Who Conceives of Society?

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▶ **Problem** — How can constructivists speak of social interaction or communication with others, when, as they claim, their experiential world is their own construction? This question is frequently asked and is perfectly reasonable. The present paper is intended as an answer. ▶ **Solution** — After providing an outline of the constructivist approach to perception and the generation of recognizable objects in the experiential field, I argue that "others," too, can be explained as an individual's creation; a creation, however, that is just as constrained by the condition of viability as are the physical objects with which we furnish our world. Consequently, "society" too can be considered an individual construct rather than an ontological given. ▶ **Benefits** — The exposition may help to clarify the constructivist position with regard to social interaction and communication.

1 The creation of patterns

If you examine how the notion arose that our image of the world is the representation of a reality that exists in itself and independently of any observer, you will sooner or later also come to question the relation between a thinking subject and the society to which he or she believes they belong. I can think of no better way to approach this problem than to examine how patterns arise from the perception of disconnected elements.

In the first part of his contribution to the book *Das große stille Bild*, Siegfried Schmidt (1996, pp. 150–160) provides a good sketch of the radical constructivism. It forms the starting point of an essay in which he analyzes the role of pictures in the domain of advertising. Here, I take what he says about the activity of seeing as a launching pad for some reflections on the generation of mental images and the concept of society. Schmidt quotes Roland Barthes (1985):

> At the sight of a photograph, Barthes says, consciousness does not necessarily embark on the nostalgic path of memory, but may choose the one of certainty. '…the essence of photography consists in confirming what it represents. Its fundamental principle is reference. This-is-how-it-was, it cannot be denied that this thing actually happened.' (p. 86). Since we have photography, 'the past is as certain as the present' (1985, p. 97) (Schmidt 1996, p. 171, my translation from the German text).

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Figure 1: "Incomplete Form"
(from: Vernon 1962, p. 63)

Photographs are visual experiences. In English there is the old indestructible cliché: "Seeing is believing" (*Sehen heißt glauben*). This is not limited to photographs. Any visual image will be interpreted as a representation of something that has its own existence, something that is actually *there*, regardless of whether it was generated on the basis of an actual situation or was a photographically produced picture. Even representations of flying saucers and their passengers are intended to create the impression that these things could actually be perceived and therefore "exist." And paintings of dragons, devils, and angels, too, are often intended to be taken as pictures of "real" beings.

Constructivism maintains that this inference from perceptual images to things supposed to exist independently of the constructive, coordinating work of an observer is unwarranted. What a photograph refers to is not a "thing in itself" but an observer's mental representation, namely the re-presentation he or she brings forth or would bring forth when perceiving the photographed situation.

The problem with the relation that we call "reference" becomes particularly transparent in the case of caricatures. The kind of caricature I have in mind is a spare drawing showing a few lines, each of which seems indispensable. The drawing evokes the representation of a face or a figure that we recognize at once as familiar. The remarkable feature is that the lines of the drawing do not represent at all what we would see if the person stood before us. The lines constitute a crafty simplification of the perceivable. In other words, they are a graphic embodiment, for example, traces of graphite on a sheet of paper that afford us the possibility of interpreting them as something that we have already experienced, even though we have never actually seen this simple pattern of lines.

But what are these lines, in which we see the character of a person? One might say they are particles of pigment that are distinguishable from a neutral background. But the material is irrelevant. The caricature would have the same effect if the lines were white on black, thinner or thicker, or of another color. What matters is their arrangement. What caricaturists or painters of portraits produce is, from a constructivist point of view, a *potential* image of their model. Strictly speaking, they create an arrangement of visual lightness values and color shades such that the perceiver, who always involuntarily looks for possible connections between details, is led to carry out much the same scan paths that he or she would follow if facing the represented person.

This may sound complicated and perhaps even incredible. I have therefore dug out two illustrations from the psychological literature that make the drawing of connections in visual perception very noticeable. In Figure 1, not much effort is required, because the possibilities of "seeing" a reasonable form are reduced to practically one.

In Figure 2, most viewers will have to work harder to find something recognizable. As soon as it has been found, though, the effort will be forgotten and one believes one has recognized a Dalmatian that is actually part of the picture. Only a further examination reveals that the lines which yield the relevant figure are not there at all but must be supplied by the viewer.

"Organization of Visual Sensations" (Roland C. James' famous Dalmatian dog, from: Blakemore 1977, p. 66)

It has never ceased to amaze me that Kant (1968, S. 112, § 138) already had the insight that a line must be *drawn* by the perceiver before it can be seen. As the two figures show, this *drawing* must be done not only by the artist while he is creating the image; the viewer, too, has to create the image in order to perceive it, and viewers do this by moving the focus of their attention (scan path).

Although we usually do not notice it, attention can move in the visual field without eye movement. This has been experimentally demonstrated by perception psychologists in Germany, Russia, and Canada since the 1950s.[1] Text books hardly ever mention this ability, but for the constructivist model of concept formation it is an important fact. When the focus of unbroken attention moves, it generates connections, not only on the level of sensory perception but also on the higher level of mental operations. "Higher level" is, of course, intended as a metaphor. Attention, thinking, and reflection are usually taken to be processes in the brain, but although a network of neurons may be able to carry out hierarchically ordered operations, one should think of such a hierarchy as involving logical rather than spatial steps.

This exposition may become a little clearer if you remember that what we call "association" was explained by David Hume as being based on spatial or temporal

[1] A description of these experiments is given in Glasersfeld (1995), p. 167.

contiguity. In conscious experience it is, I believe, attention that in a field of unlimited possibilities links, i.e., associates, particulars by moving its focus uninterruptedly from one to the other. If you accept this as a working hypothesis, you may assume that such links can be generated not only in perceptual fields but also between particulars that are present and particulars that are remembered (re-presented). Consequently I see (as did Silvio Ceccato[2]) the dynamic of attention as the fundamental tool of concept formation.

The attentional movement, which makes it possible to "recognize" (i.e., to construct) familiar objects in a meaningless array of black dots on a sheet of white paper, has the same function when we are not looking at a reproduced image but out of the window. There we see, for instance, a few trees, a fence behind them, and then a road on which two brightly colored cyclists are just passing. These are all objects that we are able to compose on the basis of lightness and color values and the connections we ourselves "draw." We say, "We recognize these things," and only very rarely become aware of the fact that we could have drawn the connections differently. The praxis of experience consists largely in "seeing" the possibility of connections that correspond to familiar patterns.[3] (Figures 1 and 2 should make this very clear.)

2 The pragmatic concept of viability

To make these claims plausible, constructivist theory must supply a model that explains how and why familiar conceptual patterns arise in the course of cognitive development. This model is simple and has been known for a long time. However, as it was always viewed from a naïve realist perspective, its constructivist implications remained hidden. Edward Thorndike (1931), for instance, said quite clearly that living organisms tend to repeat actions that are followed by "satisfying" consequences. In the practice of everyday living, this principle has no doubt been known since the beginnings of human culture. Nomads perhaps employed it deliberately for the first time when they trained horses for riding, but mothers must have unconsciously used it long before then in their interactions with their children. Jesuits used the negative version of the principle in their schools, when they linked the undesirable actions of their pupils with consequences that were physically or psychologically unpleasant for the delinquents. But Thorndike was the first to provide the scientific formulation of the *Law of Effect*. The behaviorists adopted the principle but avoided speaking of satisfaction, which clearly involves values. They introduced the term "reinforcement" to hide them. (Though the moment you ask what makes something reinforcing, they rear their head again.)

Radical constructivism accepts Thorndike's law, but has no qualms about stressing that the repetition of cognitive operations is motivated by pleasant consequences or the avoidance of unpleasant ones. On the biological level, the action patterns of living

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[2] Ceccato developed his theory of attention around 1960. A summary appeared in his introduction to volume 2 of his main work (Ceccato 1966, pp. 20–26).

[3] James Mark Baldwin (1906), and Piaget following him, called this adaptation of perceptions to familiar concepts "assimilation."

organisms are pruned by natural selection in the sense that what does not help survival may sooner or later die out. On the mental level, however, it is cognitive viability that determines selection. Viability — you might say usefulness — can be assessed only relative to goals; and goals, whatever they may be, presuppose elementary values: things, conditions, events one would like to experience or avoid. In the constructivist model these elementary values (just as consciousness and memory) are an indispensable theoretical presupposition.

The drawing of connections in perception has the goal of yielding coherent patterns and, wherever possible, familiar ones. That is, patterns that prior experience has shown to be useful in the generation of meaningful action. One of the main tasks of perception is, after all, to put the perceiver into a position to decide which ways of acting seem viable. In short, perception serves to make predictions.

3 The population of the experiential world

The infant whose visual world is beginning to develop, must slowly learn to see repeatable patterns in her visual field and to coordinate them with the sensations from her own movement. This takes several months. As soon as it begins to function, however, the infant's repertoire of recognizable patterns rapidly grows and soon she "knows" a respectable number of items that she can grasp, lift, and move. But things also appear in her experiential world that can avoid her grasp, move by themselves, and disappear of their own accord: the cat, for example, if her tail is pulled too harshly, or the chickadee that has landed on the rail of the balcony but flies away when someone approaches. When such experiences have been gradually separated from items that falls to the floor when they are not held tightly enough, the child is in a position to create the category of self-moving things that will later be called animals.

In the course of many further experiences these creatures will gradually be imbued with the capacity to see, hear, and smell and eventually also with feelings and intentions. The ascription of these properties arises because without them, the child's interactions with kittens and dogs cannot be turned into even moderately reliable schemes. Soon even this will not be enough to cope with some of the experiential items in this group that, to a much greater extent than the others, make interaction unavoidable: namely human beings. As we all remember, in many of these inescapable interactions, the schemes we developed aimed at avoiding unpleasant consequences rather than creating rewarding results. Here, again, in order to develop relatively reliable schemes, the child must impute certain capabilities to the objects of interaction. But now these ascriptions comprise not only perceptual but also cognitive capabilities, and soon these formidable "others" will be seen as intending, making plans, and being very predictable in some respects and not at all in others. Indeed, out of these frequent but nevertheless special interactions, there eventually emerges the way the developing human individual will think both of "others" and of him- or herself.

This reciprocity is, I believe, precisely what Kant had in mind when he wrote:

> It is manifest that, if one wants to imagine a thinking being, one would have to put oneself in its place and to impute one's own subject to the object one intended to consider.... (Kant 1910, p. 223, my translation)

My brief account of the conceptual construction of "others" is no doubt a crude and preliminary analysis, but it at least opens a possibility of approaching the problem without the vacuous assumption of innateness that "social constructionism" entails.

The Kantian notion that we impute to our conspecifics the cognitive capabilities that we become aware of in ourselves, leads to an explanation of why it means so much to us to have our experiential reality confirmed by interaction with others. The use of a scheme always involves the expectation of a more or less specific result. On the level of reflective abstraction, the expectation can be turned into a prediction. If we impute planning and foresight to others, this means that we also impute to them some of the schemes that have worked well for ourselves. Then, if a particular prediction we have made concerning an other's action or reaction turns out to be corroborated by what we perceive the other to be doing, this adds a second level of viability to the scheme we have imputed to that other, and this second level of viability helps to strengthen the experiential reality we have constructed for ourselves (cf. Glasersfeld 1985, 1986).

4 A perspective on communication

Although it is not always explicitly acknowledged, the separation of two kinds of instrumentality, which I mentioned above, is not a new one. Since the days of Socrates, teachers have known that it is one thing to bring students to acquire certain ways of acting — be it kicking a football, performing a multiplication algorithm, or reciting verbal expressions — but quite another to engender *understanding*. The one enterprise could be called "training," the other "teaching." However, educators, who are often better at the first than at the second, tend to blur the distinction. Consequently, the methods for attaining the two goals tend to be confused. In both, communication plays a considerable part, but what is intended by "communication" is not the same. Early studies of communication developed a diagrammatic representation of the process as it appears to an outside observer. Success or failure of a communication event was determined on the basis of the observable behaviors of a sender and a receiver. This schema was highly successful in the work of communication engineers (Cherry 1966, p. 171). It was also immediately applicable to the behaviorist approach to teaching and learning. The teacher's task, according to that view, consisted largely in providing a set of stimuli and reinforcements apt to condition the student to "emit" behavioral responses considered appropriate by the teacher. Wherever the goal is students' reliable replication of an observable behavior, this *training* works very well. And because there is no place in the behaviorist approach for what we would like to call understanding, it is not surprising that the behaviorist training rarely, if ever, produces it.

The technical model of communication (Shannon 1948), however, established one feature of the process that remains important no matter from what orientation one approaches it: the physical signals that travel from one communicator to another — for

instance the sounds of speech or the visual patterns of print or writing in linguistic interactions — do not actually carry or contain what we think of as *meaning*. Instead, they should be considered as instructions to select particular meanings from a list that, together with the list of agreed signals, constitutes the "code" of the particular communication system. From this it follows that if the two lists and the conventional associations that link the items in them are not available to a receiver before the linguistic interaction takes place, the signals will be meaningless for that receiver.

From the constructivist point of view, this feature of communication is of particular interest because it clearly brings out the fact that language users must individually construct the meaning of words, phrases, sentences, and texts. At the age when they are acquiring language, children are not given dictionaries. Later, needless to say, the semantic construction does not always have to start from scratch. Once a certain amount of vocabulary and combinatorial rules (syntax) have been built up by trial and error in interactions with speakers of the particular language, these patterns can be used to lead a learner to form new combinations and, thus, novel conceptual compounds. But the basic elements from which an individual's conceptual structures are composed and the relations by means of which they are held together cannot be transferred from one language user to another, let alone from a proficient speaker to an infant. These building blocks must be abstracted from individual experience. And their interpersonal fit, which makes possible that which we call "communication," can arise only in the course of protracted interaction with others, through mutual orientation and adaptation.

For the individual speaker a word often has a definite meaning long before he or she succeeds in generating an approximate understanding of what it means to other speakers. The process of accommodating and tuning the meaning of words and linguistic expressions actually continues for each of us throughout our lives. No matter how long we have spoken a language, there will still be occasions when we realize that, up to that point in time, we have been using a word in a way that now turns out to be idiosyncratic in some particular respect.

Once we come to see the essential and inescapable subjectivity of linguistic meaning, we can no longer maintain the preconceived notion that words *convey* ideas or knowledge; nor can we believe that a listener who apparently understands what we say must necessarily have conceptual structures that are identical with ours. Instead, we come to realize that *understanding* is a matter of fit rather than match. Put in the simplest way, to understand what someone has said or written means no less but also no more than to have built up a conceptual structure that, in the given context, appears to be compatible with the structure the speaker had in mind. And this compatibility, as a rule, manifests itself in no other way than that the receiver says and does nothing that contravenes the speaker's expectations.

Among proficient speakers of a language, the individual's conceptual idiosyncrasies rarely surface when the topics of conversation are everyday objects and events. To be considered proficient in a given language requires two things, amongst others: to have available a large enough vocabulary, and to have constructed and sufficiently accom-

modated and adapted the meanings associated with the words of that vocabulary so that no conceptual discrepancies become apparent in ordinary linguistic interactions. However, when conversation turns to predominantly abstract matters, it does not usually take long before conceptual discrepancies become noticeable — even among proficient speakers. The discrepancies generate perturbations in the interactors, and at that point the difficulties become insurmountable if a participant believes that his or her meanings of the words used are true representations of objective entities in a speaker-independent world. If, instead, the participants take a constructivist view and assume from the outset that a language user's meanings cannot be anything but subjective constructs derived from the speaker's individual experiences, some accommodation and adaptation is usually possible.

5 How do we understand society?

The ontogeny of cognition and language is, of course, more intricate than I have described here. I hope, however, to have successfully outlined the view that before we can form a concept of society, we must discern and characterize individual fellow humans as such in our experiential world. Social constructionists seem to take for granted (explicitly or tacitly) that "society," i.e., the "others" in our experiential world, is a ready-made ontological given, existing as such and independently of subjective experience. Kenneth Gergen, for example, explains the constructionist difference quite clearly:

> For constructivists the process of world construction is psychological; it takes place "in the head." In contrast, for social constructionists what we take to be real is an outcome of social relationships. (Gergen 1999, p. 237)

The others with whom the individual relates have to be there before his or her construction can begin. This is a metaphysical assumption. Though I see no need to make such an assumption, I feel that everyone is free to invent his or her own metaphysics. However, as far as a theory of knowing is concerned, I consider metaphysical assumptions vacuous as long as they do not specify a functional model of how ontology might determine the experiences from which we generate our knowledge. To say that something exists does not explain how we come to know it.

Alfred Schütz, one of the deepest thinkers in modern sociology, was quite clear about the fact that the basic problem of how we come to *know* of others is an epistemological problem that would have to be investigated by psychologists (cf. Schütz 1932).

Piaget's work in that area is unfortunately all but unknown in the English-speaking world. My own access to it has been very recent, through the Italian edition that the translator sent me (Piaget 1989). Let me translate a few passages that seem very appropriate to the problem I am discussing:

> What has not been acquired through experience and personal reflection can only be superficially assimilated and does not modify any way of thinking. The child acculturates itself in spite of adult authority and not because of such authority. (Piaget 1989, p. 252)

In his discussion of children's socialization, Piaget uses many examples taken from a

school setting. He did this, I imagine, because it is easier there to distinguish the two mechanisms he considers primary in social adaptation. One of them he sees in the imitation of certain physical actions or behaviors (which may include speech acts) owing to *coercion*; the other he specifies as the generation of mutually compatible actions and mental operations as a result of reflection and understanding which take place in the context of *cooperation*. The distinction is parallel to the one I have been making between training and teaching in the educational context. (The coercion, of course, may be subtle and diffuse, as, for example, in the case of children's acquisition of the standard number word sequence as an empty verbal routine.)

Piaget applied this distinction to the process of linguistic interaction. He begins by asking how a statement uttered by one person could be agreed to by another:

> How could such a convergence be established? The two subjects necessarily have different, non-inter-changeable perceptions: they exchange ideas, that is to say, judgments concerning perceptions but never the perceptions themselves! (Piaget 1989, p. 189).

He comes to the conclusion that *meanings* are a matter of "private symbolism" and agreement cannot manifest itself except through reactions due to mutually compatible mental operations.

This is obviously not the place to present Piaget's detailed model of the child's construction of linguistic meanings in the course of interaction with others. However, the passages I have quoted may suffice to show how far ahead he was in the 1940s, when he wrote these essays. He even dealt with the claim, revived today by certain social constructionists, that knowledge and language do not reside in individuals but are preformed in society:

> The preformation [of social characteristics] is, as in other contexts, nothing but a common sense illusion consolidated by the Aristotelian philosophy of potentiality and action. (Piaget 1989, p. 340)

At the outset, "society" can hardly be conceived as anything more than a collective term for the handful of people we have learned to recognize in the above sense and to whom we may ascribe a number of common characteristics as well as individual differences. To these we can then add people whom we consider part of the community even though we have only seen them casually or heard or read of them. With this, we have created the notion of a community that has members we have not ourselves experienced but who we nevertheless want to set apart from the rest of the world's population. It is the lowest level of the concept of society and can be extended in various directions but never quite loses the connection to the first generalizations that were abstracted from one's own subjective experiences.

I cannot claim to be well versed in sociology, but of all I have read in that field, the following passage from the work of Georg Simmel seems to me an excellent basis for sociological considerations.

> Individuals are the immediate, concrete locus of historical reality. Everything found in them, drives, interests, purposes, inclinations, psychological conditions and movements, is such that it engenders reciprocal effects among them. I see this as the contents, the

> material so to speak, of socialization. As such, these items with which life fills itself, the motivations that drive it, do not yet have a social character. Neither hunger nor love, neither work nor religiosity, neither technique nor the functions and results of intelligence immediately entail socialization; rather, they engender it in that they transform the isolated side by side of individuals to certain forms of with-one-another and for-one-another that fall under the general concept of reciprocal effects. Socialization, thus, is the pattern, realized in countless different ways, in which individuals on the basis of their sensory or ideal, momentary or lasting, conscious or unconscious interest, causally driving or teleologically drawing interests grow to form a unity within which their interests can be realized. (Simmel 1917, pp. 51–52, my translation)

There are two points in the rather dense passage that I should like to stress. First, that socialization arises from elements — drive, interest, purpose, inclination — that are situated in individuals. Second, that these elements, above all the function of intelligence, are not in themselves social phenomena but serve as the basis of socialization.

At this juncture I want to reiterate that radical constructivism does not purport to describe a real world but merely proposes a model of *how one could imagine knowledge to be built up*. The building up of course involves the concept of society. Just as the meanings of words have to be abstracted by each future language user from his or her own experiences and interpretation of heard or read words, so the concept of society has to be formed by each individual by means of generalization from his or her own experiences. It is irrelevant whether or not you believe that society exists in its own right, knowledge of society can be gathered only from your own experience. This goes not only for children and innocent adults, it also goes for sociologists.

Simplified — and therefore seen somewhat naively — all that is written and proclaimed in scientific sociology is the sum of what an attentive observer with the help of more or less accepted methods gleans from experiences, experiments, and statistical investigations, and formulates in a way that his or her colleagues can interpret in a satisfactory fashion. Irrespective of how large the number of agreeing colleagues might be, the conceptual 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 discussions and mutual critique, have acquired a certain viability for all the participants.

This relatively interpersonal adaptation cannot eliminate the fundamental subjectivity of concepts. Thus, for example, Luhmann writes:

> Sociology considers itself predominantly as an empirical science and understands the notion of the "empirical" very narrowly as interpretation of a self-generated reality. (1992, p. 19, my translation)[4]

[4] In the same essay, however, Luhmann later writes: "Even if the self-description of society springs only from a recursive network of observations of observations and descriptions of descriptions, one might expect that eigenwerte arise in the course of these operations, that is, positions that will no longer change in further observations of observations but that will remain more or less stable" (Luhmann 1992, p. 46, my translation). I understand this as an elegant but rather loose metaphor because the recursion of operations of observation or

It is therefore, from my point of view, misleading if social constructionists and other socially oriented constructivists speak of language or knowledge as though these items existed in a generally accessible environment, independently of the individuals that conceive of them. Such statements are incompatible with their fundamentally agnostic position with regard to ontology, which they claim to share with constructivism.

As a natural scientist I may well postulate for the objects I study a stable environment and, within it, causal relations derived from my experiential world. This may yield a viable model of the respective physical domain. Physicists, astronomers, chemists, and mechanics do this with considerable success. There are, however, two reasons why it is not legitimate for social constructivists to postulate interactions between their own abstractions and other individuals who are in the society. In the first place, abstractions such as language and knowledge have to be generated by individuals on the basis of their own experience. In the second place, their interactions with these constructs are not causal but are psychological, that is to say, they are determined by individual values, goals, and feelings.

6 Summary

I hope I have succeeded in showing that the complex concepts that play major roles in sociology can be assembled in a way that is similar to the construction of mental images. In the social context, of course, the connections among elements are not created by "drawing" lines, but rather by mental operations that lead from one abstraction to another. As I have often said, I am not concerned with describing what might "really" exist, but with designing a coherent model of knowing and showing how you, I and all other individuals might have come to have what is called knowledge. Any such model involves presuppositions. My epistemological model involves consciousness, memory, and some basic values. These presuppositions can be justified only insofar as they make a coherent theory possible. They are, therefore, not ontological foundations but part of a working hypothesis.

What I have presented here is the view of an individual that no longer wants to have anything to do with the "postmodern" movement. A couple of decades ago it seemed to me an acceptable epithet for radical constructivism because it advocated breaching with the traditional notion that reason is a means of access to objective knowledge of reality. But I did not understand it as an "emancipation *from* reason" (Luhmann, quoted in Schmidt & Spieß 1995, p. 231). The model I am suggesting is, in fact, a theory of rational knowing.

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