REGULAR ARTICLE

On the Emergence of the Subject

Tania Zittoun

Abstract The paper retraces the elaboration of a model that accounts for the emergence of subjectivity—the possibility to distance self from others and oneself—if we consider people as always taken in social and cultural streams of meaning and tensions. It builds a model considering first, human experience as possible when a person takes distance from the here-and-now. Second, it suggests considering two general semiotic streams that feed in, or support, that distancing—social and cultural discourses, and personal experience. Third, a knitting model suggests the constant creation of personal patters out of these two streams. Fourth, a dynamic, star-like model is proposed to account for the actual and constant emergence of subjectivity out of such social and cultural configurations. The model is constituted by a 2, 3 or N-number of eight-shaped crossing loops, resulting in a star-like model situated in a 3 dimensional space. The proposition is to analyze a person in a specific situation: the attractors enabling these loops, or end-points of the star, are the relevant social and cultural elements: others with whom he or she interacts, specific bodies of shared knowledge, social representations, cultural elements and tools, and so on. In each situation, the relative strength of these elements, or the tension they generate, are negotiated by the person; the unique ways of dealing with that situation and inviting solutions can thus be seen as the emergent subjectivity. The model is explored to account for developmental dynamics at various scales in the lifecourse. Finally, the pragmatic interest of a model emphasizing complex configurations, not simple causalities, is recalled.

Keywords Development · Dynamic · Time · Model · Subjectivity · Sociocultural psychology

People live in complex social worlds, in which they are never alone. By emphasizing the social and cultural dimension of mind, do we not risk loosing the idea that there is

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in each person also something that escapes these streams of determinations, or more radically, that can account for the uniqueness of each person? In this paper, I propose to build a model that might help us to think the person as emergent subject, within and through these streams, yet always reinventing herself.

Becoming a "Subject" in a World of Tensions

People Live in Time

Probably in an objective sense, the world is constantly moving and evolving—an ontological given, as much relevant when describing biological system, as well as complex human and social systems (e.g., Toren 1999 in anthropology, Valsiner et al. 2009). Human cultures try to capture this irreversibility by calling it "time", or by other names. What the shape of time is, and how it is represented, depends upon local histories and traditions (Yamada and Kato 2006; Lê Quang 2012). Anywhere in the world, humans find ways to mark the time and render it thinkable and graspable. In our western worlds, and from a subjective perspective, experienced time has been quite usefully equated with the flow of consciousness itself—"it flows" (as it rains) (James 1890). Whatever is the shape of imagined time, physical time is irreversible, and so is psychological time: if anyone can go back in imagination to the last time he ate strawberries, or the first time he could bike, every memory is transformed according to cultural guidance, the present of the person, and its orientation toward a future (Boyer and Wertsch 2009; Draaisma 2004). In other words, people can never have twice the *same* experience, twice the same memory, knowledge or hope. Every human experience is uniquely new, emerging in the here-and-now from an even changing present.

Human Experience is Semiotic in Nature

Paradoxically, and beyond the impermanency of things, we experience the world as stable. We do so, partly because things and events happen to us as similar, comparable or different to previous ones: we relate these things and events distant in time one to the other. And we can relate these because they leave traces in our bodies and minds—marks to which we can come back, and refer to. Culture gives us means to consolidate or complement this marking of our experiences, for instance through lullabies, tattoos, words, sentences and concepts—through semiotic means.

Human thinking and activities are enabled because we perceive the world as inhabited by signs, and it is through some sort of translation of these signs in our mind that we can think, create and guide our action (Freud 2001a; Peirce 1878; Valsiner 2007; Vygotskiĭ 1934). These signs can be very simple, allowing us to discriminate between some A and non-A, but they can also be much more complex, as these get organized in groups, sets and hierarchies, which can be more or less socially guided (Valsiner 2001; Vygotskiĭ 1934; Zittoun, 2011). Also, these semiotic forms can take various modalities—to our human minds, colors, shapes, melodies, spatial arrangements and rhythms, words, other people's ways of moving, smells,

temperature, are signs—we use them, or refer to them, at times not consciously, and so they stand for something else—an atmosphere, a general mood, a meaning.

The Person as Subject

The notion of "subject" can be best defined after an etymological excursus. In Latin, an "object" was *objectum*: "what is placed in front of", what affects the senses (14th century). A "subject" was "what is subordinated to" (but also, paradoxically 12th century: "what has a nature of its own"). Eventually, the "subject" becomes in the 19th century "the individual being, the person as the origin of an action or an influence" (Rey 1998). Hence, the contemporary "subject" results from a semantic inversion: from the subject of something else, it is today what escapes subjugation and stands detached, facing its object. Cases of semantic inversion suggest an inherent tension in the basic idea (Freud 2001b). And in effect, this basic probably still suggests the journey that allows a person to become a "subject": a subject has detached him or herself, to some extent, from the pressures and tensions from her surroundings, and to his inner tendency to remain the same, simply act or repeat oneself. To become a subject, one needs to detach from self and from the others and the world.

By analogy, this paper makes the following psychological argument: the "subject" emerges in, or out of the semiotic streams of social and personal determinations that always traverse and guide the person. Social and behavioral sciences have largely analyzed these channeling forces—social representations and beliefs, institutions, interactions with significant others, as well as one's personal history. Yet much less attention has been given to how, still, unique persons, a unique subjectivity, can at each emerge out of these streams of determinations. Here, I argue that subjectivity results from some process of retracting, or carving out of these streams, so at to generate a space from which the person can reflect, remember, and imagine.[1]

Representing the Emerging Subject

In this paper I propose a visual model to represent the person, as it is located in an irreversible time, and at the confluence of many ongoing dialogues with others, objects and the world. Visual models concretize ideas; they help us to put them in front of our mind's eyes, and thus once internalized, become tools for thinking. As such, they become secondary signs (Vygotskiĭ 1934)—they can guide our theoretical imagination, or our analysis of real-life situations. But of course, any metaphor has its limits, which can at times over-constrain our theoretical thinking (Leary 1994). In what follows, I choose to elaborate a mid-range model—a model which is concrete enough to easily refer to specific situations, and abstract enough to participate to the elaboration of more general theories accounting for human experience (Zittoun 2008). Working visually, I will thus progress by complementation, adding up the

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[1] This thus pursues an investigation on the possibility of accounting for a "thinking space" (Perret-Clermont 2004) or an "interiority" (Zittoun et al. 2003; Zittoun and Perret-Clermont 2009) in sociocultural approaches in psychology.

262 Integr Psych Behav (2012) 46:259–273

elements I need to account of the emergence of the subject in a social and cultural environment.

The First Distance

The most elementary psychological movement, and the most fundamental, is that of *"arrachement",* to strip off from the here-and-now of the ever new moment. This demands a first suspension, a first movement of one's attention above what one does and feels. The emergence of the self is the elementary capacity to take distance from the flow of experience, the always renewed experience of being-here and now in a feeling and experiencing body (see Fig. 1).

In this first model, the dot represents the experience I AM or I EXPERIENCE A. The first detachment from this dot, is the minimal distance that enables to see or perceive THAT I EXPERIENCE. It can be very elementary, as when one realizes being thirsty, or more sophisticated, as when in the course of a surgery a surgeon monitors his own actions (Moreira 2006). Ontogenetically, the possibility of emerging as subject is progressively built through first experiences and interactions, as the child starts to realize that his or needs can or cannot be satisfied by his carers, or when he experiences having a different perspective on objects (Fonagy et al. 2002; Winnicott 1988). Microgenetically, we keep exerting such minimal distance on a daily basis—as when I stop writing realizing a spelling mistake. Of course, through life, as people learn from experience, and master complex cultural systems, their modes of distancing become also more deliberate, complex, or abstract—as in complex scientific reflection, Asian meditation, mechanical expertise or when using proverbs.

In this model, this distance is represented by an arrow stemming out of the dot, and returning on it. By this loop, the person can reflect upon her action or experience. It has two main future developments: on the one side, this basic movement that will enable generalization or abstraction; on the other side, this loop will enable to think *time* or in time. One need in effect to step out of here and now to see that it is not WHAT WAS and to consider, in a more or less subtle way, WHAT WILL or WHAT COULD be.
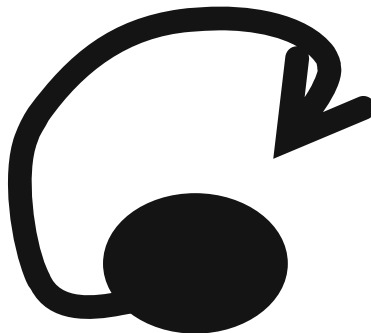

Fig. 1 Elementary semiotic mediation

Feeding-in Distance

But what is the process designated by the arrow made of, psychologically? In the framework proposed here, the arrow is the flow of our experience mediated by signs. And these signs can be of different origins.

In this next step, the loop of distancing from self to self-as-object, thus becoming a subject, is represented as fed, and traversed, by what can be schematized by two main semiotic streams (the curly lines) (see Fig. 2).

The first semiotic stream comes from the social world. First constituted by the presence and the interaction with others, it very soon becomes made of traces of such socially shared experiences, and signs, language, and objects which have been produced by others. Hence, this line represents the social and cultural material that always crosses the person's experience, that is internalized, and that always already mediates our experience of the world. It thus designates the inherent dialogicality of our experience (Bakhtin 1982; Grossen and Salazar Orvig 2011; Marková 2005): we act and think through the echoes of other people's experiences, words that have been used and signs produced by others, met in specific situated interactions, and we will always keep adding to the generalized circulation of meanings. This stream locates the person in a social and cultural time. This social semiotic stream is thus the first string with which we will knit a form of consistency out of the immensities of possible life forms.

The second semiotic stream comes from one's past experience. It is at the same time the sum and synthesis of one has done, enjoyed, suffered, learned, or reflected upon. This line results from past embodied perceptions and emotions, experiences of interactions with others and things, bodies of knowledge that have progressively been mastered, categories that have been met when moving through various social situations, as well as one's personal life philosophy. This personal stream includes memories and therefore anticipation and hopes. It is thus what confers the person a sense of personal continuity. It constitutes the second stream permanently crossing the person's here-and-now loops of distancing, and feeds in inner dialogicality; it is the second string for the knitting of our subjectivity.
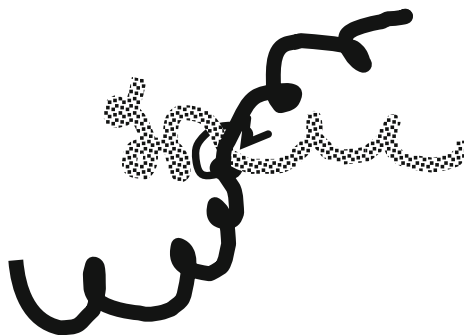

Fig. 2 Streams feeding-in basic distancing

The Knitting Metaphor

At any moment, this model suggests, the person's capacity to distance from her experience is nourished by semiotic streams coming from the social and cultural world, and from one's own life trajectories. The model thus suggests that subjectivity results from the junction of inner-dialogue and outer-dialogue, or the junction of history and one's story. The metaphor of knitting can thus be pursued: the subjectivity results from the binding of these semiotic streams through time (Fig. 3).

This is where the conceptual (if not ontological) problem springs again: if subjectivity is the result of the junction of socio-cultural discourses and personal history through time, how can we account for unique life trajectories and individualities? There are two ways to answer. The minimal answer takes the knitting metaphor as presented so far, and argues that as no two persons live exactly in the same point in time and space, and that no two histories are exactly the same path, then the process of knitting—itself located in time—can never give twice the same result. The objection to this is that if it accounts for uniqueness, it does not account for surprise and creativity: for if subjectivity is just binding what was and what there is, how can we account for people's fate-defying choices, for artists' and scientists' inventions, or for daily life-choices which escape any social or statistical prediction? Therefore, the second, dynamic answer, it that to account for subjectivity, we need to account not only for the wool lines and patterns created by the knitting, but also what enables the patterns to be seen: the fact that that there is space in and around the knitted patters. Knitted patterns appear only because, at the same time, an empty space is carved out of the fabric—here emphasized through the magnifying glass in Fig. 3.

If we reason back from the knitting model to psychological reality, then we can also say that people's life's actions, thoughts and decisions not only result from what was there (and is potentially visible to the observer)—social and cultural streams of determination, one's past trajectory—but also from what is not already given (and visible to the observer). If we come back to our first model (Fig. 1), the interesting thing is the loop. What is the space emptied out of the knitting? What supports the loop?

The Emerging Self-model

The proposition here is that subjectivity is precisely a precondition for the whole psychological production of the self—and that subjectivity can be
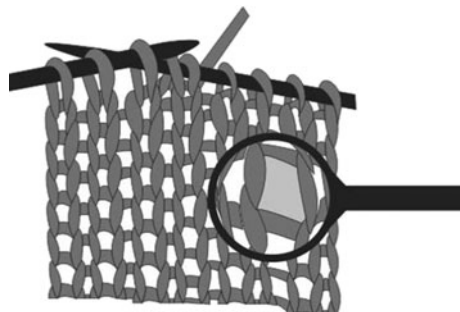

Fig. 3 The emergence of self in a semiotic fabric

conceived as what is constantly carved out, and generates a space in what is given. Yet subjectivity is not only as secondary product of repetitive determination as the knitting metaphor suggests. Subjectivity is rather a primary, co-emergent property of the system constituted by the person and her social, historical and cultural environment.

To account for subjectivity as a co-emergent property, both created and creating one's unique position in the world, another model is needed. Therefore the following dynamic, star-like model is proposed (Fig. 4):

The reader is now kindly required to engage in a short exercise of imagination. Consider that this star-like model takes place in a three-dimensional universe, where things keep moving (like in a galaxy). Consider then that each curved line, going from one end of an arm, passing through the center, going to the other arm, coming back through the center, going to the first side and back again, figures a perpetual, eight-shaped sinusoidal movement. Third, imagine then that each eight-shaped movement is dynamically dependent from the others: that means that the end of a loop then moves to another one, in such way that a variation in one of the movement—it trajectory, broader or longer, its speed—will affect the others. Fourth, imagine that these eight-shaped loops cross in their middle of their trajectory. Yet imagine that these trajectories do not exactly cross at the same point, but rather, that there is some mismatch between these crossing points, in such a way that there is always some empty space at the heart of the system. You may now have in mind a model engaged in a perpetual movement, supporting itself, yet constantly renewed by the energy it produces as well as the tensions of the field, or the space, in which it takes place—something like a pulsar, or a irregular system of planets. Finally, imagine that, depending on his internal movements, this system irregularly rotates upon itself, and that it moves through space—and that doing so, it leaves a trace, like a comet or a shooting star.

My proposition is that this schema offers a viable model of the dynamic emergence of the subject at the junction of the dynamic social and cultural streams:

(1) We can first consider the time-space environment in which we leave as a three dimensional space—at each moment of our life, we are in a specific social and geographical location, which gives us a perspective on where we are and on the rest of the possible spaces and times;
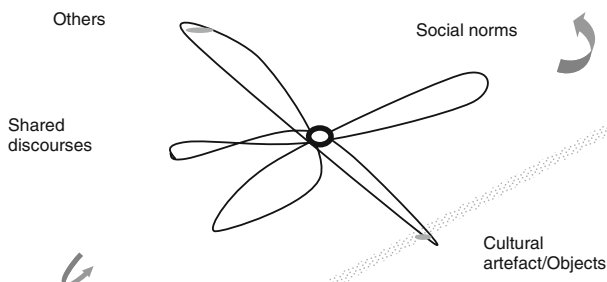

Fig. 4 A star-like model

(2) Second, consider that each attractor around which these eight-shaped trajectories unfolds, which constitute the "poles", or arms of the star-like shape, represent the "others" of one's real-world or inner dialogues, the persons, social entities or discourses which are likely to participate to the making of the person, at one specific moment in time and space. Here for the sake of demonstration, I will consider four or five poles, constituted by the other persons with whom one interact in a given situation, the social norms which are active, the objects and artifacts which mediate the current activity, the social knowledge and discourse what people mobilize in that situation—but these can be multiplied as much as required;

(3) The third idea of mutual co-determination suggests that at each moment, the weight of one of these social streams might be reinforced, or counterbalanced, by another—these social streams always create a field of tensions;

(4) If the crossing of these trajectories generates and empty space—like the hole in the knitting—then this space would designate the location of the subjectivity: it is carved out, or emerges from these streams, and at the same time, is the creation of an unique synthesis, through which the person, depending on her story, is here-and-now creating her participation to the world;

(5) Finally, the trace of this always emergent core through time and space would constitute the person's story.

In the two following sections, these five aspects are transposed on a psychological place, expanded and illustrated.

Activating the Model

What can this model show? The two first aspects are quite trivial and descriptive: the model analyses the situation of a specific person in one time and one location; in each specific situation, the person will be located in a unique configuration, or in a system made out the "poles" of the model. Hence, the actualization of the model is very different if it is made for a seventeen years old boy from an immigrant family in a French class in a Swiss vocational class, or a seventeen old boy from a local established family in a French class in pre-academic gymnasium—even though these schools might actually be geographically distant from less than two 200 meters.[2]

The third aspect, the mutual dependency of the person's looping streams, demands a more specific illustration. Imagine a young woman who wants to get closer to another *person*—a fiancé from the neighborhood—but feels impeded by other persons and *social norms* not to—parents will not want the daughter to marry a man

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[2] Most concrete examples are taken from (or inspired by) the SYRES project (*symbolic resources at school*) (see Grossen, Zittoun & Ros, 2012; Zittoun & Grossen, 2012, as well as Ros and Grossen 2009; Zittoun et al. 2010). The project's goal was to identify if students could use literary and philosophical texts met at school as symbolic resources, and eventually examined the roles between cultural experiences in and out of school. It included observations in 15 classes in 3 upper-secondary schools, questionnaires with 205 students on their cultural experiences, interviews with 16 teachers and 20 students on their relationship to cultural elements in and out of schools, and 6 focus groups with students about classroom situations in which engage personal matters in discussions about literary or philosophical texts. One example is taken from another project with its reference; the remaining examples are imagined on the basis of past research and indicated as such.

from a different social or national group. Yet the woman might decide to override the parental advices, and ignore the norms. She might feel supported in her decision because she knows a novel or a song describing a situation very close to hers—a cultural element such as *Titanic* or *Romeo and Juliet*—which can be used a symbolic resource to inspire her resistance to these parents and what she believes to be unjust social norms.

The fourth aspect, that of the carving out of a personal interiority, or the emergence of the subject, can be illustrated with the same example. In effect, that young woman could resist to one of the forces of the configuration in which she is located, first because she was also in a dialogical field of tensions: her desires where not that of her parents, the norms contradicts her experience of meeting that man, etc. This mismatch, the tensions, is a first invitation to step out of the situation, to take the distance to reflect and find a solution (Marková 2005; Zittoun et al. 2003). But this distance necessary to reflect is then nourished or supported by other semiotic means: her experience of watching *Titanic* or listening to *Romeo's and Juliet*'s opera, and being moved by the narratives and transported by images and sounds, finding an echo in her experience (Zittoun 2006). So the space of her reflection, borne out of the mismatch of social and symbolic tensions, is not empty; it is now inhabited and vibrant of her emotions, memories, whishes, impossible dreams, and imagination. In that sense, thus, one's subjectivity is carved out of the streams of determination, and uniquely made alive. It is then from this unique location that the person can then decide to act symbolically or concretely—to take distance from some streams, give more importance to others, and so on.

The dynamic co-regulation of the poles and the emergence of the core interiority are themselves probably co-emergent, as they occur in an irreversible time. An example can illustrate such mutual dependencies. A student in a secondary school is asked by the teacher to read and comment a literary text—a sequence of Dostoyevsky's *Player*. The relevant others here are the teacher, the other students, and in a more remote way, his family and his friends from outside school. The social situation of the secondary school classroom carries certain norms and guides what reading and commenting means; in principle, in this type of school, one should not talk about things which happen out of school, and one should learn to analyze the literary form of texts. Students of this class are also supposed to have acquired certain analytical skills and grammatical and literary knowledge, as well as know-how of the routines of discussing literary texts. The student has read the text and has been moved by it, as it made him think of personal experiences—a family drama due to his uncle's addiction to money games. Now in that particular configuration, what will the student do?

Two possible answers to the teacher's request can be described here. In the first option, the student starts reading aloud, and then analyses the structure of the text. In the second, the student reads the text silently, and then says that it makes him feel sad and reminds him of his uncle. In the first case, in the student's configuration, the expectations of the teacher and the social norms demanding to mobilize specific skills would have been stronger, and the subjectivity of the student is expressed by way of keeping his emotions and memories for himself. In the second case, life out of school would have been fore-grounded, and social norms actualized by the school context would have less strength; the students' subjective choice is expressed by his reflective

skills and poetic capacities, rather than literary-specific ones. The point is that either choice, which might be more or less deliberate and reflective, is an expression of one's subjectivity: it demands the externalization, in a specific configuration in time and space, of the result of one's unique synthesis and positioning—whether that expression is in apparent conformity or rejection of dominant norms.

The present model thus suggest that each of the poles dynamically interacts with each other; and yet, the person—represented at the heart of the crossing line, can, through these multiple cultivations, develop as an unique individual, with a margin for unique reinvention.

The Historicity of the Subject

The model suggests that the components always maintain dynamic relationship, and that it is under constant evolution in its three-dimensional sense. Of course, one of the limits of such a model is that it is very difficult to describe the configuration of the model in which a person is at a given moment in time, and the dynamic of current transformation of the model in time and space.[3] However, the model is meant to highlight these constant mutual dependencies and their temporality. Here, therefore, I give a special attention to the fifth aspect of the model, its dynamic and temporal nature—which I show at various scales.

First, time can be analyzed at a micro-genetic scale, in a given situation, in a sphere of experience. Let us return to the example of the Dostoyevsky student: after he or she engages in one of the possible answers, the teacher (and his peers) will react to that proposition. The student might also be affected by the teacher's feedback. If the teacher prizes him for the first type of answer (reinforcing the norms), the student might be encouraged to give more importance to literary analysis, and so give an even better answer in a next similar situation. But also, he might find it all too-easy, and try to find another way to reply his teacher in the next similar situation, for example by questioning why one should focus his analysis on the literary form when much more important issues are raised by the text. If the teacher prizes him for the second answer, the student might feel encouraged to develop his reflexive capacities and the links between school knowledge and daily life, thus weakening some of the active social constrains. Let us even imagine further events: the praised first student might disinvest school, while the student with the "bad" answer might become a poet, and then a teacher… Hence, because of its looping nature, the temporal dimension of the systems allow for showing the dynamics between interpersonal and intrapersonal dialogicality, constitutive of the emergence of the subject.

The system has a history. A second scale of analysis—which might correspond to so-called meso-level analysis—might render the evolution of the system more visible. For this, we need to follow the evolution of the system around a specific theme, or configuration, in the life of the person—a theme that has some durability, and that

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[3] A problem that has similarities with the so-called uncertainty principle in quantum physics as described by Heisenberg, who showed the impossibility of measuring both current properties and momentum of a particle. It is not only a matter of combining perspectives: the very process of measure will affect in an unpredictable way the system made of very small quantities. This has been questioned over the years (for instance see Busch and Lahti 1985). To some extend, but for different reasons, the same issue appears in any social and human system under study…

moves through spheres of experience (e.g., from school, to work, to family life). At the scale of months, perhaps years in a person's life, the system develops some stability around its attractors: significant others, social knowledge, might be replaced one by the other, even if their central organizing roles in one given aspect of the person's life have some continuity. Take the example of a young woman's interest for Arts. As a child, her significant other was first her mother showing her beautiful dresses in a children's book, then a grandmother bringing her to the Museum to admire Degas *Dancers* beautiful tutus; these were soon replaced by a group of girlfriends with whom they enjoyed drawing real-size girls, and finally, by an attentive teacher noticing her gift for color and encouraging her to study Arts (Zittoun 2010). In the life of the young woman, the mother has not "disappeared", she is in the background of the significant persons who have supported her painting. In the model, the loop organized around persons-who-support her painting—the attractor—can thus take place, although the actual person—mother, grand-mother, friends, etc.- replace, or even more, add to each other, in respect to that particular interest. And in respect to that interest, we see how the young woman's interest—her commitment to Arts— slowly emerges as her subjective life-path.[4]

Let us move one step further. If we can imagine evolving configurations around specific interests or topics that have some stability through a longer period in one's person life, how can the model represent how people move from one activity to the other, one sphere of experience to the other, along the day or along the year? Should we imagine that one model substitutes another one—the person as painter, as student, etc.? The suggestion is here precisely that the model allow for representing the moment-to-moment reorganization of one's field of experience. The model keeps evolving around the core that is the emergent person. Rather, some loops fade out as some attractors get less important, while other can emerge; other, can also be transformed in their weight and importance. The good student physic teacher's figure do not vanish as he plays hard-rock in a basement—these become simply less relevant, temporarily overwritten by his musician friends and models. It will come back as soon as the student goes back to class. Yet also, sometimes these changes through activities bring some of these attractors to mingle, exclude each other or fuse, bringing to new life choices. A young person in a technical school might keep separate is interests for rock and engineering separate, and shared them with different others; another might actually realize he might combine them by becoming a sound engineer. In the first case, the person's system would be substantially reorganized as he moves from one sphere to the other—relevant objects, knowledge, others are replaced by others—while in the second case, the fusion of previously separated loops would demand a deeper reorganization of the system. Again, in either case, the emerging subjectivity is that, what remains the same through these changes, while being constantly produced by them.

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[4] In that sense, over time, significant Others, the meanings they have, or the laws that organize people's lives regarding specific objects or activities—that is, in specific spheres of experience—are often *synthesis* of many encounters, or accumulated experience. One's relationship to mathematics is not built in one day, it is a long history that can go back to childhood games, school mockery, exam failure, tax-form-filing, company management, and so on. Like Freud, writing about dream figures, suggested (2001a), these internalized others are less one specific person, than a composite, a synthesis—like when, in the early times of photography, many people's negatives were captured on one same photographic paper, so as to produce a composite of persons, with some dominant emerging figures and erasing people's specificities.

Through the years, from a forth, ontogenetic perspective, imagine now a bifurcation point on the basis of the previous case—the person that plays hard rock and enjoys physics. In the first option, he decides to put more effort in his music, rehearses more hours a day, and starts to play concerts; his school commitments drops but he achieves a simple technical training which enables him to support himself; music becomes his main involvement. In the second case, the person becomes very interested in more challenging physics, and decides to try to be admitted in a more advanced school program. He works a lot for it, and has less time to go to rehearsals and concerts, and eventually his rock-band friends replace him. He does not care much, as he enjoys physics and can still play for himself now and then. In that case, science becomes a main commitment; it might take more place in the person's life, involve many more significant others, etc. Such examples might help us to reflect upon the evolution of the model through time: we might say that through time, some attractors might change their relative importance; some might play a more dominant role in the system of curves and lines, while others will reduce their amplitude and intensity. Some might even fade out, and with them the corresponding loop will need to be redesigned or transform its trajectory; inversely, some new attractors might emerge and thus redefine the system. Thus, it is the whole equilibrium and momentum of the system which might be transformed as the person moves through life. And again, the resultant of these transformations of that system is also its emergent property—the definition of an unique life trajectory.

Finally, as suggested, the heart of the model—the subjective space—emerges from the mismatch of the crossing loops of the various components in tension. If the whole system evolves with time, with looping trajectories redefined, attractors evolving or replaced, then it follows that that space itself will be constantly renegotiated, reshaped, or reconfigured. Also, as suggested, the whole system can be seen as rotating in and moving through a three dimensional space, given its own momentum; thus, the core "space" is also moving in space (Fig. 5). In that sense,
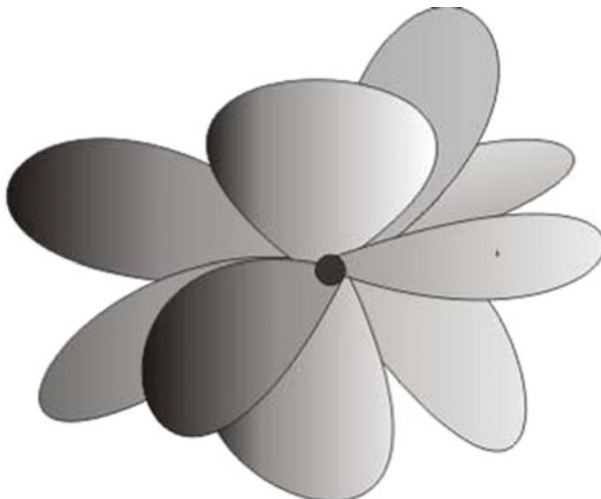

Fig. 5 Evolutive system in a three-dimensional space

one might say that the system, and especially this central heart that is subjectivity, is leaving a trace in that space. That trace of the subjectivity is what we consider as being the person's life course, or life trajectory. From an external perspective, it might be the history of observable changes in commitments, relationships, social positions and actions. From a more subjective perspective, the resultant itself is the perspective that each person can have, at one given moment, on her own past trajectory and on where she might go. How people think about this trace of their experience—the life story—of course depends from the perspective from which they examine it, whether they simply reflect on it or narrate it to a researcher (Bruner 1990; Kvale and Brinkmann 2008). In any case, what we, as researcher, access when we question people about their experience, is precisely this emergent part of a subjective experience.

The model has thus ambition to give us a clear, intuitive grasp of the possibility of the emergence of the subject, out of complex, dialogical, social and cultural others, and in time.

What is a New Model Useful For?

There is no use in producing additional models if these do not add anything to the existing state of understanding—both for parsimony purpose (Occam's razor), and from a pragmatic perspective (James 1904). Models should allow us to see the world better, to improve our understanding of it, or guide our actions upon the world.

In that respect, this model is a rudimentary attempt to offer a better representation— to visualize and mentally grasp—of the mutual dependencies of social and cultural processes in human development, and of the possibility for the person to emerge as unique. Its quality over other models is its simple complexity and openness (branches can be added, taken away, as the basic principles stay), its capacity to account of the circulation of semiotic flows enabling dialogical processes—in the world and in the person—and its temporality. Mainly, it breaks away from linear, two dimensional representations and thus might support our thinking of complex phenomena in terms of configurations, not simple causalities. In terms of use, it might become an analytical tool for better grasping situations in which persons are both constrained, and can find means to emancipate and expand their inner distance. Finally, the model can probably be combined with others, as for instance trajectory models (Sato and Valsiner 2010) that allow retracing trajectories from a bird-, or better, a satellite-eye perspective.

Above all, such model might allow us to make a step toward a better understanding of the emergence of people's unique melody of living (Zittoun et al. in press)—how, in their sets of constraints, social determination, oversaturated languages, people keep creating their unique trajectory, in an unique style—the unique mark of our passage in an infinite universe of possibilities.

References

Bakhtin, M. M. (1982). *The dialogic imagination: Four essays*. Austin: University of Texas Press.
Boyer, P., & Wertsch, J. V. (Eds.). (2009). *Memory in mind and culture*. New York: Cambridge University Press.
Bruner, J. S. (1990). *Acts of meaning*. Cambridge: Harvard University Press.
Busch, P., & Lahti, P. J. (1985). A note on quantum theory, complementarity, and uncertainty. *Philosophy of Science, 52*(1), 64–77.
Draaisma, D. (2004). *Why life speeds up as you get older. How memory shapes our past*. Cambridge: Cambridge University Press.
Fonagy, P., Target, M., Gergely, G., & Jurist, E. L. (2002). *Affect regulation, mentalization, and the development of self*. New York: Other Press.
Freud, S. (2001a). *The interpretation of dreams. The Complete Psychological Works of Sigmund Freud* (New Ed., Vol. 4–5). Vintage [Original german publication 1900].
Freud, S. (2001b). The 'Uncanny'. *The Complete Psychological Works of Sigmund Freud* (New Ed., Vol. 17, pp. 217–256). Vintage [Original german publication 1919].
Grossen, M., & Salazar Orvig, A. (2011). Dialogism and dialogicality in the study of the self. *Culture & Psychology, 17*(4), 491–509. doi:10.1177/1354067X11418541.
Grossen, M., Zittoun, T., & Ros, J. (2012). Boundary crossing events and potential appropriation space in philosophy, literature and general knowledge. In E. Hjörne, G. van der Aalsvoort, & G. de Abreu (Eds.), *Learning, social interaction and diversity – exploring school practices* (pp. 15–33). Rotterdam/Boston/Taipei: Sense Publishers.
James, W. (1890). *The principles of psychology (Vol. I)*. New York: Dover.
James, W. (1904). What is pragmatism. *A new name for some old ways of thinking*, Writings 1902–1920. The Library of Amercia. Retrieved from http://www.marxists.org/reference/subject/philosophy/works/us/james.htm
Kvale, S., & Brinkmann, S. (2008). *InterViews: Learning the craft of qualitative research interviewing* (2nd ed.). London etc.: Sage.
Lê Quang, D. (2012). *Rien ne va plus. Comment faire advenir l'effet.* Invited lecture at the Conference of the Neuchâtel Association of Psychologists-Psychotherapits, La Chaux-de-Fonds, March the 17th.
Leary, D. E. (1994). *Metaphors in the history of psychology*. Cambridge University Press.
Marková, I. (2005). *Dialogicality and social representations: The dynamics of mind*. Cambridge University Press.
Moreira, T. (2006). Heterogeneity and coordination of blood pressure in neurosurgery. *Social Studies of Science, 36*(1), 69–97. doi:10.1177/0306312705053051.
Peirce, C. S. (1878). How to make our ideas clear. *Writings of Charles S. Peirce* (Vol. 3). Indiana University Press. Retrieved from http://www.marxists.org/reference/subject/philosophy/works/us/peirce.htm
Perret-Clermont, A.-N. (2004). The thinking spaces of the young. In A.-N. Perret-Clermont, C. Pontecorvo, L. Resnick, T. Zittoun, & B. Burge (Eds.), *Joining society: Social interactions and learning in adolescence and youth* (pp. 3–10). New York/Cambridge: Cambridge University Press.
Rey, A. (Ed.). (1998). *Le Robert. Dictionnaire historique de la langue française* (Paperback., Vols. 1-3). Paris: Dictionnaires le Robert.
Ros, J., & Grossen, M. (2009). *Savoirs scolaires et extrascolaires en littérature, philosophie et culture générale à l'école secondaire II.* Research report SYRES n°2. Lausanne/Neuchâtel: Universités de Lausanne & Neuchâtel. (subside FNS n° 100013-116040/1).
Sato, T., & Valsiner, J. (2010). Time in life and life in time: between experiencing and accounting. *Ritsumeikan Journal of Human Sciences, 20*(1), 79–92.
Toren, C. (1999). *Mind, materiality and history: Explorations in Fijian ethnography*. London & New York: Routledge.
Valsiner, J. (2001). Process structure of semiotic mediation in human development. *Human Development, 44*, 84–97.
Valsiner, J. (2007). *Culture in minds and societies: Foundations of cultural psychology*. New Delhi: Sage Publications Pvt. Ltd.
Valsiner, J., Molenaar, P. C. M., Lyra, M. C. D. P., & Chaudhary, N. (2009). *Dynamic process methodology in the social and developmental sciences*. New York: Springer Verlag.
Vygotskiĭ, L. S. (1934/1986). *Thought and language*. (A. Kozulin, Ed.). Cambridge: MIT.
Winnicott, D. W. (1988). *Human Nature* (Reprint.). London: Free Association Books.

Yamada, Y., & Kato, Y. (2006). Images of circular time and spiral repetition: the generative life cycle model. *Culture & Psychology, 12*(2), 143–160. doi:10.1177/1354067X06064575.

Zittoun, T. (2006). *Transitions. Development through symbolic resources. Coll. Advances in cultural psychology: Constructing development*. Greenwich (CT): InfoAge.

Zittoun, T. (2008). Children's uses of cultural objects in their life trajectories. In S. Salvatore, J. Valsiner, S. Strout-Yagodzynski, & J. Clegg (Eds.), *YIS. Yearbook of ideographic science (vol. 1)* (pp. 361–370). Rome: Firera.

Zittoun, T. (2010). How does an object become symbolic? Rooting semiotic artefacts in dynamic shared experiences. In B. Wagoner (Ed.), *Symbolic transformations. The mind in movement through culture and society* (pp. 173–192). London: Routledge.

Zittoun, T., & Grossen, M. (2012). Cultural elements as means of constructing the continuity of the self across various spheres of experience. In M. César & B. Ligorio (Eds.), *The interplays between dialogical learning and dialogical self*. Charlotte, NC: InfoAge.

Zittoun, T., Duveen, G., Gillespie, A., Ivinson, G., & Psaltis, C. (2003). The uses of symbolic resources in transitions. *Culture & Psychology, 9*(4), 415–448.

Zittoun, T., Padiglia, S., & Matthey, C. (2010). *La culture personnelle des élèves et leurs relations aux textes lus en classe de philosophie, littérature et enseignement général*. SYRES research report n°4, Mars. Lausanne/Neuchâtel: Universités de Lausanne & Neuchâtel. (subside FNS n° 100013-116040/1).

Zittoun, T., & Perret-Clermont, A.-N. (2009). Four social psychological lenses for developmental psychology. *European Journal for Psychology of Education, 24*(2), 387–403.

Zittoun, T., Valsiner, J., Vedeler, K., Salgado, J., Gonçalves, M., & Ferring, D. (in press). *Melodies of living: Developmental science of the human life course*. Cambridge: Cambridge University Press.

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