

tual structure that they consider to be common property does not describe an 'objective' state of affairs but a collection of individual interpretations that, in the course of discussion and critique, have acquired a certain viability for all the participants" (§43).

8 Von Glasersfeld's "bottom up" account may complement the social constructionists' "top down" view. In other words, perhaps it is fruitful to postulate that the personal and the social mutually influence and shape one another. In such a conception, one might uphold von Glasersfeld's notion that people are isolated knowers only in touch with their own processes. However, in coordinating their actions with one another in the course of group living, people exist as parts of social unities that generate "shared" meanings, or social constructions. These social constructions need not be seen as objective and independent entities. Rather, they can easily be

seen as "a collection of individual interpretations that, in the course of discussion and critique, have acquired a certain viability for all the participants" (§43). Yet the process of discussion and critique that spawns this "collection of individual interpretations" is nothing if not a means for further perturbing, or triggering, the internal processes of individuals. Thus, how people socially coordinate their individual interpretations with one another influences the next round of perturbations they generate. Importantly, the perturbations created do not dictate an individual's response because that response is always a product of the person's structure. Nevertheless, different perturbations arise in different contexts and individual development is both a product of the kinds of perturbations an organism encounters and the ways it reorganizes itself in reaction to them. This occurs in good measure because a substantial part of each context is shaped by the ongoing discus-

sion and critique of those dwelling within it, however cognitively isolated they may be. It is therefore reasonable (rational, even?) to suggest that the "social" informs the "personal" as much as the "personal" informs the "social." What one does impacts one's surrounding medium, even if individuals never can directly access this medium. This, in turn, perturbs and changes the medium in a manner that inevitably impacts its next series of perturbation-inducing events. Von Glasersfeld's presupposition that all organisms are isolated subjective knowers can thus remain viable within a framework that sees the personal and social as mutually informing. Implying that isolated knowers coordinate the ways in which they "bump" into one another – and that this coordination impacts the kinds of perturbations that arise within them – constitutes a perfectly rational variation on von Glasersfeld's theory of rational knowing.

On the Viability of Being a "Self-Orienting Subject"

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The non-analytic potential of a cybernetic perspective

1 In the opening passage of his paper, Ernst von Glasersfeld zooms in on a *subject*, grasping the world as *reality*, determined by *society*, while reflecting him- or herself as a part of this society. In the advanced sense of being a conceptual essay it aims to understand how "patterns arise from the perception of... elements" (§1).

2 This analytical assertion involves several assumptions that are implied in the use of conventional notions such as "thinking subject," "patterns," "disconnected elements" and even "perception" or "society." It also touches on discourse terms such as "observer-independent reality."

3 Despite their conceptual connotations, these terms do not, however, fit into the essen-

tially non-analytic approach to constructivist thinking. According to mathematician Luitzen E. J. Brouwer (1975) and in the sense of philosopher Immanuel Kant, I assume that the validity of analytical notions does not depend on any reference to ontological consistency. The non-analytic potential of the constructivist approach (which is also cybernetic) bears on the synthetic experience of an observing subject who does not rely on trivializing the experiential world into a set of separations when modeling and simulating conceptual foresights.

4 Consequently, the risk of misunderstanding arises within the analytically bonded notions of the language used, which simplify the prospective complexity of a given discourse. Like the assumption that seems to conceptualize "reality" (mainly as a product of internal visualization ("mental images")), the figures used are perfectly suited for illustration. The same metaphors can be, at the very least, misleading for sufficient appreciation of the conceptual potential of von Glasersfeld's vision.

5 In the light of the almost brilliant equilibrium of the author, who manages to compose a resourceful explanation, switching between the notional conditionality and the expected contextual understanding, I intend to focus on

the interdisciplinary potential of some suggestions that offer new perspectives on conceiving society, which are driven by a non-analytical and holistic vision.

The fateful ambivalence of autonomous orientation

6 In order to avoid a misconception, I would remind readers of the belief that I share with the author (§42) that the only reasonable and possible kind of knowledge (not only of society) is individual and is initially of a non-analytic nature. Since a thinking subject differentiates the world, he or she has to comply with any external drive. In my own categories, evoking a holistic view of epistemic determinism, *there are no verities or certainties beyond the individual orientation*. Being originally free of any separation (or objectification), everything should be conceived initially as an attitude from one's own integrity.

7 The concept of *autonomous orientation* (Tsvasman 2006) explains the driving attitude of a subject defined as "thinking" to separate things into the form of "notions." A self-orienting subject does not define him- or herself as a separate – and therefore as a *thinking, communicating* or even *analyzing* – subject until involved with other subjects in *inter-subjective* handling. At this point, another consequence

of the above-mentioned simplification (of the discourse through the use of language-validated terms) occurs. The term “notion”, for example, ignores any history of a determination that could clarify the epistemic inconsistency of any analytic contextualization of the conceptual meanings. As set out in the following passage, an intersubjective perspective is the consequence of the semantic re-contextualization of the approach (towards its non-analytic potential) drafted in von Glasersfeld’s article.

8 Von Glasersfeld explains *viability* in terms of goals of individual perception. Summing up (§17), he explains the natural drive of individual orientation as “to put the perceiver into a position to decide which ways of acting seem viable. In short, perception serves to make predictions.” At this point the author’s concept seems to ignore the natural “fate” of individual orientation to be substituted for initial socialization (which emerges from inter-subjective activity). He attempts to deal with this problem in the next chapter, dedicated to “communication,” which is assumed to arise “in the course of protracted interaction with others, through mutual orientation and adaptation” (§26). However, this explanation still overlooks the essential point that “mutual orientation and adaptation” is socially determined.

9 Conceiving the world outside as an order of entitative subjects or objects, a thinking subject distinguishes “things” according to a certain interface-criterion that confines the trivialized visibility as a product of initial socialization (towards a certain balance of attention and memory; §§4–16). The pure cognitive-psychological explanation above undervalues the intent of socialization, which is to restrict the autonomous orientation of the subjects involved. With those intentions, inter-subjectivity is enabled to concentrate its efforts against those energies that cannot be conceived and absorbed on an individual level. Confined for being “destructive” or termed as “enemies,” the inter-subjectively absorbed hindrances quasi *ad negativum* define the sets of “viable patterns” as inter-subjective *validities* (realized as inter-subjectively stable objects, communicated as notions, etc.).

10 As might be expected by von Glasersfeld, from the visionary constructivist outline that gives an alternative to sociology (§§41–45), I intend to “merely propose a model of how one

could imagine” that emergence which we perceive as society “to be built up.” In the specifically constructivist view, sociology appears to be a set of instruments used for individual interpretation (by a selected circle of experts) or – in my terms – a technology of valid knowledge rather than an empirical science. Here I use the term “technology” in the meaning of “know-how for trivializing, objectifying or re-producing meanings.” In this case I have to claim a consistent cybernetic understanding of those relations between *autonomous orientation* and *inter-subjectivity* that I assume to be the subject of what I call “social cybernetics.”

11 Commending *radical constructivism* as an approach that aspires to a kind of thinking-consequence, I will try to interweave this commentary with my initial draft, thought-out in response to the views indicated in §§30–46.

The drive of “combining efforts”

12 To consider the basic assumptions, the only reasonable purpose of inter-action seems to be to *combine efforts* (cumulating its drive inside the inter-subjectively objectified meanings in the form of “value” or “power”). So the only motivation for social action on the part of the *autonomously orienting subject* is the viability of combining efforts. The initial socialization includes, therefore, something like an “expectation of devotion,” which is not challenged later on, becoming a stable part of the so-called psychic or mental *awareness* of the initially-socialized subject. This psychological perspective of understanding social action also seems to fit von Glasersfeld’s understanding, indicated in §§31–33. By the term *inter-subjectivity*, I mean more than a purely communicative act, because it also implies the intentionality of intra-subjective operations, which is the subject of what we call “consciousness.” By analogy, *intra-subjectivity* should be used instead of “psychic or mental structure.”

13 The mainly self-evident possibility of *combined efforts*, without running the risk of provoking a subject to reassess his or her social *awareness*, is to objectify its necessity as an external order of things (*externalization*), which is then a “ready-made ontological given, existing as such and independently of subjective experience” (§31). If we accept this concept, our *world of living* appears to be a medium of inter-subjectivity, and the “built-in” belief in reality is a medium of socializa-

tion. The significant aspect is, furthermore, a kind of ban on autonomous orientation, which is immanent in social action.

“Actualization” as social technology?

14 To be socialized one must first devote one’s potential as a subject of autonomous orientation to what we call “society,” which is supposed to be a self-evident emergence of cumulating efforts. In the second step one must prepare oneself (through education) for acting as a *person* who is able to operate in accordance with a certain set of validities (as certain values or powers that are cumulated in the appropriate objectified notions) in order to re-produce their authority. This activity displaces the original drive towards autonomous orientation by using the energy destined for self-orienting (at the pre-social or biological level I would call “the level of embodiment”). As a person, one must act according to the rules that constitute the *technology* (in the above-mentioned meaning) of *actualization*. The origin of what we call “psychic” is therefore an experience of being dependant, in awareness of one’s potential as an autonomously orienting subject, but alienated by the initial socialization (for the purpose of actualization).

15 A hypothetical not-socialized subject will orient him- or herself autonomously for the biological purposes of self-maintenance and reproduction (I suggest calling these *embodiment*). A socialized subject will act, by contrast, in accordance with its society’s set of rules. The meta-subjective purpose of social acting is what I call *actualization* (“Verwirklichung”), which is therefore a certain mode of constructing reality, based on the objectification of the specific validities. (By this position, I anticipate the possibility of alternative modes of constructing reality that would be still reason-legitimized but not necessarily *technological* – i.e. trivializing, objectifying, re-producing and therefore analytical.)

16 Those “actualizations” (as the absolute purpose of *combined efforts*) seem to fit with the initial *interest* of a self-orienting subject – as a living organism or an acting individual – in a stable *world of living* which filters the not-absorbable and, inasmuch, destructive energies (substantiated as hindrances). This initial *interest* explains the credit (the already mentioned devotion) that a self-orienting subject gives to that regulation which is required for socialization.

Conceiving the inter-subjective “validities”

17 Expecting a specific system of inter-subjectively validated “patterns” (applied here in the meaning implied in Simmel 1917), socialization suggests a set of rules for orientation for the involved subjects to be used as a kind of orientation-know-how. The latter fits that know-how of “trivialization” (in the meaning near to von Foerster 1998) that sustains the self-devotion of autonomous orientation.

18 My proposal is therefore to use the term “validity” when language-related (inter-subjectively trivialized and thus socially dominated) separations are meant. Alienated from its usage in logic or statistics, this term denotes - besides the *technological* significance of the sociolinguistic perspective - both the economic aspect of “value” as well as the imperative aspect of “power.” Subsequently the term “validity” means any consensually stable inter-subjective separations that link autonomous orientation for the needs of society. In this context “sociality” stands for a certain consensus of inter-subjectivity aimed at concentrating energies that have been diverted from individual orientation in order to construct a relatively stable *world of living* by creating, maintaining and managing “validities” inside a non-trivial “reality of ontological determinants.” The term “validities” connotes, therefore, the determination mechanisms that are intrinsic in socialization. This implies the offer of autonomous orientation

for the non-subjective needs of an inter-subjective construction of *validities*. (In this context the term also implies a strong aspect of attentiveness that is important for conceiving of the mechanisms of mediality).

19 A different perspective exposes the problem that can be observed if socially maintained *validities* emerge as autopoietic systems with their own interest in autonomy. In this case, any legitimization of validity becomes system-rational (reasonable in the terms of the systemic integrity), while no longer tied to individual orientation. The use of these *validities* to assemble reality is not obligatory for the subjects involved, hence I tend to define the “thinking subject” in general in the terms of his or her autonomy of orientation.

20 This non-analytic commentary gives a good example of the interdisciplinary potential of “conceiving society.” It also is a basis for possibility of a consequent constructivist alternative to any system-centered, validity-rational or even subject-hostile socialization concepts.

The dictate of emerging “constancies”

21 The outlined view reveals dimensions hidden under the ingenious simplicity of von Glasersfeld’s solution, summarized in the abstract to “Who conceives of society?” According to his vision, both “recognizable objects in the experiential field” and “others” appear as *validities*, confined by their *constancy*. The

only difference between *subject* and *object constancies* seem to be linked to their potentiality as *orientation-driven* (subjects) and *cumulation-driven* (objects). Subjectivity (of living humans), motivated by embodiment, is therefore dominated by the actualization of *validities* motivated by power. The subjects of social acting perceive each other to be “objective” because of constancy, strained by the validity-driven *medialization* (in the meaning of Tsvasman 2006) as “identities.”

22 A self-orienting subject has no intrinsic motivation to be *constant* and therefore “objective,” “real” or even “actual,” until involved in a certain inter-subjective action. The only essential attitude of a self-orienting subject is *potentiality*. Even when socialized as “individuality” (or medialized as “identity”), the thinking subject remains no more than driven by autonomous orientation. The emergence of the *orientation-driven* validity-system (so-called “consciousness”) is structurally equivalent to the emergence of the *cumulation-driven* validity-system (which is “reality”). Both appear to be products of socialization, a *power-driven* emergence of inter-subjective validation. The intrinsic goal of socialization is therefore reality-construction, which maintains the experiential world, populated by *persons* who sustain *validities* according to the rules of communicative handling. Being a certain mode of inter-subjectivity, the latter transforms the biological drive of *embodiment* into the power of *actualization*.

Does Brain Science Render Constructivism Superfluous?

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1 Ernst von Glasersfeld draws an admirable picture of the constructivist viewpoint. The subjective world, including our interaction with the social world (including society) is not grounded in an objective-physical world but a psychological construction loosely or not at all correlated with the “objective” world. He describes the building blocks of the

inner construction of our view of society on a psychological level. I argue that present brain science arrived at a fairly precise knowledge base of the brain’s constructive mechanisms - even of the social world. Social cognitive neuroscience has accumulated, in many ingenious experiments, knowledge of the brain processes behind the most elementary social behaviors such as empathy, imitation, attitudes, prejudices, and social emotions. Neither the basic neuroscience results nor social neuroscience is compatible with radical constructivism, which is a return to radical subjectivism. What do we gain from the notion that society is an individual’s creation? Brain science has taught us over the last 100 years how this creation is built in our brain during evolution and development. We have learned

to ground psychological concepts in physiological constructs amenable to experimental verification and replication. Certainly, Donald Hebb’s *The organization of behavior: A neuropsychological theory* (1949), constituted the end-point of introspective psychology and constructivism by translating the psychology of perception and learning into neural nets and cell assemblies. The years after 1949 up to today brought us an endless stream of discoveries in the neurosciences confirming Hebb’s formulations.

2 Perception and motor responses consist of associative networks in the brain that are build according to Hebbian cell-assemblies construction principles. What else can the brain do except connect repetitively synchronous active cells (in philosophical language: associ-