favour the basic competences of individuals rather than the advancement of interindividual cooperation.

Piaget, after his contribution on cooperation, turned to other interests, notably his commitment to rationality as a light for humanity (see Piaget, 1916, in which he depicts his youthful and almost mystical belief in such a mission) and thereafter never investigated again empirically his hypothesis about the fundamental role of cooperation. He appeared to view cooperation as the sole explanation of whether advancement could, or could not, take place. Present studies – for instance, on the social mediation of disputes, show that things are not so easy. Of course, goodwill and good faith, as well as communication, have to be presupposed for mediation and conflict resolution to happen. But if partners have conflicts of interests and hence have difficulties cooperating, what can they do and how can they be helped? How can the communicative exchange be restored in such a way as to make it possible for long-standing disputants to work together and build a common solution? Greco Morasso (2011) offers a very interesting description of the setting, and of the conversational and argumentative processes that a conflict mediator can initiate in order to sustain adult partners in an effort to discover their common interest beyond the present conflict, and to develop appropriate skills and attitudes to overcome breakdowns in cooperation. Mediators make a cautious yet firm effort to scaffold the parties' process of regaining mutual respect and to construct a path towards their responsible cooperation. But how does it work with children? Cooperation skills are not a given but the fruit of psychological development,

education, culture and properly adjusted social frames. Cooperation is not a state but a dynamic process. Piaget made important theoretical pleas towards engaging children in cooperative activities but has left wide open questions about when, how and under what conditions children agree to cooperate in sociocognitive tasks and can learn from them. In our present society with competition as a dominating ideology, often students do not understand cooperative activities as possible win-win games (Butera et al., 2006).

Piaget only minimally studied the role of cooperation. If he had conducted more empirical studies, he would have had to face the limits of his theoretical model (Piaget, 1932; Piaget and Smith, 1995) because it considers only two extreme situations, which are quite unlikely to occur as such:

> either the adult imposing by authority his knowledge on a dependent child. But children, even when they are in the "heteronymous stage", usually tend to interpret what is being said actively and in their own way – they are not just passively appropriating the statements;
>
> or two autonomous minds, equal in status, involved in a symmetrical relationship, just discussing the correctness of their judgements independently of any other motive, goal or power game. Yet reality seldom provides the opportunity for such symmetrical relationships. Minds are not just "pure minds": they belong to individuals who have more than just epistemic needs. They fight for their interests; they are in search of identity, social position, and security. They try to manage their emotions. Their goals are multiple and they are accountable towards others in networks of solidarity.

To study real-life cooperation (and not reduce it to logics of "co-operation" as Piaget did), the "situatedness" of social relationships has to be considered: partners, context, cultural expectations, norms, stakes and power asymmetries. A model of multiple "factors" (or "variables") cannot account for it because individuals and groups are not just manipulated by external factors or only by unconscious elements but are also actively engaged in meaning-making and interpreting situations. They elaborate their own meanings and these cognitive, emotional or strategic understandings of what is at stake in turn modify the situation. To approach this complexity, it is important to consider that cooperation does not happen in a "social vacuum" (Tajfel, 1972). In consequence, the question becomes: What architectures of social

relationships are supportive for the development of cooperative social skills, for the development of thinking, for mature citizenship? Here, "architecture" is a term borrowed from Rommetveit (1976), who uses it in his studies of communication. It serves to point to the interpersonal, institutional, cultural and conversational implicatures that prestructure an interaction and its communication contract. We extend its use here to encompass not only verbal acts and their intersubjectivity but any type of interpersonal activity, including cooperation.

I will now invite the reader to further studies of this architecture by presenting some examples of empirical research that address questions that were left open by Piaget. I will organize them according to the four "levels of analysis" suggested by Doise (1986; Perret-Clermont, 2004a). Better understandings of what are the affordances of an architecture of relationships that can promote cooperation and dialogue, can help to document and improve formal and informal spaces intended for youth development (Perret-Clermont, 2004b) and inspire the establishment of new ones.

The architecture of the social relationships that allow for shared thinking, cognitive development and cooperative social skills

Level 1: The individual in cooperation

Piaget used to say that "operation" and "cooperation" are "two sides of the same coin": to cooperate means for him to operate with others, and this entails mastering reciprocity both on the cognitive and the social plane, one feeding the other. It would then be sufficient to understand what the operatory level of the individual is to account for his social conduct. But, as Vygotsky and cultural psychology often state, it could also be that social coordination precedes the individual's competence: it is then the collective practice in which the child grows up that is gradually appropriated by the participants. Hence it is the study of interpersonal relations and semiotic resources that can open the way to understanding the individual's behaviour. To take side in this Piagetian and Vygotskian dilemma is probably similar to choosing between egg and hen to decide which came first.

We know that an individual competence (a socioculturally acquired individual competence) is a prerequisite to cooperation (Perret-Clermont, 1980) as in the following example: Four-year-old children from kindergarten were invited in dyads to share chocolate drops among themselves in a fair way. Each dyad was composed of a non-conserving

child and a more advanced partner who was mastering conservation of number. They were both unaware of their partner's cognitive level. Both children would usually engage in such a sharing activity easily. The conservers tended to use counting when they wanted to demonstrate that they had shared fairly. As predicted by Piaget, most non-conservers were not really convinced that counting helped: for them the quantities were changing according to the perceptual configurations of the chocolates laid on the table. Hence the dyads had a hard time coming to a joint decision about the fairness of the shares. But a closer look at the results showed that there was a major difference between two types of non-conservers: those who knew the "counting rhyme" (one, two, three, four, five...) and those who did not. The former participated in the counting (even if they tended to keep the opinion that the quantities were changing) and the latter were not capable of joining in on the counting. Counting offered opportunities for more profitable interactions because, with a closer look at the one-to-one correspondence between the two sets of chocolate drops (reached in joint counting), the object under discussion was more focused. As a result, the performances in a delayed post-test of the non-conservers who could count improved, several of them reaching full mastery of conservation. The semiotic tool ("counting rhyme") sustained the conversation, focused the shared attention and helped to make more explicit what the sociocognitive conflict was about and, as a result, facilitated some cognitive progress. Of course, the counting rhyme is a semiotic tool that had been learned before (within other social interactions, themselves rendered possible by other former cognitive gains: a spiral move between cognitive and social growth).

Hence, contrary to Piaget, we think that cognitive and social processes scaffold each other and that there is no gain to confuse them as "two sides of the same coin". Social skills can be learned that will help one to become an efficient participant in cooperative work. In return, participating in social interactions opens the way to decentration, to discovering other perspectives and developing more complex cognitive tools to grasp the object under scrutiny.

Taking seriously this question of the individual competences allowing for better sociocognitive exchanges, Mercer (e.g. 2000 and 2007) offers teachers strategies to enhance the language and social skills of their young students (taking the other into account, listening, taking turns, rewording, asking questions for further comprehension, etc.). Children then become capable of taking part in collective activities. Mercer reports large cognitive gains in these programmes in which

children learn to think together. It is important to note that teachers not only teach skills but also introduce the children into the experience of enacting certain values: mutual respect, courage to take I-positions, and obedience to certain rules that protect individuals by guaranteeing space for each person. Teachers who sustain the development of such social skills always rely on rules that frame the relationships and the social game. Cooperation is not only a matter of individuals developing proper social skills. In the programmes just mentioned, teachers also intentionally promote values and rules that establish (or make more explicit) some elements of architecture that frame the type of social relationships that they want their students to experience.

Level 2: Interpersonal relationships

Studies both in animal ethology and in child development offer evidence in favour of an interdependency between cognitive growth and the need to maintain long-term relationships: safeguarding social relationships requires the development of proper strategies, and if these are not only instinctual they have to be developed using psychological means (Hinde et al., 1985). This echoes Sherif's famous pioneering study (also mentioned by Downing Wilson & Cole, Chapter 11 and Psaltis, Chapter 5, this volume) that established how, in some cases, a new social challenge can spur changes in cognition (Sherif et al., 1961).

Unusual events (e.g. transitions from one milieu to another, changes in the environment, personal growth, contradictions, and clashes due to differences of opinion) can be invitations to change reactions and minds, especially if there is social support to do so. And this can be observed not only in historical transitions or in designed simulations (Downing Wilson & Cole, Chapter 5) but also in short-term formal settings, such as tests. For instance, in revisitations of the Piagetian task of the conservation of quantities of liquids when poured into glasses of unequal shapes (Donaldson, 1978, 1982; Perret-Clermont, 1980; Rijsman, 1988/2001, 2008; Light & Perret-Clermont, 1989; Muller-Mirza et al., 2003; Sinclaire-Harding et al., 2013), it has been observed repeatedly how much children's conceptual level is dependent on the meaning that they attribute to the social context of the task and the conversation about it. Children are likely to act as conservers or non-conservers depending on whether the talk is an abstract requirement from the adult in an isolated face-to-face relationship or a common reflection on a previous experience (e.g. sharing juice fairly among peers, sharing a narrative or repairing a disrupted situation). We have observed that during the pretest (i.e. the first conversation with the adult), some children

(especially those from the same educational milieu as the experimenter) were progressing and others were not. The latter were likely to change their minds later, as if the social relationship with the adult in the pretest was not a good opportunity for them to reflect, on the spot, here and now, on the quantities: their energy seemed to be invested first in trying to make sense of the social components of what seemed to them a strange conversation, with unclear requirements (Arcidiacono & Perret-Clermont, 2010; Greco Morasso, et al., in press). How the interpersonal relationship is established and understood is very important for cooperation. In the example just cited, the children did not understand that they had been invited to think together with the adult. They believed that they had to give responses to questions whose aims they did not understand. In contrast, when they were confronted with a peer and were trying to work out how to share juice fairly with glasses of unequal shapes, they got involved in quite different socio-cognitive processes. These were more fruitful for their own learning.

Peers who are invited to interact on a task are not necessarily cooperating in a horizontal (symmetric) relationship. In our research on joint activity with Kohs' cubes (Tartas & Perret-Clermont, 2008, 2012; Tartas et al., 2010), as well as in the work of other researchers (e.g. Schubauer-Leoni, 1990; Grossen et al., 1996; Psaltis & Duveen, 2006; Darnon, Butera & Harackiewicz, 2007; Schwarz et al., 2008; Buchs & Butera, 2010; Zapiti & Psaltis, 2012), very different patterns of social interactions and of learning can be observed, depending on how the partners understand their relative expertise, their roles, their gender status or the goal of the "social game" in which they are involved. Some children are assertive, some more empathic, some are careful to take their turn one after the other (even irrespective of the advancement of the task and the errors made), some, on the contrary, want the lead and give way only when they obviously fail; some imitate their partners because they think they are experts or, on the contrary, try to make them fail with the hope of demonstrating their own superiority; some pick up a friend's suggestion and try it out; and others appropriate it without understanding it and, as a consequence, "learn" errors.

Of course, fortunately, children do not always rigidly adhere to these attitudes. For instance, observing a dyad of adolescents working together to solve a rather difficult problem involving proportions, Schwarz et al. (2008) found a turning point in their cooperative problem-solving precisely when one of the children, who had given up on defending his point of view, appropriated the other's doubt through a (momentary) concession, relieving his peer of the burden of defending his point: this

meant for the peer the possibility of decentring without losing track of what he was thinking or losing face, and he then moved ahead in his thinking.

The interpersonal relationship can be facilitated by the pleasure of working with a friend. But, from a cognitive perspective, interacting with a best friend might not always be the most stimulating experience, because experiencing a cognitive conflict was likely to be felt as a threat to the friendship and hence was carefully avoided (Dumont et al., 1995). This is a "semantic barrier" quite different from the one described by Gillepsie (Chapter 6) and yet probably with the same effect of preventing any cognitive change. When are interpersonal relationships and friendships likely to be strong and secure enough to allow for the management of differences? When are they sufficiently protected from external pressures to permit the children to take the risk of acknowledging and discussing disagreements? This is likely to be the case when there is a proper "framing" of the setting and of the relationships (Goffman, 1974; Grossen & Perret-Clermont, 1992; Zittoun & Perret-Clermont, 2009) that offers guarantees to the interactants. This framing itself is (or is not) supported by still another frame acting as a "frame of the frame", itself embedded in larger social contexts (e.g. institutions, shared cultural norms, representations and values). These frames and their adjustment or tensions, together with the interpersonal and intergroup relations (within and outside these frames), constitute the architecture. For instance, Uskul (Chapter 9, this volume) shows how social interdependence shaped by cultural attitudes and experiences, and know-how towards economic and ecological requirements, may shape social relationships in specific ways, thereby leading to different forms of socialization in children of different milieu.

Level 3: Status and intergroup relations

Mark, six years old, conscious of being in his school's first grade ahead of Jenny, five years old, and asked to divide the juice with her in unequal glasses, turns to the researcher and says: "but she will not understand! She is much too young!" We have observed that children might feel offended if they think that they have been paired up with a person who is "unworthy" of their status. In order to invest in the interpersonal relationship and to care for the other's opinion, or in order to take the risk of identifying or granting credit to others' perspectives, children and young people (perhaps adults, too) need the relationship to be secure enough to guarantee that what is at stake is not mere face-saving, a threat to identity or a comparative assessment of respective merits. If the

interactants are embedded in intergroup relationships that invite them to defend their positions or status, to win in a competition (Nicolet, 1995; Nicolet & Iannaccone, 2001; Darnon et al., 2006) or to adopt negative expectations towards the other, perceived, for instance, as less competent, it is quite probable that those worries and goals will be dealt with in priority before any investment into cooperative thinking, even if requested by the experimenter or the teacher who organizes the meeting (Grossen & Perret-Clermont, 1996; Mugny & Quiamzade, 2010).

The architecture of the relationship that affords cooperation – to think together – offers some mental and social space to deal with these issues. A secure space allows for trust and security (see Gillespie, Chapter 6). Sara Greco Morasso (2011) explores this question in her study of argumentation in dispute mediation. She sheds light on the role of the third party – the mediator – and on their very special status. The mediator's role is not that of the author of the solution, yet it is an active role – that of rendering possible for the persons in conflict to move ahead, step by step, discovering, one move at a time, their common interests, and the kind of social relationship that managing them requires. The premise on which this common good rests, and the arguments by means of which the dispute can be resolved, have to be progressively discovered "within the conflict". Relying on close observation of the interactions between the mediator and the disputants, Greco Morasso shows how cognitive moves are possible only when a certain social space is created. In turn, these cognitive moves themselves will enlarge the possibilities of re-establishing proper rules in order to better cooperate within this social space. The mediator then acts as a "guardian" (Grossen & Perret-Clermont, 1992) of this sociocognitive space. This is possible only if the interlocutors feel that they can be respected in their own interests and involved towards a common superordinated goal. In research with children conducted by Psaltis (2005a, Chapter 5, this volume), evidence suggests similarly that an interaction with a peer can offer opportunities for new understanding only if asserting and defending one's own point of view is considered to be legitimate. And this will not be the case if social representations about the respective roles (in Psaltis' case, gender roles) undermine this legitimacy. This brings us to level 4 of the analysis.

Level 4: Values, norms and social representations that sustain cooperative and productive interactions

In Greco Morasso' s study of mediation, in Schubauer-Leoni's studies of the ruptures of the didactic contract, and in Grossen's observation of the implicit contract between subjects and researcher, a common

fundamental feature appears – that is, the importance of certain values such as good faith, and trust in the goodwill and commitment to rationality of the partner in the argumentation. If this is not the case, communication and relations are deeply affected and cooperation in thinking is impossible. Grossen's six-year-old participant at one point stops and asks: "Is there a trick"? (Grossen, 1988). Schubauer-Leoni's school students feel deeply cheated because the teacher has asked them to solve a problem (the age of the captain), which at a first glance seemed easy but was in fact absurd (Schubauer-Leoni & Ntamakiliro, 1994).

Heath (2004), studying youth-based organizations, points to the importance for marginalized youth to experience trust in older peers with whom they can identify and who introduce them to framed activities (e.g. basketball, theatre) in which they are listened to. They benefit there from a secure space to learn how to socialize, respect rules, and take initiative and responsibilities. In such circumstances, they don't only act and think but also reflect on their emotions, their actions and thoughts, exploring in new ways the external world and its relation to their personal internal worlds, developing simultaneously their sense of being, their higher psychological processes and their social skills. Such open and secure spaces exist only if the rules that permit them are obeyed and only if credible persons enforce them. The elder peers' role is also to guard the frame. To keep with this role, these guardians of the frame themselves have to be recognized and respected not only by the participants but also by elements (persons with power or authority, institutions, cultural customs) that serve as "frames of the frame" and grant credibility to their authority according to values, norms and social representations shared by a larger part of society.

Knowledge or skills acquired in a given frame are interesting only if they are relevant to the given frame and also to further frames and settings. The transition from one frame to the other is not only a matter of personal adjustment but also of recognition by a larger part of society of the similarity between the frame and hence the legitimacy of the transfer. A young person, for instance, can be proud of achieving a success in their youth-based organization, but even prouder to discover that their newly acquired knowledge or skill is relevant in other settings – for instance, making friends or getting a job (Ghodbane, in preparation). Moving from one frame to another is a transition that solicits adjustments, with changes in identity and cognition (Zittoun & Perret-Clermont, 2009). What will the person change and what can they keep constant and transfer? Social markings and social representations will influence their perception of similarities and differences among the

frames, and hence sustain or hinder transfer. And frames themselves (often because of the institutions that back them up) are more or less open to being negotiated or, in contrast, resistant to change. This will depend on the power, interests and goals of the individuals and groups that guard and defend them (Kontopodis, 2012). Frames "survive" only if they adapt to the evolution of society, adjusting themselves in relation to other frames within the larger architecture. For frames to adapt, it is important that the practices, norms and values that sustain them are discussed, particularly in the face of alternative emerging stakes that need to be dealt with (new circumstances, new comers, etc. but also the maturation of the growing children themselves).

Conclusion

Can young people be raised to become peace-minded and skilful adults who are patient enough and with the mature cognitive and social skills and attitudes to sort out unavoidable conflicts of interests, social problems, disruptive ecological events or other major issues? Psychology, and in particular social and cultural developmental psychology, has accumulated increased knowledge to address this question. In the early days of child psychology, Vygotsky was interested in the role that education could play in the development of children in a post-revolution context, being particularly conscious of the importance of cultural transmission. Claparède, Ferrière, Bovet and Piaget and their partners in Geneva looked for ways to offer children alternatives to the strict authoritarian education that was prevailing, and free them from the weight of rigid cultural and educational traditions. They were looking for active citizens of a democracy, capable of interacting in horizontal relationships between equals, usefully critical of the state of science and society in order to advance it, and happy to contribute to a dialogue between nations in the search of peace.

In this chapter I have tried to show that, today, research relies heavily on the contributions of these authors but offers a greater understanding of the complexity of the social architecture within which thinking takes place. Education can help children to develop sociocognitive competencies, useful experiences, adaptive transfers, respectful relationships, and skills to manage conflicts and address important problems constructively. But education cannot be meaningful and successful without considering the sociocultural context in which children take part. It makes demands on them, it transmits specific cultural resources and it shapes, via a series of frames, their access to relations, resources,

identities and a possibility of experiencing agency. The social milieu of children comprises schools in which they spend a significant part of their life. Is the architecture of schools offering students a milieu that promotes the kind of relationships that allow for the sociocognitive development that we would like to expect? This question would benefit from further exploration in the light of the modern trends in research and with an understanding of the demands, hopes and fears of life in the 21st century in different places on Earth.

Notes

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1. http://www.unige.ch/archives/aijjr/institut/.
2. http://www.ibe.unesco.org/en/about-the-ibe/who-we-are/history.html.

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