

God Has Created Reality, We Create Worlds of Experience

A Speech in Honour of Ernst von Glasersfeld to Mark the Award of the Gregory Bateson Prize, Heidelberg, 6 May 2005

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Purpose: The paper provides an overview of Ernst von Glasersfeld's life and theory, concentrating on subjects such as the acquisition of knowledge, language and communication, ethical questions, and aspects of teaching and learning. **Conclusions:** Ernst von Glasersfeld interests cover a wide range of disciplines. Therefore his work is genuinely rooted in interdisciplinarity.

Key words: Philosophy, linguistics, ethics, teaching.

My *Dear Ladies and Gentlemen,
Dear Ernst,*

Throughout my long acquaintance with Ernst von Glasersfeld and his work, I have found his ideas and insights to be both intellectually fascinating and of considerable assistance in solving life's more practical problems. Fortunately, von Glasersfeld has also come to my aid today, as I attempt to explain his work a little, in order to demonstrate why we are honouring him with this important prize.

Ernst von Glasersfeld once remarked that when we look back over our lives, or the lives of others, we should substitute any demand for objectivity with the perspective of the observer, which should be as coherent as possible. His own relationship to works and authors, he stressed, was never hermeneutic in nature, but was instead determined by whether they could be of help in solving his own problems.

I would like to take these two pieces of advice as the starting-point for a subject-specific look – in other words, my own – at the life and work of Ernst von Glasersfeld.

Born an Austrian national in Munich in 1917, Ernst von Glasersfeld did not enjoy a “standard” academic education, nor did his career follow a straight course. His autobiographical stories describe the many phases of his life: his

multilingual youth in Austria, the South Tyrol and Switzerland, his time in Australia as a ski instructor and racer, his life as a farmer in Ireland during the Second World War and, after 1947, his career as a sports and culture reporter, camping on the shores of Lake Garda in the *Val di sogno* – the idyllic backdrop for his initial encounter with Silvio Ceccato's mother. Von Glasersfeld describes this encounter in the following way. Working on his typewriter in front of his tent whilst his two-year-old daughter played naked on the beach nearby, he noticed a boat being rowed past on the bay, which soon returned the way it had come. It was clear that the woman in the boat was interested in the unusual situation playing out on the beach. After a few days, she spoke to von Glasersfeld, asking what he was working on. “It's mostly about philosophy, that's what interests me,” von Glasersfeld answered, to which she replied: “Philosophy? My son's a philosopher – you must meet him.” Thus it was that von Glasersfeld got to know Silvio Ceccato and became his colleague at the Milan Centre of Cybernetics in the *Scuola Operativa Italiana*. From 1966 onwards von Glasersfeld also worked as a linguist and concept-analyst on a research project run by the American Air

Force; from 1970 he was a psychologist and primate researcher at the University of Georgia, Athens, before ultimately becoming Emeritus Professor at the University of Massachusetts, Amherst. During these years, von Glasersfeld was also in constant demand on the worldwide lecture circuit. I believe that this “atypical” path through life protected von Glasersfeld from developing a number of negative characteristics which beset the majority of “standard” academics – namely a fixation with a discipline's preset topics and a simple acceptance of well-worn, discipline-specific patterns of seeing and thinking. Liberated from set patterns of thinking, von Glasersfeld was able to turn his attention to those aspects of his subject which truly interested him. He could focus on what he actually wanted to know, and on how he could express his ideas in the clearest and most precise manner.

Growing up using three languages (he learnt French at school), yet without an actual mother-tongue, further helped liberate von Glasersfeld from set patterns of thinking. Lacking the intuitive connection to a mother-tongue, one experiences the constructive role

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of language. Von Glasersfeld's early experience of the differences between languages gave him a clear sense “that one must build a different reality with each language. [...] This is precisely the point

which led me to constructivism.” (Glasersfeld 1999, p. 195). This experience also led von Glasersfeld to the conclusion that meaning does not lie in a text itself, but is *actively* constructed by the listeners in their own way.

By preparing the subject in this way, we have already begun to stray onto the intellec-



Ernst von Glasersfeld together with the author, Siegfried J. Schmidt, in Heidelberg, Germany, 2005.

tual path that leads to the basic principles of von Glasersfeld's constructivism. These principles are:

- In constructivism, the subject plays the central role of the constructor.
- It is the active subject who constructs sense, meaning and reality through his thoughts and actions.
- If reality is seen as the result of human imagination – as an inductively constructed world of experience (*Erfahrungswelt*) – it follows that human knowledge can no longer be expected or obliged to represent a reality which exists objectively, and that the active observer must accept responsibility for his individual construction of reality. Such considerations make it clear that one can, and should, develop a theory of knowledge (*Wissenstheorie*) without being constrained by the demands of an epistemology (*Erkenntnistheorie*). Radical constructivism, understood here as a theory of knowledge, provides a model of our ability to create knowledge in the sense of *ideas which work*. As Jean Piaget has shown, this knowledge results solely from our actions and the operation of our minds.
- “Cognition serves to organise a subject's world of experience, and not the subject's ‘insight’ into an objective, ontological reality.” (Glasersfeld 1996, p. 96)

- The constructivist Ernst von Glasersfeld does not claim, however, that objective reality does not exist. Rather, he claims that we can not know such a reality. “I understand by ‘reality’ a network of concepts, which have proven themselves to be appropriate and useful – that is, ‘viable’ – in the perception of the subject. They have proven this by repeatedly helping the subject to overcome obstacles successfully, and by aiding the conceptual ‘assimilation’ of their experiences.” (Glasersfeld 1997, p. 47).

Together, these fundamental principles of his constructivist thought implicitly connect to similar principles within the wider philosophical tradition. Ernst von Glasersfeld repeatedly reminds us that constructivism was not exclusively his own discovery. He notes with modesty how he learnt from the great thinkers – thinkers so diverse in range that to speak of them in one breath could panic a traditional philosopher. Von Glasersfeld learnt from the pre-Socratic thinkers, who argued with irrefutable logic that everything we term knowledge is human, generated by our specific way of doing things and thus limited by our human capabilities. He learnt from the apophantic theology of the Byzantines, from Johannes Scotus Eriugena, from Hume and from Locke, from Berkeley and from Vico. He learnt from Kant, the

American Pragmatists, from Vaihinger's philosophy of “As if,” L. Wittgenstein and from G. Kelly. He has ascribed the first outline of a consciously constructivist theory to Giambattista Vico – a theory which states: man can only know what he constructs himself: *verum ipsum factum*. Whatever a man thinks and knows can therefore never represent an ontological reality, or as the Latin original from 1710 states: “Deus naturae artifex, homo artificiorum deus.” For mankind, the only things that truly exist are those which mankind itself has constructed through perception and conceptual work, something illustrated in Bishop Berkeley's principle *esse est percipi*.

This short construction of a pre-history of constructivism makes clear why operationalism (*Operationalismus*) and pragmatism have become so important for the modern development of constructivist thought, especially in the work of Percy Bridgman, Hugo Dingler and above all Silvio Ceccato and his colleagues Vittorio Somenzi, Enrico Albani, Giuseppe Vaccarino and Ferruccio Rossilandi. They all focus on the central question: what must one *do*, cognitively and practically, in order to achieve a certain result? How does one operate conceptually, in order to achieve a certain conception? “Indeed,” he has repeatedly stated, “radical constructivists never say: ‘This is how it is!’ They merely suggest: ‘This may be how it functions.’” (Glasersfeld 2000, p. 4)

The perspective of these questions – a perspective which moves away from an ontological orientation on entities to an orientation on processes, their constraints and their outcomes (*Prozessualität*) – helps us to understand the significance of Jean Piaget for Ernst von Glasersfeld.

I shall never forget the context in which I first came across this connection. In 1990, Mauro Ceruti organised a conference on the epistemological theory of Jean Piaget. The conference was held in the old and beautifully named palace *Palazzo della Ragione* in Bergamo. The presence of Bärbel Inhelder at the conference, a long-time colleague of Piaget (who had died in 1980), had drawn a large crowd of prominent thinkers from many disciplines and countries. At one of the conference meals, Ernst von Glasersfeld, Heinz von Foerster and Paul Watzlawick – the core of constructivist thought in Austria – were sitting next to each other. It was a picture for the

history books. But let us return to Piaget. Piaget's decisive principle for undertaking research into cognition was: "intelligence organises the world while it organises itself." Knowledge, according to Piaget, does not create an objective reproduction of reality, but rather supports a process of adaptation to the constraints set by our environment. Knowledge enables an organism to achieve equilibrium in its environment; that is to say, it supports survival – and every action that preserves or restores this equilibrium is an effective action. Seen in this light, it is clear why Ernst von Glasersfeld saw Piaget's theory as, at heart, a *cybernetic* theory. Piaget broke with the philosophic tradition which explored the truth-value of knowledge, and explored

instead the origins and the application of this knowledge by studying how children construct their reality. Von Glasersfeld saw Piaget's ideas as the logical extension to Vico's, Berkeley's, Wittgenstein's and Cécato's position that cognition cannot reproduce the real world. According to Piaget, actions and conceptual operations are adapted – or to use von Glasersfeld's term, are *viable* – when they match the purposes to which we put them. The traditional concept of truth is thus replaced in the field of experience with the concept of "viability" (*Viabilität*). Von Glasersfeld delineates the generative power which Piaget ascribes to humankind on three levels:

- The segmentation level, where we establish stable objects, by concentrating on similarities and disregarding differences (*Objektpermanenz*);
- The relational level, which enables the subject to think with the aid of cognitive schemata;
- The reflexive level, where abstraction is derived from the operations of the subject, forming complex structures such as theories and systems.

This concept of knowledge as *action* as well as *effect* further establishes the connection with cybernetics. Here, too, the primary concerns are issues of regulation and self-regulation, of evolutionary constraints on thinking, interaction and communication – con-

straints illustrated by Gregory Bateson, after whom today's prize is named. Through his concept of *constraints*, Bateson avoided describing the effects of evolution in causal terms. Ernst von Glasersfeld uses precisely such concepts, not only when referring to evolution, but also to the construction of knowledge, language-acquisition and all forms of communication. When communicating, we adapt to the constraints "[...] which result from the way we perceive our fellow man's use of language" (Glasersfeld 1997,

p.17). In this way, our use of language becomes attuned to that of others: that is, viable under the prevailing circumstances. We can understand each other without succumbing to the illusion that we each had precisely the same meaning in mind.

The question of experiential reality (*Erfahrungswirklichkeit*), too, can be answered by the *constraints* model: "The world in which we live and perceive ourselves is the world which we create and maintain within the constraints we have hitherto experienced. – What could be more cybernetic?" (ibid.)

As a former linguist and philosopher of language myself, I was particularly interested in Ernst von Glasersfeld's views on language, not least because the most difficult questions for a constructivist lie in this area. How can one reconcile the cognitive autonomy of the subject with the experience of successful communication? How are we to understand understanding?

Throughout the 1970s, Ernst von Glasersfeld was engaged in an intensive debate with leading linguists and philosophers of language such as C. Cherry, C. Shannon, S. Langer, C. Hockett or N. Chomsky (for details see Schmidt 2000), in which he proposed that communication was an instrumental, goal-oriented and thus deliberate process. In cybernetic terms, this process is determined by goals as "reference values" (*Referenzwerte*), sensuality as "sensory function" (*sensorische Funktion*) and technology as "effector function" (*Effektorfunktion*). Von Glasersfeld's model of communication

reacted against the behaviourists' elimination of aims and objectives from language and communication theory. Instead, he developed a *cognitive* language and communication theory, based on the premise that any analysis of meaning must always be connected to an analysis of concepts or mental constructs. The implication of this is that a semantic analysis should be conducted in the form of a cognitive analysis which focuses on "[...] the *conceptual* items a linguistic statement invokes and the relations that are posited between them," rather than on the statement's relationship with an non-linguistic reality or a statement's truth-value (Glasersfeld 1974, p. 130). For example, when considering the meaning of a verb, or when translating it – and as an experienced translator von Glasersfeld knew what he was talking about – it is necessary to work out all the *conceptual* situations in which the verb can be used and applied. Concepts or mental representations must always be seen dynamically, as "relatively self-contained programs or production routines that can be called up and run." (Glasersfeld 1987, p. 219) When the recipient of a linguistic expression has to construct its meaning from conceptual elements that he already possesses – that is, elements derived from previous abstractions of actions, interactions and communications – then meaning must be seen as "irrefutably subjective": as

something which arises in relation to the previous experience of the recipient. The presupposition of successful communication is thus that communication partners possess comparable

experiences. These experiences comprise all the conventional rules of language use, which result from social interaction and therefore help to co-orient communication partners even though they cannot see inside each other's minds. As a consequence, the concept of subject-dependent meaning must be complemented by acknowledging the significance of other people, of fellow humans. Von Glasersfeld has stated emphatically that the development of concepts in autonomous cognitive systems can occur only through social interaction and must also relate to viable experiences in a shared field of experience (for details see von Glasersfeld 1997, pp. 59–60, 206; Glasersfeld 1995, pp. 138–143). Cog-

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nitive autonomy and social orientation are therefore not mutually exclusive. Linguistic expressions are semiotic embodiments of social experiences – they result from our social interaction and continuously work back on our linguistic and non-linguistic experience and concept formation. As constraints of social interaction they oblige us to adapt the way we use language to common usage.

In contrast to many philosophers of language who frequently praise language as the highest form of human achievement, von Glasersfeld remains characteristically sober and sceptical, noting that “if, today, we look at what we have done with the help of that splendid tool, one may begin to wonder whether, at some future time, it will still seem obvious that language has enhanced the survival of life on this planet” (Glaserfeld 1976, p. 223). These are the thoughts and words of someone who – as I mentioned above – thinks in processes, and not in ontological identities.

Ernst von Glasersfeld’s radical constructivism is often accused of lacking a sustainable *ethical orientation*, and of justifying – at least implicitly – the idea that every ethical construction, however aberrant, is simply one construction amongst others. It has been repeatedly shown that such assertions are nothing more than a cynically reductive approach to constructivist thought (for details see Schmidt 1996). Still, it should be noted that the forefathers of constructivism, amongst them Ernst von Glasersfeld, had good reason to be cautious when considering ethical questions. Particularly illuminating in this respect is von Glasersfeld’s second *Sieger Gespräch* from 1984. Asked how he would respond as a constructivist to moral problems, he answered: “If you are asking this constructivist what he thinks, well, I never stray beyond Plato’s *Phaedrus*: either you know what is good, or you don’t. [...] As soon as somebody says “You *must know* what is good,” they’ve already formulated it incorrectly. You *must feel* what is good. There is no theory to save or spare you this decision.” (1987, p. 430)

Ernst von Glasersfeld believes that there are good reasons for taking moral decisions, and that specific moral decisions can be justified. In accordance with Heinz von Foerster (Foerster & Bröcker 2002), he also believes, however, that there is no absolute foundation for evaluative judgements, and that there is

no rational philosophy from which an ethic may be firmly derived. “If we were to believe we knew both good and evil, we would be dangerous beings indeed.” (Glaserfeld 1996, pp. 335, 347)

Ernst von Glasersfeld has always emphasised that constructivists must take responsibility for their own constructions, and that this responsibility is a *social* responsibility. This means that we must see our fellow human beings not simply as a *means*, but also as a *purpose*. We must always respect our fellow human being’s cognitive autonomy. In order to achieve a reliable construction of reality, we clearly need other people. Only in this way can we construct a better, intersubjectively valid reality. In other words, we need other people not only for ethical, but also for epistemological reasons.

In the year 2000, I had a particularly inspiring encounter with Ernst von Glasersfeld during the conference “Learning in the Age of the Internet” held in Brixen, in the South Tyrol. His lecture – so clear in tone and brimming with his years of experience – was the high point of the conference.

In his lecture, Ernst von Glasersfeld once again explained the fundamental principles of his concept of a constructivist education. From the outset he made it absolutely clear that he accepted the two basic pedagogical goals of educationalists: that pupils should learn to think independently and consis-

tently, and that those ways of thinking and acting that are currently seen as the most effective should be preserved for the next generation. (Glaserfeld 1996, p. 284) However, when it comes to evaluating knowledge, a cleft opens between von Glasersfeld and the educationalists. Traditional concepts of knowledge see it as value-free and objective, whereas von Glasersfeld sees all knowledge as instrumental. According to von Glasersfeld,

students should from the outset be made aware of the reasons why certain ways of thinking and acting are preferable. The primary aim of education should not be to pass an examina-

tion, but to be intellectually more competent and successful. Since it is one of the basic tenets of constructivism that there is never only *one* correct way, a constructivist cannot propose a single, authoritative, didactic method. Nevertheless, he can explain to a student why certain attitudes and techniques are unproductive, by using the concepts of constructivism to reassess and re-conceptualise basic notions of communication, learning, knowledge, interaction and motivation. A consequence of constructivist thought is thus the idea that learning – in contrast to training – is a product of self-organisation. Knowledge is only acquired through active assimilation to cognitive structures one already possesses, and is never acquired passively (for details see von Glasersfeld 1995, chapter 10).

Teachers must always have the confidence that their pupils can think independently. Their art resides in “encouraging pupils to formulate problems independently – problems which promote specific ways of thinking.” (Glaserfeld 1997, p. 209).

Ernst von Glasersfeld’s constructivism is neither a super-theory nor a foundation-theory. Indeed, he never even claims to have developed a theory. His constructivism offers us a way “to cope with the world of experience, which can never really be comprehended” and to solve problems in a *viable*, rather than a “correct,” way. “Correct” and “incorrect,” he says, are terms which always relate to a concrete goal or to a problem which needs to be solved. For a thinker of von Glasersfeld’s calibre, such statements show a rare sense of modesty – a modesty which results from a humanitarianism which seeks neither

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to correct nor train others, but rather to help them develop independence. Underlying this is Ernst von Glasersfeld's experience of the finitude and fragility of human actions – its *contingentia*, in Aristotle's sense. Von Glasersfeld gathered this experience as a traveller between languages, cultures and societies – a journey which taught him what to avoid, rather than which goals he should set himself. He was able to liberate himself from set patterns of thinking, allowing him to develop his ideas with clarity, patience and persuasiveness, but without radical fanaticism. He wins over his reader and his audiences, liberating them from the illusory demand for truth, objective knowledge and eternal values. During my acquaintance with Ernst von Glasersfeld, I too have had the liberating experience of discovering how

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one's thought processes can become more creative and open once one accepts the *Vorläufigkeit all unserer Endgültigkeiten* – the provisional nature of what all too often seems, or is made to seem, final.

To talk of Ernst von Glasersfeld is to talk of a person with many moving and persuasive personal characteristics. In all the time I have known him, he has always radiated a sense of calm, not only in private, but also in public – whether in open debates with his students at the University of Georgia, or during more fractious exchanges with the opponents of constructivism at many a conference. Since my first encounter with von Glasersfeld at a conference in Madrid in 1977, he has repeatedly proven himself to be a brilliant speaker and raconteur – time flies when he speaks. Ernst

von Glasersfeld is also a tremendous host, who can not only prepare outstanding deserts, but is also a highly practical person when it comes to technical matters. I still benefit today from a knee stool he designed, and which I had built according to his plans. When, in 1982 and 1984, Ernst von Glasersfeld came to Germany to take part in the *Siegener Gespräche* on constructivism, I had the honour of hosting him and his wife at my home in Münster. In those days, the German motorways were still comparatively empty, and during his visit I treated him to many fast car journeys. He loves fast cars and driving at high speeds – two things which, to his great regret, he has to forgo in the USA.

We have much to thank Ernst von Glasersfeld for, both as a thinker and as a man. In this talk I have tried to highlight a few aspects of his thought and character, in order to thank him personally for his work and his friendship.

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