

Sketches toward a Theory of Every Thin/kin/g

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The status of the social and human sciences as genuine sciences on a par with the natural sciences has widely been held in doubt, and the subject-oriented approach (SOA) to knowledge also shows the traditional scientific view to be misled. It shows that it is mandatory to dismiss the idea that personal knowledge is a representation of a common world created by some God, and also the mistake to take the seductive noun/verb structure as for given. We need a new methodological paradigm of science—an approach that avoids the pitfalls of dualism and realism—and take the effort to couch its thinking in a re-interpretation of natural language. This line of reasoning paves the way for the SOA—a new epistemology that takes the individual knower and its feelings as the coherent point of departure. The traits of a new foundation are sketched and to that end a bootstrap model is proposed that departs from the early man’s first experience. In doing so, we, in a subject-oriented manner, can bring man’s living experience and his priverse (or private universe), under the collective umbrella of a consensual science. This approach brings the promise to provide a sound theory of everything—or rather a theory of every thin/kin/g—which in one step removes the cleft between the natural and social sciences.

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1. Introduction

Thomas S. Kuhn (1962) coined the term *paradigm* to embrace what the members of a knowledge discipline “share that accounts for the relative fullness of their professional communication and the relative unanimity of their professional judgments.” In Thomas S. Kuhn’s (1967), he introduced the conception of “*disciplinary matrix*” in an effort to shed further light on how the beliefs, values, techniques of a discipline is learned, trained and later used by the members of a given knowledge community. He also introduced the term “normal science” to refer to the form of scientific activity that emerged mainly during the scientific revolution, and to sieve out natural science from other forms of knowledge inquiry. He held the “success” and “methods” of natural science to be the *hallmark of science*, for that reason he was not willing to grant the status of the social and human sciences as genuine sciences.

The concept of paradigm is, in spite of being controversial, very important since it captures the idea that cooperating human groups of any kind, tacitly or not, share and operate *under a certain set of beliefs*. More important is that, in general, many years of education and training is required to be fully accepted in such a community. These efforts are so profound that the trainee in due time assimilates the belief system as his own, and in this respect science is no exception.

In this sense, one can claim that all humans in their very being implicitly share a human paradigm, and as

well as Western culture is defined by paradigm, where the rules of conduct and interpretations of the Holy Scriptures still formulates some fundamental principles of human life. The members of these communities most often become so focused on and identified with its corresponding belief system that they very seldom call it into question. In particular, they have by training and practice often assimilated many beliefs, and do not even dare to question the belief system in charge at the risk of exclusion from the community in question.

Kuhn's placed philosophy of science in a historic perspective and by the introduction of paradigm he also fuelled the sociology of science. What is more important, but seldom recognized, is that Kuhn in his strict emphasis on *methodology* turned the attention away from the *essence of the objects* of scientific discourse, thereby consolidating a trend in modern philosophy, maybe most pronounced by Husserl's bracketing of (reality). Well known is that also quantum physics was forced to this move of abstraction and a similar inclination was evident in the works of cybernetics—as it is principally inherent in mathematics, logics, and the systems sciences.

Kuhn theories were inspired by what happened during the 20th century, namely that the cognitive sciences began to understand that human observation is theory laden, i.e., biased, and the human mind massively feedback connected. Since observation is a key element of empiricist methodology, and in particular its method of verification, these findings would have had a profound influence on scientific mind-set. Not so, the causal theory (Russell 1927) of perception remained in sole possession and normal science proceeded as before seemingly unaffected by these new findings. In spite of the hot discussions about an imminent demise of scientific realism, some of the pillars of empiricist philosophy *reality, objectivity and truth* continued to have a persistent grip on scientific thinking, and very few is willing to question the relevance of these concepts in the light of the discovered feedback connectivity of mind. It seemed the power of human tradition and the success of the Newtonian paradigm tempted scientist into eager attempts of rescuing realism, rather than efforts to scrutinize the staggering of the fundamentals of normal science. Scientific realism continues to influence the thinking of scientists, more or less as a habit, and continues to influence the daily agenda of scientific practice and it seems conventionalism and pragmatism merely became an exercise in theoretical philosophy.

2. Normal Science and Its Methodology

There have always been two approaches to human knowledge building—the object-oriented (objectivist's) approach and the subject-oriented (subjectivist's) one. In the former, one takes the objects (things) of observation for given—in the latter one proceeds from the cognitive subject and his experience. The former has hitherto been the preferred one (Harré 1985) giving rise to a materialistic culture producing a deep cleft between the natural and social sciences. The object-oriented approach (OOA) takes a unary¹ world for pre-given and science is here regarded as a process of discovery (Bunge 1977). It is furthermore supported by the realist's doctrine (Niiniluoto 1999), i.e., the idea that the “things of the world” belong to a special category called “real”, which is an evident widening of the “touchable” of classical mechanics. Today, the defenders of scientific realism² claim that something is “real” if you have a “justified belief” to think this is really the case. Referring to beliefs—consensual or not—simply means to refer to the outcome of non-objective decision procedures, which of course opens the door wide for the inclusion of subjective decisions into science. The claim of scientific objectivity cannot be maintained in such a situation.

The subject-oriented approach (SOA) is, in contrast, *monistic* regarding knowledge production as a plain

constructive effort, which proceeds immediately from the *experience³ of the individual knowing subject*. The lingering scientific ban put on subjectivism here means a major obstacle to the SOA, and it matters very little the phenomenologies of Berkeley (1710), Hume (1739-40), Kant (1781), Mach (1906), and Husserl (1917) significantly has paved the way for a re-orientation. The SOA, which is not by any means new, has however not yet been subject to a refined use even if Eddington (1933), Bridgman (1927), and Carnap (1928) in some respects come very close.

The object-oriented approach (OOA) to knowing is as least as old as science and here the scientific revolution with its Newtonian paradigm brought out the methodology of “normal science,” which was designed for the natural sciences and physics in particular. One reason for the change of paradigm was the wish to put an end to the excessive speculations of the middle ages. Experimentation, observation, and the succeeding mathematical modeling was the correct methodology to use, and Galileo, Newton, among others, in their deed become the exemplar of doing good science. In their footprints, three mentioned catchwords, reality, objectivity, and truth grew so strong they started to live lives of their own. These catchwords are frequently evoked as the deciding reasons to separate natural science from other forms of knowledge inquiry. The claim here is that the Newtonian paradigm, with its obvious traditions in religion, and the inherent striking power of these prestige words became an obstacle to the progress of natural science, which accordingly was thrown into a deep crisis (Kjellman 2006). In some quarters, however, there is a tendency to claim that Einstein’s relativity theory meant a decisive rejection of the Newtonian paradigm in all its aspects. However, such a conclusion is as hasty as it is ill-founded. The influence of this very paradigm goes deeper than that, and to proceed there is an urgent need to reconsider the very foundation of the realist’s science. In doing so one gradually comes to understand how a feedback connected mind in important aspects gives support to the ideas advanced by the mentioned defenders of phenomenology. In due time, one also come to understand one must *reverse the traditional direction of causal influence* as established by the prevailing causal theory of perception. Just in order to keep up scientific consistency. In short, we must abandon the OOA in favor of SOA and come to an understanding that “reality” is a personal creation erected upon strictly personal experience, and that the question whether my private universe—or priverse—is similar to someone else is an undecidable issue. For the same reason the presumption of a reality of common access is also undecidable, as well as is the proposal of an existing, in parts, observer-independent world. However, these claims clashes head-on with the set of beliefs embraced by the deep-rooted Newtonian paradigm. To come to grips with the situation we first need to scrutinize the feedback capacity of human mind.

3. Neural Networks and Feedback

The striving to understand the human brain owes much to the pioneering work of Ramón y Cajal, who introduced the idea of neurons as structural constituents of the brain. In 1911, he discovered that alongside the sensory fibers that lead upward along the sensory pathway from the eye to the brain, there are axon bundles that come down from the higher brain centers and go back to more peripheral sensory structures. Erich Harth (1993) points out that they are highways of neural traffic coming down from the cortex to the place where the visual messages first enter the brain: the lateral geniculate nucleus (LGN). Physiologists ignored them for many years, but have now learned that neural feedback loops in the mind is a rule rather than an exception. Since the only output of the LGN is the one that carries the visual messages to the cortex, it is evident that the fibers returning to the LGN is part of a feedback connectivity that modifies the sensory messages in some way. This point is

crucial; *No human being can safely reconstruct a putative sensory input (receipt) under the influence of such a process of feedback.* In electronics, the action of feeding back of the signal from output to input gave rise to the term “feedback,” and already the early neural sciences and cybernetics demonstrated that in a neural network this situation make reality reconstruction impossible on strictly logical grounds. On this view, the prevailing causal theory of perception appears as a mistake. The experience of an occurred state transition (change) can never be correctly attributed some “external cause,” since any presumed, (i.e., *given*) external state transition can be wiped away by means of information feedback. For the same reason, a spontaneous mind state transition can involuntarily be *added* to some assumed external sensory message. The conclusion is that a human being is unable to correctly reconstruct a perceived external phenomenon on the grounds of observation. Accordingly there is simply no place for the “external given” in a sound epistemology, and this means that one of the fundamental pillars of classical scientific methodology gives away. The *properties of things* are felt and decided (and computed) in the *privacy of personal human awareness*—and nowhere else—which is to say that the traits of things are decided in the privacy of a mind. The feeling of yellow is not an “objective” characterization of the sun, just as the feeling of burning pain is not one of fire. Such feelings are personal and subjective, and such traits Locke called “secondary,” but he assumed there are objective traits as well, as for instance “form” and called them “primary.” However, in the light of the modern discoveries here accounted for such an assumption is unfounded and mislead us to think that non-subjective “objective” (i.e., non-subjective) observation is in part possible. Locke was, like most of us, misled by the causal theory of perception, and no surprise held that human knowledge embraces a universe filled with real things that exist and are accessible by naïve perception.

4. Realism: The Naïve Man’s Paradigm

Man has a peculiar inclination for thinking that a “real external world” of *unproblematic access* is given to him by Evolution or some God. Since all our thinking goes on in an internal “mental” domain, we ask how come we do not take the “world” for an internal phenomenon. The main reasons are, it seems, that we are deeply seduced by the senses of touch (thus providing the “hard facts of reality”) and still caught by the naïve idea the world was created by a sole and almighty God—even if God by today’s scientists has been renamed into the Evolution; *One God and his unique creation, and therefore one common world.* This is not meant to deny the existence of God or the idea of a common world, which very well can be the case. However the “world” a *knower knows of*, is the collection of his personal experience and thin/kin/gs,⁴ which is by no means shared by anybody else. The idea of a God creating a private world for each and every one of us has been difficult to get at, but when the idea of God’s solitary contribution to the creation of reality subsides, evolution can instead be regarded an internal force integrating private experience into a bulk of knowledge that juxtaposes to a private universe—i.e., a *priverse*. When we also take into account the recent discovery that human perception is profoundly theory-laden this situation becomes very likely.

The senses of touch that seduced science into a telling external/internal dualism, and also suggests man to think of the external things of the world in some sense are more *real, substantial, or concrete* than the “internal imaginations” of his experience. As part of his daily life, the external things to him seem *natural* or non-artificial, and as such part of an external nature—hence the natural sciences. The real is regarded the reliable, whereas dreams and hallucinations in their fleetingness are doubtful. The things of the world seems stable and immutable, and the pain he feels knocking his head in a branch convince a man that an *essential*

difference exists, which made him at an early stage to ask for the *essence of thing*. His thoughts and ideas, in spite of being essential to his knowledge, seemed to lack of *substantial essence* (substance), and in consequence a matter/soul distinction was introduced. In the hands of Descartes, it was later transformed into a matter-mind distinction, which in the course of time has become the nightmare of science. The materialists also early subscribed to *reductive atomism*, and when the domiciliary rights of physics later was enlarged beyond mechanics the movement called *scientific realism* grew so strong it still dominates the daily agenda of normal science. Thoughts, ideas, emotions, and feelings, which are so strikingly real to common man and his societies, are on this view “unreal” in terms of their fleetingness. Furthermore, utterly uncertain since they are accessible only to the experiencing subject itself, and subjectivity was exactly what the early natural sciences tried to avoid. For that reason, subjectivity very soon become a word of abuse in science. Mechanics in the 19th century developed into the fuller science of physics that was regarded to mainly deal with object palpable real and collectively accessible objects, which also portended to reveal the grandeur of universe as a creation (Newton 1972; 1953) of an almighty God.

The dispute of realism contra idealism has indeed been going on since the dawn of science. The futile attempts to make a distinction between what is “real” contrary to “unreal” are so numerous that they are maybe only outnumbered by the similar attempts to prove God’s existence. Scientific praxis should by now have convinced us that this dispute is utterly meaningless. But not so at all! This empty controversy goes on, no matter that idealism nowadays has been christened to *anti-realism*. Scientists must accept that as long as there is no generally accepted definition on “real” this very issue is *undecidable in principle*. The categorization of “real” is accordingly unscientific, which also in one blow make the celebrated scientific realism into a self-contradictory notion. A sound science is bound to resist the use of undefined concepts, since it will otherwise often find itself stuck in the dead end of undecidability.

Reality has to do with stability⁵ in time, and the phenomena of human experience are likely to be subject to a continuous subdivision on a scale from very real to unreal (or rather very stable-unstable) in case there is a pressing need to use such a one. Reality/stability is an observer-relative concept, and since prediction is the most important task of science a long-lasting stability of course will simplify matters, but are by no means a useful criterion for excluding kinds of knowledge inquiry like, e.g., sociology from the domain of science. In a human perspective, nature has, of course, been very important in the biological struggle for survival, and since most natural phenomena are both external and relatively stable they have historically, by the naïve man, been granted a *privileged existential position* and called the real. However, there is no reason for science to hastily and uncritically make use of such a fleeting and undecidable concept. Since all my thin/kin/gs are alike, this should mean that if they are called real, insubstantial, imaginary or anything else is utterly insignificant. So whether the world, unary or manifold, is real or not is accordingly an idle dispute—and unscientific as pointed out.

5. The Heavenly Truth: From the Religious Paradigms

There is another, and maybe more important, reason why scientists so stubbornly prefer to keep up the idea of a “unary world” that is furthermore real. Such a conception secures the idea of a conceivable truth, which has been a tremendously useful bat in man’s fight for power. Even if philosophers have disagreed about what “really exists,” their use of the *truth conception* has always been unanimous—something is “true” only if

a decision on that matter can be made on a level above the individual human being, i.e., by the instance of some super-observer/decider—not necessarily a God. A realist defends the relevance and value of truth as a *norm of belief and inquiry* both in science and in the public domain. He thinks it is important to hold on to the idea that truth is an accurate representation of reality. The SOA highlights (Kjellman 2002) that unless we as scientists are prone to define one, there is simply no such super-observer/decider who can decide on that issue. Science, as such, lacks both the powers of perception and decision, and in this case neither a God, Nature or a process of evolution can assist us as instruments in such a “quest for truth.”

Stephen Hawking (1988) even today refers to God as the putative cause of the existence of a unary universe.

However, if we discover a complete theory, it should in time be understandable by everyone, not just by a few scientists. Then we shall all, philosophers, scientists and just ordinary people, be able to take part in the discussion of the question of why it is that we and the universe exist. If we find the answer to that, it would be the ultimate triumph of human reason—for then we should know the mind of God. (93)

In this light the very thought of challenging the idea of an attainable truth seems devastating, and the common understanding has become that scientific statements are true or at least draws nearer on truth. Many a defender holds that the “success” of the natural sciences cannot be interpreted in another way. On closer inspection, however, the claim that the theories of natural science are truthful because they are successful is simply nothing else but a tacit attempt to redefine the truth predicate. We can come into a better grip of the situation by placing the success of natural science side by side with the evolutionary success of man. They are both deemed successful because they have survived, which has very little to do with closing up towards some eternal truth or reading the mind of God. What has been demonstrated by evolutionary success is that both phenomena hitherto have been sufficiently *fit for survival*—which in the case of man simply means that he has had the necessary *adaptability* to cope with whatever the evolution has been presented to him so far.

The vehicles of truths are sentences, Quine (1990) claims, advocating the correspondence theory, and observation sentences qualify as true by corresponding to reality. The truth predicate is an intermediary between words and the world. What is true is the sentence, but its truth consists in the world’s being as the sentence says and in doing so he explicitly makes reference to the properties of a unary world. Nevertheless, Kant claimed, following Berkeley and Hume, that the “thing-in-itself” is hidden to human knowledge, and this a claim that has gained an overpowering support by the recent finding of theory-laden-ness, and one might wonder how one can undertake such truth assessments lacking of an accessible truth template. When the presumed reality, in its classical sense, is hidden behind the individual’s feedback connectivity the basis for truth decisions is effectively prevented. Since reality, on this view, reduces to a strictly private phenomenon, we must ask whose “reality” we are talking about—Einstein’s, Bohr’s or maybe God’s. Or could it be we even count science as an observing agent?

What kind of statements does natural science takes for true? Couched in the terminology of his disciplinary matrix Kuhn proposes these statements are *symbolic generalizations*, which are most often formulated as *laws of nature*. These generalizations are summing ups of the *facts of experience*, but, in spite of the generally accepted view, no such facts are to be found “outside” a scientific decision maker, since the process behind fact production are individual decisions based on observation or hypothetical evidence. The “properties of thing” are all generated in individual consciousness, and these decisions are afterwards *expressed in factual statements*, which in turn are presented to the court of scientific consensus for approval. The

approved statements are a bit carelessly called “true”—others are rejected as being “false.” In this way statements are rashly tinged with “heavenly certainty” from the religious traditions, but the state of affairs is unfortunately not so easy. My statement “the sun is yellow” is judged true because my opinion matches the one of the court of consensus, and this has nothing to do with a correspondence to a heavenly truth or the like. It only reveals that I have learnt to use the term “yellow” to conform to the valid convention. The SOA claims that, due to the theory-laden-ness of observation, there are as many priverses as there are individuals. None of these individuals have access to a template for truth assessments, and neither has the court of consensus. Both instances are only capable of deciding whether a statement is *useful* in a certain context or not, and in particular how *useful* (i.e., successful) scientific generalizations are in acts of prediction.

In my statements, I reveal what I feel and think, but the privacy of subjectivity prevents all other living beings from judging them true or false, and it does not matter I have the opportunity to tell lies. An outsider has no means available for a fair decision on that issue. Accordingly, there are few answers more devastating than “you are a liar”—and even fewer more groundless. Private statements or scientific alike—the self-styled judges of truths simply lacks of templates for such judgments, and this recognition reduces the use of truth mainly to an oppressive instrument in the human gamble for power. A scientific or legal jury can come to the conclusion that my statement *very likely* does not reflect my thinking. Such a judgment is not based on grounds of access to some divine truth, but rather on the suspicion that I do not follow the social rules of conduct.

In the hands of modern science, the idea of deception has even infiltrated the process of cognition since the modern cognitive sciences claims that human senses are *deceptive*. There is really something extraordinarily weird with this idea. How can mankind go on living with the impression that we are, on an everyday basis, deceived by the senses? What are we really talking about, and why do we attribute the human disposition towards telling lies to our capacity of perception? I have to ask whether it is it even possible for my senses to deceive me? *Perceptual deception occurs exactly when my observations are “unwilling” to confirm a theory or an idea I hitherto have embraced by habit or paradigm.* Could not it just as well be the other way around—that the theories we hold deceive us? At least to me, this mistake occurs on an everyday basis. When this happens in science, it seems *we are very eager to erect the idea of deceitful senses* instead of taking the pains to adjust the theories that maybe has grown out of date. In any case when we, pace Mach, take for certain “what is given to us in experience” the senses are not deceptive any longer, and on that view the naïve man’s view on perception neither is a mistake. Maybe, the personal apprehension of “things as they are,” i.e., as my thin/kin/gs is the only useful form of *knowing* there is? Assuming the personal percept to be what it always have *appeared to be*, namely the result of *private experience and thinking*, will also do the job both SOA and Mach claims. Since the foremost goal of science is *prediction*, *we can as well predict what is to come in personal experience/thinking* instead of first involving in futile discussions whether there is an reality of common access to all of us or not.

Truth is a concept introduced the Holy Scriptures as such taken over by language users, mainly as a tool to judge statements, and has therefore come to play an important role in logics. The treatment of Alfred Tarski (1956) and Willard Quine (1990) reveals a truth concept that is essentially transparent and in part paradoxical, but it nevertheless seems indispensable in the present language culture. However the correspondence theory of truth cannot survive the discovery of cognitive feedback, and in this light the prestigious “scientific quest for truth” mainly seems as a transcription of searching for what is on the mind of God, Nature, or Evolution. The suspected futile quest of truth furthermore fuels the scientific strive for objectivity.

6. Objectivity: From the Scientific Paradigm

During the scientific revolution, the study of the external world and the scientific activities that results in *natural laws* came to be different from that of most other knowledge inquiry. Galileo, and his successors, in their deed become the *exemplars of scientific activity*, and the choice to consult the visible and palpable physical world to extract scientific facts meant a *choice of methodology*, which in the course of time has developed into the scientific method. This method, no surprise, contains *an explicit instruction to assume the position of a detached (or third person) observer* when doing science. This dictum has since then become the ideal of the rational scientific mind. Practically, all forms of open “insider’s” enquiry have since then been banned from the domains of true science, i.e., normal science. It also became evident that the problem of consciousness (Chalmers 1995) could not simply be approached from the third person perspective and the standpoint taken by behaviorism and B. F. Skinner (1972) was very consistent with the ideas of classical science: “*mental processes may exist, but they are ruled out of scientific consideration by their nature.*” So deep was the faith in the Newtonian paradigm that scientists left the phenomenon of consciousness outside of the scientific endeavor for more than six decades. The main aim was, of course, to prevent loose speculations and personal opinions and the best way to accomplish this, one believed, was to cut off all forms of human intuition and subjective feelings from science. Unfortunately, mankind, or rather physicists, thereby also placed the human being with its mind and societies outside the legitimate realm of their new science—or rather the movement of the natural sciences. In the 20th century, we started to ask: What kind of a science are we dealing with when the workings of human mind, responsible for the entire edifice of science, could not be considered the legal object of its discourse, thereby also including the study of consciousness? It is as easy to understand the original reasons for this unfortunate move, as it is to understand this situation cannot possibly count as a “success of science”—rather on the contrary. Today we are able to land a man on the moon, but are totally unable, as it seems, to understand, e.g., the ravaging ethnic conflicts that lay in waste whole human cultures.

According to normal science, all objects of scientific discourse have to be external to the observer. This became the slogan of *scientific objectivity*, which has been successfully drummed into mankind, and very few have taken the pains to try to find out whether such a standpoint is useful or even possible. Scientific objectivity soon became a myth that passed over the forlorn status of the priests to the natural scientist. He was capable of reading nature in the same manner as the priests earlier claimed to be able to interpret God’s will. The purpose to ban subjectivity was on lawful occasions, however the result was devastating, since the inner life and decision capability of scientists and was totally blacked out to the detriment of the understanding of science.

Initially, the term “objective” was used to liken human perceptual capacity with that of the telescope’s objective (lens system). On this view, which very much resembles the common man’s view, perception is thought to display things “as they are.” Already, Galileo thought this comprehension was too simplistic, which already Plato’s cave allegory had suggested. Locke’s distinction into primary and secondary qualities clearly brought out the subjective elements of perception, but this did not stop the frequent claims to scientific objectivity. It seemed the term objectivity started to live a life on its own very often juxtaposing the scientist to an *unbiased observer*. In the hands of Kant inter-subjective knowledge juxtaposed to objective knowledge, and the meaning of the slogan “science is objective” thereby into the meaning that “science is reliable,” which almost indiscernibly has transformed into a reliability coming close to the sacred Truths of the Holy Scriptures fetched from quite different paradigms.

Science has adopted the *causal theory of perception* in which there are *external causes* to the percept appearing in human awareness, thereby cementing the somewhat confusing construction of scientific dualism. The positivist movement accordingly meant that strict adherence to the testimony of observation and experience was the all-important imperative of science.

The evidence of observation is irrefutable, and therefore, offers a certain (or positive) basis for science. An early Mach claimed there is no place for a priori elements in natural science or in empirical knowledge, which is a paradigm faithful sheer observation. In time, this strict adherence to observation loosened up a bit allowing for the introduction of hypothetical (and unobservable) entities in science, which almost *indiscernibly* turned the classical observer's science into a *knower science*. Observation was no more the only legal method to build scientific theories but still remained, in the name of logical positivism, the *only acceptable method to verify theories*. The idea of an attainable truth still lingered and it seemed scientific objectivity remained in sole position. Quine's (1951, 20-43) seminal paper "Two Dogmas of Empiricism" confirmed the ideas of quantum physics, cybernetics and the systems sciences, which slowly start to turn the pendulum away from the idea of conceivable objectivity. In spite of the frequent declarations of objectivity, science in its Galilean methodology did not become objective bare by the denial of human feelings—not in the least. Instead intuitions and personal feelings guiding, the leading scientists could now, in principle, tacitly run rampant behind the curtains of objectivity—and not even the great scientists were faithful to the classical paradigm as spelled out. Luckily, we must hasten to declare, since *this is probably the main reason for the outstanding success of the natural sciences*. The scientists rescued science and mankind by stressing intuition and ingenious creativity unrestricted by the prescribed ideas of strict objectivity. Eventual idle imaginings emerging were washed away in the open (i.e., objective) discussions and subsequent consensual discourse of science—however the bright lodestar of these successful scientists was their personal feelings and scientific intuition. The astonishing successes of classical science and the enormous impetus to creative work that it derived from that source probably would not have come about if scientists in their theory construction had faithfully accepted the spelled out Galilean ideal—and as a matter of fact he himself did not.

In thinking a scientist is subjective, no surprise, and the objectivity of science at most pertains to its method of confirmation. Human creativity is subjective—maybe needless to say—but the testing of its theories is "objective," i.e., carried out in procedures open to public examination. The statement "science is objective" can no longer have another interpretation but the one that "science is reliable, because scientific knowledge is *objectively* (ap)proven," i.e., *its symbolic generalizations and statements are approved in procedures that are open to public⁶ examination*. As such clearly approved in scientific consensus—and accordingly certified useful for human use in accordance with the practices and proven experience. Nothing more and nothing less SOA claims in parallel with pragmatism.

7. The Dilemma

The claims of normal science that science is objective, science only deals only with a special kind of objects called real, and that scientific statements are unbiased and therefore true, or at least asymptotically draws nearer to truth, are all based on the assumption of a reality of common access given to mankind—or, which amounts to the same, the existence of a reality which, at least in parts, is observer-independent.⁷ From the preceding discussions, it should be clear that reality, objectivity and truth, in its classical interpretation in the light of modern findings has become merely catchwords, and part of deep-rooted scientific prejudice, and,

as it seems are maintained mainly as useful bats in fights for power and grants. We could go on forever discussing the meaning of these catchwords, and some contenders really do. In doing so we soon find ourselves in the same position as a man searching for the soap in a bathtub; in the very moment, we believe it is caught—it slips away. This is so because there is often a group of defenders eager to present a slightly different interpretation. This is the main problem with slippery concepts, and natural language seems so full of them that one suspect deception is, in part, a tacit but embarrassing concern in verbal communication.

Man's inclination to believe in a real external world forces "objectivity" and the "quests for truth" upon science. However, accepting the Berkeleyian idea of merely private realities, i.e., that each human has its own private, gives science good reason to ignore some parts of the Newtonian paradigm. In doing so, the "conceived real" loses its privileged position and the "ban on subjective elements" is removed, and then there is longer a reason to exclude social and other humanistic knowledge endeavors from science. Even more remarkable is that this recognition also offers the natural sciences, involved in a pressing crisis, the possibility to gain coherence, and readily place science within the grasp of a theory of everything (TOE). In spite of the physicists' frequent claim of approaching a TOE, this job cannot be realized within the prevailing framework of normal science, and SOA is here in the position to offer a more useful alternative. In the case that these discussions fails to convince the sceptic, at least the traces of scientific praxis should convince him that this puzzle cannot be solved within the framework of present scientific realism. The traditional approach of science fails on a fundamental level and it seems wise to follow the advice given by Edmund Husserl (1960), and Larry Laudan (1977) and "*begin afresh to analyze the rationality of science, deliberately trying to avoid some of the key presuppositions which have produced the breakdown of the traditional analysis.*"

One way of doing so is to reject the key presupposition of scientific realism, and try the only remaining alternative called the SOA (Kjellman 2003), which unambiguously dismisses the idea of personal knowledge as a *representation* of a world of common access created by some God or the like. This is the only solution to remove the embarrassing perplexities met with in modern science. To attain this goal, we must scrutinize the conceptual foundation of the Newtonian paradigm that, through physics, has come to dominate scientific thinking during the past 250 years.

To in some quick strokes dig out the preconceptions and shortcomings of the classical approach, let me here as a typical example use the scientific realism as espoused by Mario Bunge, and display the its set of beliefs and correct some misunderstandings that are incorporated in normal science. In doing so, we will also find something that appears to point to a consistent conceptual foundation useful to all forms of knowledge inquiry—and not only for the natural sciences. In short, a conceptual foundation for *a theory of every thin/kin/g...* forebodes a shift of paradigm that will pave the way for the physicist's eagerly longed for TOE as well.

8. The Useful Way Out

We have already touched upon the question of how we come to take the "world" for an external phenomenon, when all human thinking rather goes on in an internal "mental" domain. The doubtful idea that human capacity of *observation is unbiased* simply consolidates the idea of an existing common observer-independent world in this situation. The realist's hoping for some observer-independent aspects of a "given" world simply means he hopes that it is possible to generate similar experience in different observers

watching the same scene. The *privacy of subjectivity* effectively prevents such an assessment. The hash assumption of “given-ness” actually paves way for the before mentioned weird claim to deceptive senses. In the same moment, we remove the assumption of given-ness the presumed sense deception also will vanish. The claim of SOA is that the only consistent point of departure is that each human being must, pace Mach and Husserl, conceive of its priverse “as it is,” and postpone eventual speculations about a “reality of common access” until he eventually finds out that also other priverses have, some traits in common apart from the names of its thingy furniture.

In this vein, the SOA strictly elevates the principles of holism, i.e., the principle the observer/knower/thinker cannot be separated from its object of observation/known/thinking. This approach takes nothing else but the subject’s emerging experience for granted, whereas the OOA proceeds from the unfounded, and therefore misleading, postulate of a unary world of entities, and is thereby *immediately enmeshed in confusing ontological dualism*. Neither of the mentioned camps can, of course, provide a proof of the superiority of their own approach, but as said, at least the practice of normal science has unequivocally shown the prevailing OOA to produce an embarrassing consciousness puzzle alongside with paradoxes, and some very confusing logical dilemmas, as most prominently pointed out by Gödel.

The SOA provides a useful path to avoid getting stuck in these problems, but the space does not allow for details, and we have to fall back on a sketch, saying that when we take on the Machian view that naïve man’s view on perception is not a mistake the situation is radically changed. On this view, perceptions are what they always have appeared to be, namely *private experience and thin/kin/gs*, and in this sense *strictly personal*. Peirce’s idea that “every thought is a sign” here meet with the Machian “sensation complex of experience” also being a sign, albeit in the SOA clarified to be a *private sign and piece of personal experience*. On the grounds of personal experience and learning, we provide these personal signs with the “content of personal experience”, which then provide a sound basis for personal prediction. These are steps without which any act of purposeful thinking (i.e., mental simulation) is impossible. This recognition reduces the personal sign to “that what exists on a personal basis,” and that the content of a sign (i.e., experience) only can be collected by means of personal acquaintance. This is the only useful form of knowing there is, and on that view my *mind is nothing but an organized collection of personal experience*, and this is the SOA at its extreme. The foremost goal of knowing is to *predict*, and I do better in predicting what is to come in my personal experience/thinking, instead of embracing the somewhat confused belief that I predict what is to come in some “external reality.”

Science does not know. Scientists do—and do so in exactly the same manner as living individuals. Scientific consensus is later, or in parallel, obtained by intersubjective steps of ostensive learning. Here, we are in cooperation and coexistence carefully taught to connect a *conventional sign* to a “piece of personal experience,” which in this ostensive situation becomes a “piece of shared experience.” We thus in the spirit of consensus together arrange situations where we can learn to attach signs (i.e., entity names) to “pieces of personal experience” that by this arrangement also become “pieces of shared experience.” In this way, scientific knowledge becomes an *organized collection of signs* certified in consensual agreement, which is the main tenet of conventionalism as espoused by e.g., Henri Poincaré. These signs, providing different sign systems, are constructed and established in social cooperation. In this manner, the individual’s priverse becomes a data base of personal experience, which is “shared” by means of a set of learned conventional signs attached to each

piece of personal experience. On this view, I can in my subjective experience conceive the *percept* of another living being simply as sign appointing his data base of personal experience, and his *proper name*, say John, as another sign appointing the same data base. This immediately connects to Peirce's idea (Nöth 1990) that "life is a train of thoughts," but now housed in a *personal data base of experience* SOA would like to add. My percept of a man is a sign, and is his proper name as well, since both by association appoints a data base of collected personal experience he calls his *priverse*. Peirce's conclusion that "man is a sign" is therefore correct and useful, albeit only on a subject-oriented basis. On this view also my entire *priverse* is perfused with signs and only signs, in the same way that made Peirce to say that his "entire universe is perfused with signs." In the view of SOA Peirce's "universe" is nothing else but his "*priverse*," and is not only a change of words but a change in approach. This train of thoughts cannot be linked together into a consistent whole unless SOA is used in a stringent way—this is the presentiment I now try to communicate by means some rapids strokes.

What Peirce as a sworn realist, and Mach, as a physicist working with the "impressions of sensation," could not realise long before the discovery of mind's feedback connectivity, was that a *reversal of causation* was called for in order to consistently avoid the pitfalls of dualism. Since the experience arising in a knowing subject forming its knowledge (i.e., its feelings/thin/kin/g) is *conceptually prior to the existence* of the name of a concept/thing in its private usage, hence the reversal of causation, and the necessity of a SOA. Furthermore a "property" cannot possibly be independent of the knower/measurer, because an instance of property is specified *when it is experienced*, i.e., in the moment of its measurement, even if here "measured" means only in terms of a subjective feeling. Therefore a *priverse* cannot possibly be independent of its knower/observer. Science, on the other hand, is no agent and has no perceptual capacity. There we must simply rely on consensual agreements that can be carried out only after an individual measurement has been taken. On that view the Kantian "thing in itself," is barely a name concept devoid of properties, i.e., a *name pointer* that appoints the anchor point of a set of feelings (properties) associated with a thing by means of perception. The mistake of normal science was to locate this knowledge including its property feelings out in an illusory *observer-external* reality. For certain these feeling events takes place in my mind, so that e.g. the name pointer "apple" points at the memory of the "feelings of an apple" in my mind and nowhere else.

At a later stage, I also learn by means of recursive motor action to *project* this anchor point onto a point in my spatial environment where I at the same experience a touch sensation that for this reason is included in the complex of feelings called an "apple." But one must be very clear about that this act of association does not places my knowledge out in some external reality. On that view my physical space is merely an abstract domain (space) of association spanned by private motor action, and the space of physics is then merely a consensual agreement underpinned by similar individual experiences. To see an apple is thus to experience a complex of feelings grouped together under the name of "apple"—the latter simply being a name pointer. I have learnt to *project* this perception onto my environment and each time this act of association is confirmed *my belief* in an "external environment" is strengthened, on the grounds of my personal motor action. When it comes to the sun I cannot confirm my "sun-feelings" by means of motor action. Now I have to believe in the theories of physics, which assure me that in case I direct my attention in a certain direction specified by geometers or physicists I will experience another "sun-feeling." Since this prediction almost always occurs I am led to the *belief* there is a sun belonging to an external world. However, this is belief is no more certain than my belief that "all ravens are black." It is simply a probabilistic prediction of an outcome of a mental sun-feeling complex, which should

strengthen my *belief* that my personal motor actions can be extrapolated into a fancied encounter with a celestial body, but rather as a short cut make us believe in an external reality. The immediate perceptual evidence is just a sun-feeling complex in my mind, what else is the result of life-long exercise and training. In that vein, I can present a *justified belief* to think there is an external world. On the other hand, another fact is obvious to me as an individual; there is a bulk of collected thinking/experience called my priverse—a bulk of knowledge which does not become external by means of projection. I prefer to call this bulk of collected knowledge my mind, which once more connects to Peirce's saying "that life is a train of thoughts" now in the meaning that life is merely a train of experiences. On that view my mind, in terms of all my collected experience and knowledge, is all there is directly accessible to me. Priverse is merely a *name pointer appointing a set of privately collected memories—i.e., the recallable history of my life*. Now to *exist* means to have a name,⁸ and as such a "reality" exists as a private conception. However the content of the set named "reality" are not real things but *a set of name labels* in turn appointing a set of strictly private memories—some of them categorised as things. It is wiser to think of these things in terms of thin/kin/gs since they then become certified "internal." However one has to be very careful in such discussions, since in SOA the dichotomy internal/external is as invalid and misleading as is the one of real/imaginary.

A consistent treatment of the modern discovery of theory-laden-ness of observation simply calls for the mentioned approach, since there is no way for a piece of information to be safely brought to a mind from some "outside." In particular on the path from the senses to the mind, such a piece of information runs the risk of being "removed by feedback"—which on a closer inspection becomes an essential element of learning. Reality reconstruction is here out of the question—the essential project of human living becomes to construct a priverse out of past experience to use for personal prediction.

9. Finding the Gordian Knot

Next to the question: is my priverse similar to someone else's? Or even: Can it be useful to say that there is a common external world shared by different beings? No—since no doubt my world of experience, i.e., my priverse is strictly private and shared by no one. When my experience, is compiled into knowledge in my mind I cannot, on pains of consistency, take a shared reality for granted. The discovery of mind's feedback connectivity makes such an idea utterly improbable. Furthermore it is within normal science not even possible to indicate a procedure to answer the posed question—hence the consciousness puzzle. Within the prevailing paradigm mankind has since the dawn of science vainly tried to solve this puzzle. So whence the idea of a shared reality? As pointed out it lies inherent in the religious paradigm claiming the existence of one God and his unique worldly creation. In the moment, we let go the ill-founded and undecidable idea of a reality created by some God, nature, or evolution and therefore observer-independent—then the idea of its possible truth-likeness subsides. Then, there is no need to read the mind of a Super being—and no need to claim that any human being has unbiased, i.e., objective, access to the mind of this Super being.

The privacy of subjectivity effectively prevents anybody from "reading" anybody else's mind or percept—being or Super being alike—so there is no way for me or anybody else to come to the conclusion that my priverse, in any part, is shared by anyone. Accordingly, there is no way of corroborate the assumption that reality, or a single impression for that sake, is intersubjectively shared. Such an assumption makes it unscientific in the opinion of Karl Popper, which oddly enough it did not stop him subscribing⁹ to this very

belief himself. This assumption is so deeply anchored in human tradition that it seems more or less natural, but the discovery of mind's feedback connectivity make not justified any more. The fact that we can speak of our priverses respective as if they were "one and the same universe" has, as already pointed out, to do with the *ostensive methods* we use in language learning that effectively make me associate an occurred experience with a specific name label.

Here, a sound science has a crucial epistemological choice to make between the privacy of subjectivity and the idea of an observer-independent reality in its classical sense. By taking over a myth from the Holy Scriptures, the OOA inconsistently validates both ideas, and thereby unsuspectingly throws itself into an unwarranted and *irreversible dualism*. Even worse since the option of observer-dependent realities then become effectively dispatched from the discourse of science. The inability to find a solution on consciousness puzzle is a good indication that the contenders of scientific realism and OOA made a choice that has brought science into a severe crisis.

10. Cutting the Knot

The SOA claims the "properties", a realist improperly attribute to things, are based on the *feelings* that arises in his awareness, and these feelings are "all there is" to knowledge apart from the subjectively (internal) constructed path of association between this complex of feelings and the name appointing this complex. These "properties" arises when the incoming stimuli (sensations) meets the neural tissues of a mind and there generates a very personal *feeling*.¹⁰ To each of these complexes of feeling we associate a name (concept) on the basis of recurrence. For something to *privately exist* is, accordingly, to have a name, and in this sense my priverse is barely a *set of name-pointers*. Likewise *consensual existence* also means to have a name and in this sense a "common reality" is barely a *set of name-pointers* established by human consensus, and nothing else. However to be aware of the use of a name does not mean you know the phenomenon appointed by this name, since to know a phenomenon you need to have had *repeated personal experience*¹¹ of it. The ill-fated mistake of classical thinking was the rash assumption that the intent (target) of a named object can be regarded as something external to awareness. The intents of phenomenal thin/kin/g (objects) are nothing else but private memories, and stored in forms of compilations of repeated experience. To the subject-oriented constructivist a priverse is *constructed out of the elements of private experience*, and in mind sustained in the form of private knowledge. This knowledge becomes manageable by casting it into the *structures called conceptual schemata*—that are constructions as well albeit consensual.

11. Similar Ideas

The ideas presented above are compatible with Hillary Putnam (1981), which supported by George Lakoff (1987), has also attacked scientific objectivism pointing out that the "internalist" (first person observer) cannot by reference give meaning to the objectivist's (third person observer's) account of science. They showed this to be a principal biological restriction imposed on human observation/conceptualisation and that the "reality as we understand it" is mainly structured and conceived by the *conceptual schemata we use for explication*. Thus the human knowledge of a worldly reality is nothing that is given by Nature, but rather established by means of human convention. This idea was advance already by Henri Poincaré (1905[1996]) and later Pierre Duhem held that metaphysical commitments are tacitly understood by practicing scientists in the form of *social conventions* rather than derived from direct perception. The time was ripe for a re-evaluation of human knowing and a

decisive clue was provided by Kuhn (1962), when he from an almost humanist's conviction claimed that science is driven by "paradigm" that embodies a particular conceptual framework *through which the world is viewed*, and a set of experimental and theoretical techniques for matching the paradigm with this perceived world, and he moreover went on "*one suspects that something like a paradigm is prerequisite to perception itself*" (112). A similar philosophical view is also brought fore by Richard Rorty (1982), and a group of researchers around Otto Rössler (1998), most probably inspired by the works of the Estonian biologist Jakob von Uexcull (1921). Apart from Uexcull, none of them has explicitly attacked the present scientific paradigm nor suggested a consistent use a SOA.

The established subjectivity of quantum physics most clearly pronounced in Bohr's so-called "Copenhagen interpretation" and the closely related interpretations of von Neumann, Heisenberg, Wigner, and Wheeler clearly give support to the ideas of SOA. The cyberneticians Heinz von Foerster (1984) and Gregory Bateson (1979) have similar suggestions, and so has Ernst von Glasersfeld (1995) that advocates a form of constructivism he calls radical. However, SOA takes constructivism at least one step further in these directions. In 1957, Bell's theorem (Clauser and Shimany 1978) in the language of physics showed us that the idea of a pre-existing classical reality cannot exist alongside the *principle of local causes* and quantum theory. For that reason, quantum physics is also very likely incompatible with the proposition that measurements discover some unknown but pre-existing reality. In this context, it is worth pointing out that the SOA makes human experience and knowledge into a *private and therefore entirely mind-local phenomenon*.

The SOA neither needs a God or a Nature to "verify" its laws since they are wholly established in agreements in a domain of human consensual understanding. What is judged *useful* in this domain is successful, hence the present "success" of science. The massive feedback connectivity of human mind, which lies behind the theories of cognitive laden-ness, has been developed in the course of evolution, and must, as such, therefore be proven useful (successful) in man's struggle of survival. A science based on social consensus uses evolution, *in terms of evolutionary success*, to confirm the usefulness of its theories, agreements, and laws, rather than Nature or God. In these terms, we can re-interpret Plato's "quest for eternal laws," into *agreements that sustains in the passage of time*, which on a closer inspection lies behind his idea of eternal truth.

To summarize: Feedback connectivity of human mind cannot be ignored and a theory of perception that does not take the consequences of this connectivity into account is bound to be misleading. A man lives in, thinks of and speaks of his priverse, which is clothed in the elements of his private knowledge. The fact that this process of knowledge build-up is shaped in consensus and co-existence clearly has a bearing on his knowledge, but on the other hand very little bearing on the privacy of this knowing. He uses his private "world of experience", to predict what will to come in his awareness, and learn to direct his actions in accordance with his goals—even in forced solitude. There is no need for a reality of common access in this strictly personal deed. From this viewpoint, the natural and social sciences will conflate, since the objects of science are not merely the Machian sensation complexes of perceptions, but rather all the (mental) phenomena of human thinking, i.e., perceptions, fantasies, hallucinations, illusion and thoughts. They are all phenomena that can be collected under the umbrella of personal experience—in short the intents of thinking as advocated by Husserl during the development of phenomenology. We *share* the intents of personal experience by learning to using intricate sign systems that are constructed for collective use—but *knowledge is personal and can only be coherently built on the basis of strictly personal experience*. Science does not know—only scientists. Some

critics claim that this view amounts to solipsism, which for some reason has become a word of abuse uses in naïve attempts to rescue realism. Correctly—and this is a facet of methodological solipsism as proposed by Carnap, but on this view, the individual solipsist does not claim to be alone in the world. He only claims he has *direct access* to his own priverse, which no one else has. He is not alone in the abstract world of his priverse, because there is a multitude of signs appointing fellow beings. He can readily follow these signs to establish meaningful communication.

12. A Systems Science Approach

The embarrassing situation dealt with above has been discussed in a row of earlier²⁷ papers, and the crucial point is that the perceptual path passes the mind and therefore man needs a viable model of his mind before he is even able to begin making a model of his priverse. Here is actually the point where the edifice of classical science falls down, *since this very task turn out to be impossible in the OOA*. To a systems scientist this very insight suggests a useful pathway to a new understanding, which also offers a solution to the puzzling problem of human consciousness. The claim is that a monistic approach constructed by means of a consistent use of the SOA will to solve this pressing crisis. The solution is to accept that we all—each and every one—have access to only one “world” namely a strictly personal world. Accepting the idea of manifold of “inside worlds” just not only cause a multiplication that totally violates the celebrated idea of “scientific objectivity” but also renders the world a *strictly abstract phenomenon* suggesting the “hard facts” of human experience to be illusory—or better *allusory*. On this view there is no outside or inside—just an *on-side*—that constitutes an abstract *instrument panel* for personal when navigating in a priverse that earlier was mistaken for mankind’s shared reality. The personal “sense impressions” that appears as “pointer readings” on an instrument panel connects to a reality hidden to knowledge in the same way as the pilot’s blind landing system. On this view the real/illusory distinction is useless, but Leibniz reassures us that “*although the whole of this life were said to be nothing but a dream and the physical world nothing but a phantasm, I should call this dream or phantasm real enough if, using reason well, we were never deceived by it.*”¹² In this light the idea of scientific certainty rapidly fades away, effectively undermining the ontological fundamentals of classical science. The SOA gives substance to the views of Rorty and Engel (2006) that “*epistemology is an artificial construct meant to restore a function to philosophy usurped by the success of empirical science. Epistemology and ontology are false problems, and with their demise goes the Cartesian dualism of subject and object and the ancient problematic of appearance and reality.*”

In the SOA both human knowing and prediction turns into a strictly private and mind-local endeavour, where the Uexcullian “Umwelt” disappears hand in hand with the need to refer to something outside a mind. As human beings, we are all left with the (abstract) “Innenwelt,” but this is good enough, since we can anyhow in consensus decide to use natural languages and/or more professional tools of explication to discuss personal experience. However, my knowledge will never ever reach beyond the tools we construct to appoint these complexes of personal knowledge and the signs of a language we invent to appoint these feelings of private experience. Hence, the claim that my priverse is my personal construction, which we can say amounts to constructivism. On this view scientific collaboration takes place within and by the use of different frameworks (systems) of systemic signs (constructs) used both for thinking and communication. The basis of all signs used in these systems is the personal feeling that can be communicated only by ostensive means, which brings forward the feeling as an element so familiar to everyday man—albeit so despised by the members of the

Newtonian paradigm.

13. The Re-emergence of Feelings

The personal feeling is so central in the mentioned basic ostensive procedures of sign learning that scientific epistemology can no longer turn its back on them. I here use the term “feeling” to juxtapose it with “sensation,” the latter being a term we are accustomed to use in OOA. The feeling is the “from-inside” version of sensation, and the only version I can get in touch with, grasp and understand. On that view the ability to grasp appears as the only sound foundation for understanding.

In short we need a new scientific paradigm—an approach that avoids the pitfalls of dualism and realism—and furthermore takes on the effort to couch its thinking in a re-interpretation of natural language. This line of reasoning has during many years paved the way for the SOA—a new epistemology that takes the *individual knower and its feelings as the coherent point of departure*. To that end a *bootstrap model* has to be used that departs from the *early man’s first experience*, occurring in a situation totally lacking of some ontological commitments whatsoever. In doing so we in a subject-oriented manner can bring man’s living experience—and his *priverse*—under the collective umbrella of a *consensual science*. This approach brings the promise to provide a sound *theory of everything*—or rather a *theory of every thin/kin/g*—couched in ideas well separated from those of scientific realism, which furthermore in one step brings the thinking of science and humanity on an equal footing. The reasons for such a move have been presented as well as some of SOA’s principal traits, but I believe it is not out of place to touch on its very foundation by some strokes of the pen.

So how does the SOA proceed? It re-allocates the hypothetical causes of human experience, in the classical view called some “things,” from its imaginary external domain to the “interior” of personal awareness where “their properties” are generated, and there *rename them to thin/kin/gs*. In doing so I can in privacy proceed and construct a private science entirely based on personal experience that totally brackets the question of an [external reality]. The confusion of scientific dualism disappears in one blow, and *human feelings* become a legitimate subject of scientific discourse. In this view sight impressions are feelings, sounds are feelings, as well as touch, smell and taste—but we have better call these “impressions” for *experience* to avoid the directional connotation provided by the term “impressing.” On this view perceptual experience becomes simply a complex of feelings. However also our bodily movements, mental processes, like thinking, experiencing and knowing give rise to feelings so in this respect SOA’s notion of feeling considerably enlarges the domain of the OOA’s classical sensation. The *feeling becomes the elementary item of epistemology* in the same manner as “matter” since long has been considered the elementary particle of classical physics. On this view, “matter” is nothing else but a conventional sign appointing the “content” of a feeling. In short an implicit address to a “place” in my memory where this “content” is stored.

It takes considerable time to shake of the armour of an inherited and well learned paradigm since we by training *tacitly* has assimilated many beliefs as a matter of course. Slowly one starts to realize that the metaphysical hypothesis of the present scientific thinking is loaded with preconceptions that has lead its thinking astray. To dig out some of the preconceptions and shortcomings of the classical approach we can use e.g., Bunge as a typical example, and do so simply to understand how unwarranted dualism and a succeeding naïve inclination for realism already at a foundational stage jeopardize the whole project of building a sound science.

Mario Bunge (1977, 16) claims that scientific research proceeds on a number of metaphysical hypotheses has been pointed out from time to time, and proposes a list of ontological principles occurring in scientific research as:

M1: There is a world external to the cognitive subject.

M2: The world is composed of things.

M3: Forms are properties of things.

Already in the first step M1, he ties the Gordian knot and postulates a single external world and immediately enmeshes himself in unforced dualism. M2 claims that the furniture of the world is called things, which he, at an early stage, qualifies as real. M3 finally suggest that these things are known by way of the property of form. He thus, following Locke, postulates the forms of things to be mind-independent. This view clearly utilises the causal theory of perception, which already at its outset makes a clear external/internal distinction. Bunge develops his scientific realism, which he in four volumes advocates in excellent wordings, however always glides away from tackling the fundamental question whether M1 is logically consistent. The simple question: “Does the cognitive subject belong to the world?” immediately reveals the deep predicaments of dualism, namely that the world is regarded external to its knower. Following the rules of normal science, he consequently is unable to scrutinize his own consciousness and knowing.

The solution is to define a world private to the knowing subject, and resist the temptation to already at the outset introduce a valid inside/outside distinction. Probably misled by the traditional paradigm Bunge, like many others, was too eager to impose a “matter-ial” ontology upon physics, and this very step creates a distinction into the ontic-epistemic aspects of a thing, which is nothing else but external/internal categorisation of knowledge in disguise. Bunge hypothesises some unobservables, which he calls bare individuals, in order to count for appearance, and he here probably had the atom of physic in mind. These bare individuals was meant to function as invisible anchor points for the properties of things, and since he without further thought places this anchor point in an external reality, he in fact in advance takes the external/internal distinction for a valid one. Once he has placed the given, i.e., in this case, the anchor point outside his domain of knowing the damage done to his epistemology is now irreparable. Bunge is irreversibly caught in dualism, and literally stumbles in the very first step. And so does science by accepting this inconsistent step already at this foundational point.

M3 also reveals that Bunge does not take the consequences of the mind’s feedback connectivity in account. This omission, which meant the downfall of logical positivism, classical realism with its Newtonian paradigm will also share—it is now time for the scientific community to recognize this unpleasant situation.

SOA, on the other hand, respects the privacy of subjectivity and can in response to the metaphysical assumptions M1—M3 suggest:

- (1) Each knower constructs his own priverse—by necessity in a bootstrap manner;
- (2) The priverse is composed of thin/kin/gs—or ideas made manifest in conceptual schemata;
- (3) My thin/kin/gs are composed of feelings.

On that view the feelings that arise in personal awareness now becomes the *primary cause* in personal constructive efforts of theory building. In the case, others can approve on the usefulness of my theories (models) we can together build a *science in consensus*. In case, they cannot approve I have a choice to make:

- (1) Can choose to do predict what is to come in splendid isolation using my own models;
- (2) Or choose to modify my models to fit into some framework (paradigm) more useful for social cooperation i.e., joining a scientific community.

However, there is no more a “quest for truth” but rather a “quest for private usefulness” and a decision whether to also accept the opportunities of social cooperation. Successful theories are *useful*, because they are successful in prediction. Therefore they survive—both at a private and a consensual level. Not only man but also his theories have to change otherwise they will not survive in the course of evolution, exactly in the same way as personal beings, families or living species. *Adaptability* is here the key conception. Aiming for some eternal truth rather represents the other end on a scale of flexibility—namely total rigidity. The Darwinian catchword “survival of the fittest” is a tribute to processes of living adaptation, albeit what was fit in the middle ages is not necessarily fit today. This holds for man as a living species, for his knowledge and for his theories of science.

What furthermore is problematic is that most realist thinkers with few exceptions take human language with its seductive noun/verb structure as for given. For sure, there was no such a tool as a language at hand when the early man started to clothe his thoughts in words. When we are brought up to use the noun/verb structure of natural languages it is unfortunately almost impossible to break free from the classical thinking of dualism. Notably, even the most prominent thinkers of phenomenology, including those calling themselves radical constructivists (Kjellman 2008), do not with any precautions hesitate to make use of such a language deeply anchored in realism. Probably they meant that there was no other choice and no surprise then that most attempts to re-formulate the conceptual foundation of human thinking often come to nothing. Like logics once become a dedicated language in attempts to sharpen up verbal communication, we once more need a new language since logics is couched in classical thinking. At least, we need a new interpretation of the present one, to explicate and communicate experience and knowledge arisen in the privacy of human consciousness.

14. Conclusions

Prevailing science with its traditional external observer can coherently neither explain human consciousness nor the idea of a shared physical universe. The misleading assumption of a reality of common access, which, in parts is observer-independent, is the villain of the piece, which instantly throws present thinking into unwarranted and irreversible dualism. When instead using SOA the “inside” feeler/knower can explain these phenomena, albeit in a monistic domain—and do it coherently. So goes the claim, and this recognition enforces an imminent shift of paradigm of science. Certainty and truth-likeness are lost forever—well they were never there, since it was a mistake to think such attributions even to be possible.

The physicist can continue to use his stable measuring sticks, but there is a need to understand that these only emulate the human feeling. On this view the meter stick reduces to the “feeling of the meter stick”—yellow to the “feeling of yellow” and headache to the “feeling of pain in the head.” The path to come to consensual understanding is to reduce the physical (object-oriented) concepts into human (subject-oriented) concepts, i.e., feelings, and stay put to scientific monism. The SOA marks out the return of the human’s feeling and free will on the arena of science, and thereby also bring the thinking of the natural sciences and humanities on an equal footing.

Notes

1. One and only one.

2. Sometimes called “moderate realism,” as if the distinction of real/imaginary would lend itself to this.
3. Thin/kin/gs.
4. Etymologically, thinking (via thin-kin-g) might be the root of “thing,” and a ready understanding here is that thin/kin/g is another word for idea, i.e., *an element of cognition*. I owe this insight to Dr. Bernard Scott.
5. However the perceptual impression is far from stable.
6. Even if one might wonder in what respects today’s physics is open to public examination, or even open to non-specialists.
7. A claim advanced by scientific critical realism.
8. Which is expressed by Quine’s slogan “To be is to be the value of a variable.”—*On What There Is*—in *Review of Metaphysics* (1948). Reprinted in Quine (1953).
9. “I share with old-fashioned materialists the view that material things are real”—Popper and Eccles (1977).
10. Since “sensation” is a concept used in the OOA framework, and as such defined from the “outside” the feeling refers to its counterpart, i.e., the sensation as conceived (felt) from the “inside”.
11. In one way or other.
12. As quoted in *The World of Mathematics* (1956, 1832).

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