Children as "Unstable Signifiers" and as Language Learners: A Dialogue with Giorgio Agamben and Lev S. Vygotsky[1]

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We are familiar with children and childhood; as adults, we constantly encounter them in everyday contexts related to the family, school, leisure time, and other areas of life. We remember our own childhood and what it was like to be a child, but in a *strangely ambivalent* way. We know so little about the *child inside us*. It seems likely enough that this *child within us* is more than just a segment or an episode in our life story. There seem to be peculiar obstacles that block our ability to relate to this child. At the same time, the children outside us often seem to be extraterrestrial beings, "aliens". Relating to the child within us is mysteriously difficult; the children around us are puzzling strangers. If this is true, then the question arises why in our culture *relating both* to the child within us *and* to the children around us is so difficult.

To adults, children and childhood seem to be something radically different. They display a confusing strangeness and heterogeneity, an absolute difference in relationship to us and to our world. The mysterious presence of childhood and children is the presence of something that is *radically and irreducibly Other*.

This chain of thought raises the following issues: To what extent does this Other remain elusive? To what extent does it make what we know – despite all of our disciplinary and interdisciplinary research on childhood – uncertain? To what extent does this Other call to question the places and spaces that we adults organize for children and childhood? To what extent does this complete Otherness of children and childhood lead to areas where the standards of our knowledge and of our power do not apply? A historical perspective allows for more incisive questions: When and why did the presence of children and childhood become so radically Other? Is there a connection here to European modernity, which was compelled to make children and childhood into something radically and irreducibly Other? In 3rd world cultures, why do we not encounter this radical strangeness and otherness of children in comparison to the world of the adults? Is this related to the fact that here we encounter a *conception of time* that is fundamentally different from that of modernity?

Within the last three decades, extensive research on children and childhood has increased dramatically within individual academic disciplines at both national and international levels. Time does not permit me to present all of the individual stages of this development in detail here. Instead, with reference to the work of Imbke Behnken and Jürgen Zinnecker (2002), I would like to briefly outline the following three developmental trends:

1. Both disciplinary and interdisciplinary studies are concerned with an increasingly conscious distinction between "child" and "childhood". "Children" has been well established as a topic of research within the fields of psychology and education for the last one hundred years. "Childhood" has become a research topic primarily in the social sciences (the history, sociology, and politics of childhood) within the last fifty years.
2. To an ever greater extent, children are being considered as "social actors", as designers of their own lives, of their own development. Within the scope of this research, viewing things from the "perspective of children" has advanced to a major methodological guideline.
1. Childhood as a "social construct" characterizes the third developmental trend. Especially noteworthy here is the paradigm shift from a conception of history focused on social structures to one centered on cultural micro-history and emphasizing everyday life and the social actors involved. It is apparent that this shift coincides with a relative devaluation of the significance of educational environments and relationships.

For all three of these trends, the Other, the difference between children and adults, has certainly become a central theme. Researchers are expected to explore the contexts of children and childhood and, thus, the contextual constraints of their own research, in methodologically appropriate ways. The otherness of children's life-world and the patterns of sense-making employed by children are, indeed, seen as problems of understanding a different culture and as problems of "expropriation" by means of research practices. Possible solutions to such problems seem to involve increased orientation to reflection and self-reflection on methodology and methods.

In my view, these solutions, in turn, are not without their problems. In a fundamental way, they remain biased and, at times, constricted by the prevailing logic of disciplinary and interdisciplinary research.

What does this mean? Science, as a form of knowledge and a process, attempts more or less successfully to arrive at ever more precise approximations of reality. In doing so, it must presume that the essence of reality has already been determined. In principle, developmental psychology knows

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what a "child" or "adolescent" is. In principle, pedagogy knows what kind of institution and organization a "school" is. *An example: What is a kindergarten?*

This designation is regarded as a collective term applying to all kinds of child daycare facilities. The kindergarten, the rudimentary sphere of the educational system, has a mission to fulfill with respect to education, personal development, and personal care. Friedrich Wilhelm August Fröbel founded the first kindergarten in 1840. He selected the name because he thought that a child should be cared for and should develop in analogy to the care and development of a plant. In the aftermath of the unsuccessful revolution of 1848, from 1851 to 1860, the institution was banned and then abolished in Prussia. During the Nazi era, the number of placements in kindergartens doubled; in 1941, 31% of all children attended kindergarten. Since 1996, German children have had a legal right to a kindergarten placement for the period from the age of 3 until they enroll in elementary school.

In Germany, professional journals, one academic online handbook, numerous academic publications, and historical and systematically oriented research projects deal with kindergarten pedagogy as their central theme. Following the logic of disciplinary and interdisciplinary research work, then, individual aspects not yet fully understood, specific issues, or newly emerging phenomena associated with the "kindergarten" become topics of research in accordance with the logic of that ever more precise, yet in principle never-ending approximation of reality. In this process, methods gain more and more significance.

To return to our question: What is a kindergarten? That form of knowledge we call art responds to this question in a distinctive way. Brazilian artist Lia Menna Barreto from Porto Alegre/Brasil provides the following response with her installation art:

Lia Menna Barreto (Porto Alegre): "Jardim de infância"

It is not my intention here to provide some sort of aesthetic or historical interpretation of this work. Nor am I interested in assessing the significance of this installation for Barreto's career as an artist. What Barreto presents here is a kindergarten circle time activity, a practice that is taken for granted in virtually every kindergarten. This naturalness and familiarity is literally disrupted and destroyed. The individual children's chairs have been mutilated, burned, or vandalized in various ways. Yet, the circle order is maintained – a system of order that has been imposed and structured "from above", from the pedagogical sphere.

In this installation there is no fixed content, no pedagogical idea that is presented and explained. In this context, viewing "kindergarten" from a novel perspective entails the individual artistic forms becoming the means through which the observers make and construct meanings. Here, "kindergarten" as a reality is one that is already determined, defined, and understood. Something is represented "as something". In this metaphorical perspective ("this" is "that"), the "that" is not predetermined and

definite in the sense of some finalized message communicated by the artist. Yet, through forms that are, indeed, very precise and specifically defined, a relationship to an indeterminate reality is established.

As a form of knowledge, art cannot be confined to the domain of the fine arts or of literature or music. As a form of knowledge, art is neither didactic nor pedagogical; nor is it technical. Works of art are not tools for solving practical problems. Art mediates a relationship by providing space for the development of thinking and feeling.[2] Art offers possible answers to questions that have not yet been posed. If we allow ourselves to become involved with a work of art, we learn something about the world we live in and, at the same time, about ourselves.

The forms of knowledge we call philosophy and/or art demonstrate clearly that the increasingly better approximation of reality is an illusion. They show that science never proves anything. It puts forward hypotheses, checks these, improves or rejects them, or proposes new ones. Art and philosophy, as forms of knowledge, do not relate to an approximation of a predefined reality that basically has already been understood. Instead, they refer to an ideal and objectively indeterminable reality. Works of art and philosophical theories are fundamentally different from the reality to which they refer and, at the same time, they are thoroughly effective ways of perceiving reality.

As specific forms of knowledge and cognition, they thematize and realize a certain relationship to reality. They are *unconditional*; i.e. they disregard every power external to themselves. They recognize no authority over and above themselves. Works of art and philosophical theories *refer to reality in a formal way*. In an absolute and precise manner, they relate to an ideal reality - here, "ideal reality" is based on Ilyenkov's (Il´enkov´s) concept of the ideal (Ilyenkov 1994). This becomes especially apparent in the relevance of the formal aspects of artworks, whose precision and absoluteness determine the works´ overall quality.

Art and philosophy – their potential to perceive reality from a fully novel perspective

I would now like to quote the following passage by Fernando Pessoa in full, a passage from *The Book of Disquiet by Bernardo Soares, assistant bookkeeper in the city of Lisbon*:

> Most people are afflicted by an inability to say what they see or think. They say there´s nothing more difficult than to define a spiral in words; they claim it´s necessary to use the unliterary hand, twirling it in a steadily upward direction, so that human eyes will perceive the abstract figure immanent in a wire spring and a certain type of staircase. But if we remember that to say is to renew, we will have no trouble defining a spiral: it's a circle that rises without ever closing. I realize that most people would never dare define it this way, for they suppose that defining is to say what others want us to say rather than what´s required for the definition. I'll say it more accurately: a spiral is a potential circle that winds round as it rises, without ever completing itself. But no, the definition is still abstract. I'll resort to the concrete, and all will become clear: a spiral is a snake without a snake, vertically wound around nothing.
> All literature is an attempt to make life real. As all of us know, even when we don't act on what we know, life is absolutely unreal in its directly real form; the country, the city and our ideas are all absolutely fictitious things, the offspring of our complex sensation of our own selves. Impressions are incommunicable unless we make them literary. Children are particularly literary, for they say what they feel and not what someone has taught them to feel. Once I heard a child, who wished to say that he was on the verge of tears, say not "I feel like crying", which is what an adult, i.e. an idiot, would say, but rather "I feel like tears." And this phrase – so literary it would seem affected in a well-known poet, if he could ever invent it – decisively refers to the warm presence of tears about to burst from eyelids that feel the liquid bitterness. "I feel like tears"! That small child aptly defined his spiral. (Pessoa 2001, No. 117, 107-108).

With reference to two differing "philosophical" positions on childhood and children and to a possible dialog between these positions, I would like to put Pessoa's (or Soares') point of view into concrete terms, thus opening it to discussion and criticism. The two philosophical positions are Giorgio Agamben's conception of childhood (in-fantia); and Lev S. Vygotsky's conception of child development and language. In this way, I wish to demonstrate that the level of philosophy and art – I can only touch on art – does not conflict with the level of disciplinary research, but that, instead, the latter, for its empirical, qualitative and quantitative research, requires the former if it is not to be dominated by a purely methical and technical orientation.

Giorgio Agamben: Children as "unstable signifiers"

A short biographical note: Born in Rome in 1942, Giorgio Agamben studied law, literature, and philosophy. Important influences on Agamben's theoretical framework include Martin Heidegger,

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Michel Foucault, Hannah Arendt, and Walter Benjamin. He edited the Italian edition of Benjamin's collected works. Since the end of the 1980s, Agamben has been primarily concerned with political philosophy (cf. his project in *Homo Sacer*). Currently, he teaches aesthetics and philosophy at the universities of Verona and Marcerata. He has held visiting appointments at various universities, including institutions in Paris, Berkeley, Los Angeles, Irvine, and in Germany.

Agamben cannot be classified as belonging to a philosophical school, nor as an adherent of a specific methodological approach. My remarks on his work here refer to "Infancy and History" (published in Italian in 1978, English ed. 1993, German ed.: *Kindheit und Geschichte* 2004). Many of the ideas expounded upon in this volume are provocative. Historical, political and disciplinary distinctions are often treated in a very playful, perhaps too playful way. Moreover, some of the hypotheses are probably untenable, especially if one confronts them with specific disciplinary research on childhood, history and, most particularly, on the phylogeny and ontogeny of language.

What infancy is not: In Agamben, infancy is not a "paradise lost" that is characterized by immediacy and authenticity. Infancy is neither a chronologically distinct condition such as that of a specific age group nor a psychosomatic condition which could emerge as a construct of developmental psychology, psycholinguistics or paleoanthropology in the sense of a human condition independent of language. Nor is infancy a psychological state that precedes subjectivity and is then repressed or relegated to the id. Nor is infancy a condition of the human subject prior to language acquisition, a condition that predates language and after a certain point no longer maintains, as it then finally leads to speaking and speech. Nor is infancy the raw material (materia prima) of the political and pedagogical utopias and projections of adult society.

For Agamben, infancy is *a philosophical category*. To determine the logical status of infancy, it is necessary to find a philosophical (transcendental) answer to the following questions: "Is there such a thing as human in-fancy? How can in-fancy be humanly possible? And if it is possible, where is it sited?" (Agamben 1993, 54). With respect to these questions, Agamben takes infancy literally. In the original Italian, the term *in-fanzia* makes constant reference to Latin *in-fans*, someone who is *speechless*. This does not refer to experiencing something thought to be unspeakable. Instead, infancy is the designation for experiencing that empty space of language which makes meaning possible in the first place. In-fancy is a paradox, a circular phenomenon, something in-between, where infancy is the origin of language and language is the origin of infancy**.**

Agamben attempts to explore this paradox with recourse to the childlike experience of the boundary between voice and language (1993, 50-70). Man is precisely not the "animal" whose distinctive characteristic is that of "having language", but rather the animal that has no language and for this reason must acquire it from the exterior. Animals do not become engaged in language; they are always already involved in it. If we had language from the beginning, it would have the same function as the sense of smell in animals. It would be a sensory organ providing orientation in an environment in which we would be immersed like in an amniotic sac – with no chance of breaking out of there or of changing our condition. To go through childhood and experience language acquisition entails a permanent disruption between human beings and *any kind of environment*. It is due to this transition from the speechlessness of sensuous life to articulated speech that we have no environment, but, rather, a world that we are a part of and that involves lasting, manifold forms of resistance resulting from mutual permeation. *Childhood seizes man from his environment and allows history to become possible.*

Agamben attempts to put this major hypothesis into concrete terms in two steps:

1) The personal pronoun "I" does not signify a lexical unit in the same way as the noun "tree", from which all individual instances of "tree" can be derived. The personal pronoun refers to something which is very distinctive and exclusively lingual in nature. It refers to the process of individual speech and to the speaker. The subject is simply the speaker. In this view, only in and through language does man constitute himself as a subject. In order to speak, he must say "I"; he must constitute himself as the subject of language.

2) Since man goes through childhood and is not a speaker from the outset, he splits the unity of language and speech. There is an irreconcilable hiatus between language and speech/voice. Here, the distinction between the *semiotic* and the *semantic* **(**Beneviste), which is more precise than Saussure's distinction between language (langue) as a synchronous language system and speech as an individual realization of language (parole), gains a certain significance. The *semiotic* designates the way a linguistic sign constructs meaning (signification), *which it constitutes as a unit*. It designates pure identity with itself and pure otherness from an opposing sign (chanson – vanson, laver – laner, sur – tur). The *semantic* designates the specific manner of constructing meaning that is produced *by discourse*. The semiotic must *be recognized;* the semantic must be *understood.* The semiotic is a quality of language; the "semantic" results from the activity of a speaker who puts language to use.

Since man goes through childhood and thus is not a speaker from the outset, he cannot engage in the semiotic system of language without radically transforming it through his discourse, in speech.

Childhood is the setting of the scene in which the child transforms the semiotic into the semantic, pure language into speech, into human discourse.

From this line of thought, Agamben draws the following bold conclusion: It is due to the distinction between the semiotic and the semantic, between language and speech, that there is history, that man is historical by nature. His characterization of children as "unstable signifiers" exemplifies this conclusion.

The foundation of this position is provided by the work of Lévi-Strauss and other cultural anthropologists on ritual and play. Rituals do the work of connecting the present with a mythical past. The gulf separating them is eliminated, and events are united to form a synchronous structure. Play tends to sever the connection between past and present and to dissolve a synchronous structure into individual events. One consequence of this is that the subject of the discipline of history is not the diachronic as such, as if this were some material, objective reality. *The subject of history is the opposition between the diachronic and the synchronic which characterizes any society*.

Funerary rites, which we find in all societies, have the function of turning deceased persons into ancestors. Deceased persons who have not been buried are thought of as "homeless", as "phantoms" that "wander around". They are "unstable signifiers". Funerary rites are concerned with transforming "unstable signifiers" into stable ones. The deceased leaves the sphere of the living and enters into that of the dead, in which there is only the synchronic.

With reference to their logical structure, *initiation rites* correspond to funerary rites. Just as death does not produce "immediate ancestors", birth does not produce "immediate" human beings, but, instead, children who take on a specific distinctive role in any society. As "unstable signifiers", children represent the discontinuity and difference between the world of the synchronic and that of the diachronic. The necessity of maintaining an open and animated opposition between the diachronic and the synchronic and, thus, of making history possible is apparent in every society in children and childhood.

Children and language in the perspective of L.S. Vygotsky

In Vygotsky, the transcendental, philosophical conception of history as a system of diachronic and synchronic *relationships* with reference to children and childhood is dealt with in a way radically different from its treatment in Agamben. The differences and stark contrasts between the two positions, but also the elements they have in common allow for engaging in a dialog.

Vygotsky did not conceive of himself as a linguist or even as a psycholinguist. In contrast to current positivistic interpretations of his work (e.g. Wertsch 1996), it should be remembered that his paradigm ultimately consists in an attempt to establish a new discipline focused on the human subject (Fichtner 1992). His work does not identify the constitutive role of language with language as an independent system comprising autonomous fields such as semantics, syntax, and phonology. Like Agamben, Vygotsky situates the reality of language within the speech of the individual.

One key issue that Vygotsky and Agamben deal with in radically different ways is how language determines the substance of *human* consciousness without representing it. For Vygotsky, the relationship between linguistic sign and meaning is not based on association, but, instead, is to be described as a developmental relationship. Meaning is not to be explained in terms of reference semantics. Only through the production of meaning on the part of the individual does the developmental relationship between linguistic sign and meaning come about.

To put this developmental relationship into more concrete terms, I will briefly exemplify this with reference to grammaticalization[3] to make the difference to Agamben's view clear. I will attempt to describe grammaticalization as a process of *cultural appropriation* and, in doing so, I will employ Vygotsky's conception of *age levels*.

For Vygotsky, to theoretically grasp a particular *age level* involves discovering the transformations in a child's *entire personality*, venturing into a special kind of *drama* with its major and minor roles, central and peripheral lines of development, evolutionary and involutionary elements. The specific *social situation of development* is to be understood in a concrete and detailed way as a dynamic system, as a context in which a child effects his or her own development by engaging in a dialog with his or her environment (1987a). Vygotsky is especially interested in *critical* age levels "in which the dialectical laws of development are manifest" (1987c, 197).

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[3] The concept of "grammaticalization" is used in various ways. It designates not only the "diachronic process of de-semanticizing, formalizing, and schematizing semantic options," but also the "subprogram of speech that aligns a message with the language rules pertaining to grammatical forms and syntax," and, finally, a child's learning progress in language acquisition in the development from pre-grammatical single-word utterances to the production of verbalizations that conform to dominant grammatical conventions (Knobloch 1994, 77). Evidently, this process is not terminated with the child's mastery of the language. It receives an essential impetus through the acquisition of written language and perhaps through the appropriation of other systems of notation.

The "crisis of the first year" usually begins towards the end of the first year in the child's life and terminates at the end of the second year. It consists of three elements that can be characterized in a "highly dialectical *formula*" as "the unity of being and nonbeing" (1998, 243). The three elements are: learning to walk, the focus of this stage; children's autonomous speech; and the non-differentiation between will and affect, the so-called hypobulic reactions. But this only identifies the main aspects of the *social situation of development*. How learning to walk is related to the hypobulic reactions, how such reactions can be attributed to a social structure expressed in the mutual communicative problems between child and adults – all of this would need to be described as a systemic structure with its particular social qualities.

For Vygotsky, the *neoformation* in the development of the child's psyche in this period is *children's autonomous speech*, which he describes in detail as a typical transitional phenomenon in contrast to *standardized* language. Vygotsky notes differences with respect to structural rules, the phonetic systems, and connections between words. In this view, the two types of language generate two different forms of communication (1987c, 181). The phonetic structure of children's speech differs considerably from that of standard language; the connections between individual words are non-grammatical; that is, there are no clear syntactical relationships. The words have indicative and nominative functions, but no signifying function.

But the crucial issue is the child's relationship to the social environment that is established with this neoformation: to what extent it involves the child's entire life, which significance it has for the child's thinking, perception, and emotions, which new ways of perceiving external reality and of becoming active within that reality and which forms of internal activity it facilitates (1987c, 189-91). As a neoformation of the child's psyche, autonomous *speech* is not yet independent of perception and the concrete situation. It corresponds more closely to outbursts that express both an emotional reaction and a willful tendency. A vital force characterizing autonomous speech is a contradiction that will destroy the social situation of development for this critical age level – the child has only its own speech at its disposal, but at the same time, is also able to understand our speech.

One might *now* assume that in the subsequent stable age level, that of early childhood, speaking for the first time within the context of standardized language would become the central neoformation of the child's psyche. Yet, this is not Vygotsky's view. For him, this is simply the main line of development:

> […] the very fact of acquiring speech is in sharp contradiction to everything of which I spoke thus far that characterizes early childhood. In other words, speech instantly starts to shatter sensori-motor unity and to break up the situational connectedness of the child. (Vygotsky 1998, 268)

The fundamental psychological neoformation of the child must be connected to speech, but cannot be identical with it. Along with the development of speech, consciousness attains for the first time a new quality which Vygotsky characterizes as the interrelation of meaning and the systemic structure of consciousness, and it is this which he considers to be the neoformation of the child's psyche at this age level.

Vygotsky elaborates on this interrelation of meaning and the systemic structure of consciousness by claiming that now generalization is the prism through which all functions of consciousness are refracted. Further, if generalization is understood in the context of communication, then it becomes apparent that generalization as a whole is a function of consciousness and not solely one of thinking. In this view, all acts of consciousness are generalizations (cf. 1998, 280).

Perception, the main function of this age, differentiates itself from internal experience and develops into the *beginning* perception of meaning. To the child, the world starts to become a world of things that have meaning. Concealed behind the meaning of a word is now a generalized perception.

Through speaking, the child is no longer under the power of the merely visible, concrete situation. It now becomes possible to see things not only in their situational relationships to one another, but also in a generalization that is behind the word. But this all depends on the specific level of generalization that the child is capable of. For the child, "the word itself is a transparent glass through which he looks at what is hidden behind this glass, but does not see the glass itself" (Vygotsky 1998, 279). The child speaks without being aware of speaking.

What Vygotsky means by speaking of the systemic structure of consciousness is that the meaning of words begins to mediate all psychological processes with a new quality. On the whole, perception involves changes of the most significant order. Memory is realized in active perception as recognition. Attention is also refracted by the prism of perception. Thinking is a vivid and practical restructuring of the situation, of the perceived field. At the end of the child's third year, a new social situation of development arises with the crisis at age three.

Linguistics and psycholinguistics see grammaticalization as an irreversible, diachronic process of de-semanticizing, formalizing, and schematizing semantic and lexical operations. On the basis of a

broad consensus, the phenography of grammar acquisition describes the individual stages of this acquisition as a progressive line. Vygotsky's conception of age levels raises the question of which function this line and its individual sections have in the child's development, which function the child himself or herself actively carries out in the process of cultural appropriation or in the development of personality.

Children can manage quite well and for a long time without taking recourse to systemically organized *morpho*-syntax in their speech. They solve problems related to the ordered relations between words on the basis of a proto-syntax (Knobloch 1994, 77). With this proto-syntax, children put into effect a relationship to their environment that Vygotsky, with recourse to Eliasberg, terms *children's autonomous speech* and Knobloch calls *syn-semantics*. But what is the precise nature of this relationship? When do children no longer manage to get by with this relationship and, above all, why does this happen? Why do they destroy the context of the social application from which this resource has arisen by making socio-communicative use of this psychological neoformation? Is there such a thing as a "Zone of Proximal Development" in the process by which grammar becomes autonomous?

Apparently, only in the level that follows the *crisis of the first year* does the child work out the first structures of the system that *we* call grammar. In this new social situation of development that characterizes early childhood, the child constructs the interrelation of meaning and the systematic structure of consciousness as a neoformation of his or her psyche. The first grammatical structures could be taken to be the basis of this neoformation. Linguistic signs now no longer immediately refer to the present situation and its components; they detach themselves from affective and volitional elements and, only mediated through the relationship of several linguistic signs to one another, do they now refer to the situation. The original indicative, referential, and action-related potentials of language signs now become decontextualized, as at the level of linguistic units they become schematized, operationalized, and fixed. This is a dramatic break from the child's primary experiences. The question to be posed from Vygotsky's perspective is to which extent these processes of grammaticalization are supported, determined, or even motivated by the reciprocal effects between communication and generalization in the context of this social situation of development.

What the child develops here as the core of grammar, viz. syntax, apparently only exists in the form of a process that works in a specific way when the child speaks. At this point, space prevents me from going into detail on the controversial discourse on syntax in psycholinguistics. But I do find the metaphor Clemens Knobloch uses to describe the work process of syntax as that of a syncretical machine very thoughtprovoking: "This machine works its way from word form to word form and under constantly changing direction (but with the long-term aim of providing a stable representation of discourse) taps into the structural levels that are momentarily required for making references." (Knobloch 1994, 89)

This metaphor reminds one of Lady Ada Lovelace's famous commentary in which she compared Jaquard's loom to Charles Babbage's Analytical Engine in the first half of the nineteenth century:

> The distinctive characteristic of the Analytical Engine, and that which has rendered it possible to endow mechanism with such extensive faculties as bid fair to make this engine the executive right-hand of abstract algebra, is the introduction into it of the principle which Jacquard devised for regulating, by means of punched cards, the most complicated patterns in the fabrication of brocaded stuffs. […] [T]he Analytical Engine *weaves algebraical patterns* just as the Jacquard-loom weaves flowers and leaves. Here, it seems to us, resides much more of originality than the Difference Engine can be fairly entitled to claim. We do not wish to deny to this latter all such claims. We believe that it is the only proposal or attempt ever made to construct a calculating machine *founded on the principle of successive orders of differences*, and capable of *printing off its own results*; and that this engine surpasses its predecessors, both in the extent of the calculations which it can perform, in the facility, certainty and accuracy with which it can effect them, and in the absence of all necessity for the intervention of human intelligence *during the performance of its calculations* (Lovelace 1996, 118-19).

What kind of a learning process is this, in which a child constructs such a processoriented machine that mediates structure and process and, in doing so, corresponds to the unity of communication and generalization? According to Vygotsky, the *significance* of this unity for all issues related to human consciousness cannot be overestimated – a point he repeatedly stresses (Vygotsky 2002, 52). Here, I cannot presume to present even an attempt at an answer to this problem. But I would like to hint at the direction pedagogical research could take.

Describing such learning as cultural appropriation seems to lead to a contradiction stemming from the object and the subject involved in the process: the object, language, is the pre-*existing* result of socio-historical developments, whereas the subject actively constructs such a syncretical machine in a fascinating display of independence. Pedagogy usually sees independence and self-directed activity as learning without guidance. Self-direction is the opposite pole of external pedagogical control. With

numerous images, pedagogy has repeatedly drafted the idea of a human subject that directs himself or herself from an organizing inner core of personal needs. This form of pedagogy has always stressed that outside influences unfortunately cannot be eliminated, but should, at least, be minimized. This view is based on a complete lack of understanding of the social character of human learning. Every process of cultural appropriation is a developmental process of "knowledge". The motor behind this development is the relationship between individual and social elements of learning in the specific social situation of development.

What kind of independence is expressed in the processes of grammaticalization that take place in language acquisition? The child speaks, but does not become aware that he or she is speaking. The child constructs his or her "syncretical machine" and uses it with superior ease, but in a way that is totally unconscious. At the basis of cultural appropriation is a specific relationship between teaching and learning on the one hand and psychological development on the other. In grammaticalization, linguistic signs are, step by step, withdrawn from consciousness, automated, and mechanized. Yet, this is exactly the precondition for the child to discover new communicative forms of language.

No concluding summary can now decide the issue of which approach, Agamben's or Vygotsky's, is more productive or more tenable. These two approaches are, on the one hand, not really comparable; yet, on the other hand, they do have something in common: a pronounced affinity to the meta-level of philosophy or of art. For Vygotsky, *grammaticalization* would be a developmental process in which speaking discovers language as its own context and can now put it to use. This can be considered an example for processes of grammaticalization being generalizations of generalization from the perspective of Vygotsky. From Agamben's perspective, only through such processes do children make history possible in the first place.

(Translation: Thomas La Presti)

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