Dialogicality and Social Representations

The Dynamics of Mind

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1 The circle of perfection

Throughout my career as a social scientist I have always been preoccupied with questions as to how, and in what ways, the researcher's work is influenced by implicit presuppositions, which are shared by the cultures, societies and traditions in which she lives. These questions were particularly reinforced by my personal experience, having emigrated from Central Europe to the United Kingdom, from certain kinds of tradition to other ones and from one kind of psychology to another.

We can find many examples in the history and philosophy of science of the effect of implicit presuppositions on thinking and scientific theories, ranging from ethics and aesthetics on the one hand to hard natural sciences on the other. One of them is Nicolson's (1950) fascinating exposition of *the circle of perfection* in the history of metaphysics, science, ethics and aesthetics. The image of God as a circle of perfection had already appeared in Egyptian hieroglyphics and from there it was later adopted by ancient Greeks and by Christians. This image of the circle of perfection dominated science, aesthetics and poetry until the seventeenth century. Nicolson presents evidence not only of how, by the weight of scientific discoveries, this image finally and irretrievably broke down, but also how old habits of the mind are hard to change, due to culture, religion and mythology. For a long time the image of the circle of perfection resisted any attempts to be destroyed. Nicolson points out that 'many great scientists of the past were "poets" and some of them mystics' (Nicolson, 1950, p. 108) and, until the sixteenth or seventeenth centuries, the languages of poetry and of science were complementary and often interchangeable. For example, Newton was influenced by the mystic philosopher Jacob Böhme who developed 'theosophy' as a discipline in which he tried to capture the manifestation of reason through the divine work (cf. Chapter 2).

Like Newton's, so Kepler's mysticism is well known from his writings. In accordance with the dominant religious images of the time, Kepler

assumed that planets must necessarily move in the circle of perfection. This presupposition apparently delayed his study of planetary motion. When he could no longer resist his own discovery that orbital movement proceeds in ellipses, he was shattered. Nicolson paraphrases his feelings, saying that he continued to believe that circular motion remains the perfect motion because the circle is a symbol of God. His own finding, showing that planets move in ellipses, indicates *their* limitation and not the limitation of God. The planets simply cannot reach the perfection of their Creator, Kepler thought, and instead, they only imitate the circle by elliptic movement. Their natures permit 'the beauty and the nobleness of the curved' (Nicolson, 1950, p. 134) but not the nobleness of the circle.

Another example of the difficulty of 'breaking the circle' is Darwin's creation, throughout his career, of his theory of evolution (Darwin, 1859). In his analysis of Darwin's creative process, Gruber (1974, p. 174) showed how Darwin's ideas developed gradually, having been originally implicitly embedded in the framework of generally accepted theories of his time. As Darwin, in deepening his knowledge and amassing increasing evidence for his theory of evolution departed from the generally accepted framework, his ideas, from being originally mere hunches, became more explicit. Recognising his own differences from the accepted framework, he was slowly able to reflect upon them and to develop his theory against the scientific majority's point of view. Darwin's original hypothesis, before 1832, included the Creator in the theory of evolution. Darwin thought that the Creator actually made the organic world. Later, the Creator played a smaller and smaller role and finally, he totally disappeared from Darwin's scientific schema. In the final version of Darwin's theory of evolution, the Creator remained, with a question mark, outside the system. Darwin implied that if the Creator existed, he might have initiated the evolution of the natural system. However, he no longer interfered with it.

Thus Darwin, like Kepler before him, deprived God of the responsibility for the worldly phenomena, which he had supposedly created. Having liberated himself, Darwin could then proceed with the formulation of his evolutionary theory. However, it is interesting to note the slow rate in which Darwin only gradually freed himself from the force of implicit presuppositions of the commonly accepted conceptual frameworks and of the various inhibiting factors. Gruber's analysis points to a number of such factors. These included the fear of persecution, hesitation of repudiating his religious beliefs, the fear of loneliness as he isolated himself more and more from the accepted scientific theories and as he entered a field of inquiry into which not many could follow him. Thus both personal and societal pressures were obstacles to his making an essential conceptual transformation into the new system of knowledge.

These examples show how much and how deeply the collectively shared and the implicitly adopted presuppositions of scientific theories are engraved in the researcher's thinking, in particular at the beginning of his scientific journey. Researchers can reject or transform their presuppositions into new ideas only with a considerable effort and only if the weight of argument and/or of evidence becomes irrepressible.

Social psychology, like other sciences, has its deep-rooted presuppositions that are difficult to alter. Among them, the presuppositions of the concepts of stability and change pose particular problems for the theory of social knowledge in social psychology.

2 Stability as the circle of perfection

2.1 Stability and change

In various spheres of life, tendencies towards change and stability are often experienced as a conflict. Let us think of political revolutions. Revolutions, by definition, require renunciation of the past and yet the masters of revolutions latch on to many old values that help them to secure their newly attained power. For example, social interactions and habits of the mind are deeply embedded in culture and they are highly resistant to change. They are part of inter-connected systems of communication, songs, myths, collective memories and traditions.

To illustrate, like other great political revolutions, the Soviet Revolution of 1917 claimed to have broken with the past and to have introduced a new order. Writing about the icon and axe and about the irony that these symbols produced in Russian history, Billington (1966) illustrated how Russia, after the Revolution of 1917, continued to be ruled by Byzantine rituals, but without Byzantine beauty and piety. The revolution disposed of the czar, but rituals based on worshipping and bowing to the tyrant remained unchanged. In a similar manner, Lotman (1990, p. 138) recalls the feudal practices of Ivan the Terrible, who used to execute not only disfavoured boyars but also their families, servants and peasants from his villages. As it is well known, the idea that family is collectively responsible for the actions of its members was maintained by the Soviet regime and even expanded, after the Second World War, to all countries under the Soviet rule.

More recently, in the post-communist countries of Europe, the political and economic revolutions did not necessarily bring about a social psychological revolution. For example, Klicperová *et al.* (1997), describe a 'totalitarian syndrome' in the minds and activities of the general public produced during the previous regime. It is characterised by patterns of

attitudes and behaviours developed in order to adapt to life under totalitarian conditions. These include learned helplessness, specific manifestations of immorality and incivility and lack of civic culture. Such patterns of attitude and behaviour endanger the new state not from outside but from inside and put at risk the democratic awareness of citizens.

We can suppose that 'change' and 'stability' in everyday language are empty terms or without any reference to realities unless we fill them with specific human affairs and with concrete phenomena, which provide them with contents, meanings and passions. We may desire and hope for change just as we may struggle to preserve tradition. We may fear change just as we may hate our existing situation from which we cannot escape. Generally speaking, however, we experience and communicate everything in life *as* change, whether it is saturated with tempestuous and passionate events or gradual, almost imperceptible, transformations.

Language has an immense number of words to express change, movement and passage from one state of affairs to another. Change-words distinguish between fast and slow transformations, intentional or purposeless activities, revolutions and evolutions, and qualities and quantities of adjustments. There are words for ebb and flow, wax and wane and flux and reflux. Yet in order to understand these distinctions, which are built into meanings of change-words, equally, we need to experience and understand non-change. As with pairs of words like life and death, war and peace, fear and hope, limited and unlimited, beginning and end, so with change and stability, we understand the meaning of one word in reference to the other within the pair of opposites.

Not only revolutions, but also our daily routines are experienced as a tension between stability and change when we alter our habits, form and dissolve relationships, choose constancy and disguise old loyalties. Our ability to understand and evaluate events in terms of change and stability is an essential aspect of *commonly shared social knowledge*. Without analysing this term, 'social knowledge' can refer to all kinds of knowing in our everyday life, like common sense, formation and transformation of concepts and social representations, 'know-how' skills, managing interpersonal interaction and relations, among others. Social knowledge is *knowledge in communication* and *knowledge in action*. There can be no social knowledge unless formed, maintained, diffused and transformed within society, either between individuals or between individuals and groups, subgroups and cultures. Social knowledge is about the dynamics of stability and change.

If social knowledge is concerned with creating, understanding and evaluating change and stability, one can expect that the concepts of change and stability will be fundamentally important in the theory of social

knowledge. Yet we are badly mistaken if we hold such a supposition. When examining *theories of knowledge* in general and *theories of social knowledge* in particular, the first thing we cannot help noticing is the considerable asymmetry between these two concepts in terms of their theoretical status.

2.2 Stability as a reference point in theories of social knowledge

Casual inspection of psychological theories of social knowledge indicates that in general, they foreground *stability* as a theoretical concept. However, *change* is not treated in the same manner. It is worth considering some examples in social psychology. Theories of social perception are based on the idea that humans, in their desire to control and predict the world in which they live, tend to explain social and natural phenomena in terms of relatively stable attributes (e.g. Heider, 1958; Schutz, 1972). Moscovici (1976b) shows that the studies of social influence have been largely based on congruence and movement towards conformity. Thus these studies have emphasised the tendency for non-change in both thinking and action. Similarly, theories of attitudes and attitude change (e.g. Abelson *et al.*, 1968) highlight people's need for consistency. Conversation analysis, too, searches above all for regularities, rules and principles that remain stable across historical changes in language and across communication genres (e.g. Atkinson and Heritage, 1984).

It is not that change as a social and psychological phenomenon has been ignored. One can find an enormous number of books containing the words 'social change' in their titles. There has been a multitude of research findings concerning the causes of societal change, the analyses of factors leading to social change, the consequences of social change and so on. If this is so, what is the problem, if there is one?

The fundamental issue here is that the criterion for the study of change is the state of stability. It is stability that is presupposed and the questions posed in research concern the causes or reasons for disturbances of stability. For example, social research is often concerned with the question as to why people *change* their attitudes rather than why they *retain* their attitudes. Or, why people *change* their behaviour rather than why they remain *stable* in their habits and activities. Although we have numerous theories about stable universals, their nature, content and form, *we do not have theories of social knowledge based on the concept of change*.

One would think that there must be good grounds on which to evade the concept of change in theories of social knowledge. But what are they? Let us look for an answer in the history of philosophy.

The concept of knowledge in European philosophy and science has been determined by the historically and culturally established search for

stability and certainty. The history of European science in general, and social science in particular shows that in order to study change, *the reference point is stability*. Referring to ancient Greek ontology, Lloyd (1994, p. 96) has pointed out that, when Greek philosophers studied change, they analysed phenomena in such a way that they always described the stable characteristics of substances, which they considered as underlying everything that changed. They believed that proper understanding and knowledge could only be obtained from entities, which are permanent.

This line of thinking has also impregnated modern European philosophy. In the seventeenth century Descartes (1628/1911), in his rules for the direction of the mind, pointed out that science must be based only on certain and evident knowledge. According to this traditional Platonic/Cartesian epistemology, which is now often called 'foundational' (Taylor, 1995b), the objective of the theory of knowledge is the search for truth, certainty, unchangeable universals and indubitable principles, which are to be discovered by the mind of the individual. Descartes' epistemological concern was to find out a reliable method, which would verify valid knowledge based on evidence.

In view of the asymmetry between the concepts of stability and change in social psychological theories of knowledge, we need to ask the following question. What kinds of epistemology underlie the theories of knowledge, which foreground stability? We may assume that these theories are based on epistemologies which, again, foreground the concept of stability. If the phenomena that one purports to cognise are conceived as stable, timeless or universal, it must be that their history and their change are irrelevant to one's understanding. It means that we do not need to be concerned with change. In that case, foundational epistemology and an explanation by *a-historical causes and effects* or by *purposes* must be fully adequate.

2.3 Two questions about the nature of knowing

In order to develop my arguments about dialogicality and social representations, I consider it essential, in this chapter, to reflect on the basic presuppositions of foundational epistemologies, which have shaped theories in cognitive sciences. These presuppositions have been mistakenly transferred into social sciences, and more specifically, into social psychology. Only reflection upon them will enable us to conceive of the alternative, *a dialogical epistemology*, for social psychology.

Questions concerning the nature of knowing have undergone surprisingly little variation over the centuries. Although a slight exaggeration, we could claim that, essentially, over the aeons of time, such questions and answers have remained unchanged. Among them, two questions and the

answers appear to be particularly significant. First, what aspects of reality can provide humans with knowledge? Second, how do humans represent the world? These basic philosophical questions and the answers to them perhaps would not be of much interest to psychology, if they were concerns only of philosophers. However, they are also theoretical questions asked by psychologists and they have become imprinted in the theories of social knowledge. Consequently, these questions have also been conceived in psychology as empirical ones and they have been implanted into research methods and the analyses of data.

Let us consider the first question, what can count as knowledge. Scholars from Plato to Descartes and Chomsky have provided similar answers. Only knowledge of *eternal universals* can count as true knowledge. Plato postulated the theory of eternal or absolute ideas or Forms, which exist independently of anything that we can perceive through the senses or judge with reason. Particular organisms, like people or animals, or objects like artefacts, or specific attributes like ugly or beautiful, are all perishable. In contrast, the world of Ideas, like the Absolute Man, the Absolute Beauty, the Absolute Justice, Triangularity, Redness or the Absolute Good exist as immanent principles and constitute the objective world, which partake in worldly phenomena to various degrees. The human soul is immortal and already has knowledge of Forms well before the birth of the person in whom it will reside. During life, through a process of learning and acquiring experience, the soul just recollects what it already knows.

For Descartes, the human soul is born with the *innate seeds of knowledge*, and these, as Descartes claims, are clear and distinct ideas. Clear and distinct ideas are universals. They are dispositions, which are like the fire that lies hidden in a flint. They are revealed through reasoning and imagination. For example, the ideas of God, Triangle, Body and so on represent true and immutable essences, which are 'implanted by nature in human mind' (Descartes, 1628/1911, p. 12). This Cartesian point of view enabled Fodor (2000) to emphasise that Chomsky's position of *epistemological nativism* is practically indistinguishable from the one defended by rationalists for centuries – and that his ideas of innateness would be intelligible to Plato.[1] Throughout his extensive work Chomsky has always explicitly acknowledged his debt to Descartes.

Modern psychology has been involved, for decades, in disputes concerning the existence of universals and their natures. The most prominent representatives of cognitive psychology argue that all the most plausible theories of cognition are based on the assumption of innateness of concepts (e.g. Fodor, 1981). The notion of universal, however, has been used very liberally and conveys different meanings to different researchers.

There are weak and strong universals; process and outcome universals; innate and environmental universals; and even universals undergoing change (Marková, 1991).

Considering the second question, the one about representations, we find that the seed of the notion of *representation* already germinates in the ancient Greek idea of *mimesis*, which became particularly important in Plato's philosophy. While, for Plato, the real and objective world was the world of Forms, which were unchanging, universal and incorporeal, perceptible objects of the phenomenal world only resembled or imitated the world of Forms. Plato used the notion of 'mimesis' or 'participation' to refer to particular objects that imitated Forms and were, therefore, inferior to them. For Aristotle, knowing could not be dispensed without images or representations, but in contrast to Plato, Aristotle did not consider mimesis inferior. In the modern studies of cognition, from Descartes through to Chomsky and on until today, a *mental representation* has become an essential concept of all cognitive theories of the mind.

One of the fundamental confusions in contemporary social psychology concerns confounding mental representations and Moscovici's social representations. Mental representations are totally irrelevant to the theme of this book. However, in order to dispel the confusion between mental representations of foundational epistemologies and social representations of dialogical epistemology, I must consider, in this chapter, the main characteristics of mental representations. Then, later the paradigmatic differences between these two, quite incompatible concepts will become much clearer.

2.4 Mental representation

The central interest of foundational epistemologies is to develop a general theory of mental representation. The main epistemological assumption behind this goal is that in order to know something, you need to represent what is outside the mind, to understand the manner in which the mind can construct representations and to express them in language. Thus, 'mental representation' is a term that, in whatever way it is used in the study of the mind, under any circumstances, it cannot be by-passed.

2.4.1 To make correct mental representations, you must use correct words

It was René Descartes and John Locke in the seventeenth century who laid down many of the contemporary ideas about mental representations. Specifically, Locke suggested that there is a tight association between language and the theory of knowledge. In his *Essay Concerning Human Understanding* (1690/1975) he raised questions about the nature of

reality and its relation to names, words, signs and language in general. Words can both hinder and facilitate knowledge. They can be abused in many different ways thus preventing the perfection of knowledge. In fact, the wrong use of words, is, according to Locke one of the greatest reasons for the imperfection of knowledge. Among the most significant abuses of words is 'taking them for Things' (1690/1975, book III, Chapter X, paragraph 14) *rather than treating them as representations of things*. This particular abuse is due, according to Locke, to the narrowness of thinking, which restricts one's thoughts to a particular doctrine. In addition, imperfection of knowledge could be due to inconstancy in the use of words, to wrong interpretation, application of old words to new and unusual phenomena, rhetorical use of words, willful faults and neglects and the use of words without having clear and distinct ideas, among many other faults. In order to remedy such defects of speech, words should not be used without precise meanings.

Locke's idea about mental representations as signs of reality restricted itself to the question of truth and falsity of representations. This means that there are correct or incorrect ways in which we represent reality and any imperfection of representations would be due to the use of words without having clear and distinct ideas. In other words, to make correct representations means to use ideas and words correctly. Thus, in Locke's theory of representation we can already find germs of the main characteristics of mental representations as currently studied in cognitive science. There are true and false representations; representations are mirrors or signs of nature; they are formalisations or symbolic structures; they are processes and rules in the brain.

2.4.2 Mental representations are properties of mechanisms Today, cognitive scientists like Chomsky and Fodor presuppose that the mind is a mechanism or a computer. Chomsky (1980, p. 5) explicitly points out that for him, terms such as 'mind', 'mental representation' or 'mental computation' refer to abstract characteristics 'of the properties of certain physical mechanisms' although these mechanisms remain as yet quite unknown.

However, mechanisms are objects without life history or they are objects in which we can ignore historical changes for the purpose of their study. Mechanisms are decomposable and re-combinable into segments or independent modules and the operations of these segments can be explained in terms of causes and effects or of purposes. Their operations are rule- or algorithm-governed. Mechanisms are self-contained communicational solipsists. Their interaction with the environment is limited to the effect of external forces that they may impose on one another.

Throughout the whole of his career Chomsky likens organs of the body, e.g. vision and its operation in specific cells in the visual cortex, to the operations of organs in the mind/brain. Concerning the confusion in psychology and cognitive science, between the terms 'brain' and 'mind', I could hardly find a more appropriate example of the difference between the two than the one quoted by Rommetveit (1998) that comes from the Hacker (1990) essay entitled 'Chomsky's problems'. There Hacker states: 'What may grow in the brain, e.g. a tumour, cannot grow in the mind, and what may grow in the mind, e.g. suspicion, cannot grow in the brain' (Hacker, 1990, p. 135).

Other cognitive theorists define the mind very abstractly, as a combinatorial space of possible states instantiated in the brain (Jackendoff, 1992). In this conception, mental states, physical and chemical states and computational states are all identical. The brain is a computer and mental states are the software of this computer.

Epistemologically speaking, the mechanistic conception of the mind/brain is displayed at least in two different ways. The first concerns pleading for the causal explanations of mental phenomena requiring an a-historical and synchronic approach. Traditional epistemologies in European philosophy like those of Plato, Descartes and Chomsky are all based on concepts of universals, certainty, permanent knowledge, immutability and a mental representation. These foundational epistemologies in order to understand and explain natural and social phenomena use *a-historical explanations* (Fodor, 2000, p. 82). Fodor (2000, p. 82) argues that sciences are correct in using a-historical explanations by viewing mechanisms in terms of their synchronic, i.e. existing operations, rather than in terms of their diachronic, i.e. historically contemplated operations. To that extent, 'why couldn't a likewise ahistoric theory of mind/brain supervenience count as explaining how mentality belongs to the causal order?' Indeed, if psychology is concerned with evolution of the phenomena it studies, then it will be '*very* [Fodor's emphasis] unlike lots of other sciences; because in lots of other sciences, it's perfectly OK-in fact, it's the usual case- . . . to be largely or solely ahistorical'. Just like physical sciences provide an aerodynamic explanation of a bird's flight without referring to evolution, so functions of any mind/brain organ should be similarly explained a-historically.

Such arguments should not astonish us because, as already implied, they have been part of European philosophy and psychology for centuries. However, when old ideas in 'new' guises are claimed to be revolutionary turns and when Copernican revolutions entice the psychologist's imagination with promises of the change of paradigm, it may be difficult to reflect on the possibility that the latest fads might be profoundly rooted in history. We may be deceiving ourselves by ignoring this possibility.

The second mechanistic aspect of the mind/brain conception concerns the assumption that the mind/brain consists of a set of independent compartments, which each contain different parts of a machine. While Chomsky emphasises 'mental organs' of the mind, Fodor extends this idea by proposing his conception of 'innate modules'. In both cases, the mind/brain is viewed as containing specialised computational devices; each is designed to treat a particular form of information or to translate information from one specific form into another. Subdividing the mind/brain into specific organs or modules is widely accepted in cognitive and computational sciences.

However, the mind/brain conception has also been extended to social psychology. Jackendoff (1992, p. 17) believes that no matter what takes place in the study of mental representations, the generally adopted view of the mind/brain is fairly robust. He ventures to apply the individualistic computational model into the area of social concepts, by developing an argument for a module or a group of modules called *social cognition* (1992, pp. 67–81). He argues on this basis that 'social organisation' and 'culture' involve the interactions of individuals with each other and that *'each individual's participation in the culture must be supported by cognitive organisation in the individual's mind'* (p. 76, Jackendoff's emphasis). This serves as an argument for the universality of social cognition in the human species and consequently, the essential equality of individuals and social groups in this domain. Jackendoff believes that the causal access to external social relations is obtained through the same channels as in ordinary perception, 'the good old sense organs' (1992, p. 166). However, Jackendoff's ambition goes much further in his attempt to extend the models of individual cognition to social cognition. Specifically, he turns his attention to the possibility of formalisation of social cognition. As he points out, a number of questions still await further research, like the following: how would social concepts look if considered to be formal entities? In what combinatorial space could they be embedded? How could this space be related to the perception of concrete actions?

2.4.3 What do mental representations represent? Today, the study of mental representations is so vast and diverse with so many contradictory assumptions built into different theories that one can hardly orientate oneself in this complex pattern. Cummins (1996) has summarised the different kinds of questions studied in psychology, cognitive science and philosophy, categorising them under four headings. First, there are questions about *contents* represented in the mind and about the kind of information that is represented in the mind when it is cognising. Contents, however, do not refer to concrete events and to events experienced by the individual but to formalised propositions, concepts, categories or classifications.

Such formalised contents of the mind/brain are assumed to be more or less stable in the mind/brain. Second, there are questions and theories about *forms*, which a mental representation takes. For example, mental representations can take the form of images, symbolic structures and activation vectors. Different forms of representation may be appropriate for different kinds of task. Third, there are questions about the *implementation* of representational schemes in the mind/brain. For example, do they have neural, computational or other implementation? And finally, there are problems of definitions. These require clarification as to what it means to say *that something represents something else*. This issue itself presumably incorporates yet another question. Since mental representations are generally classified as true or false, how do we know when we make errors in representing? As Cummins points out, these four main psychological and philosophical questions impose constraints on one another.

Necessarily, by virtue of such diversities, today there are a number of representational theories of cognition, each claiming to provide a resolution to the above problems.

Since mental representations are conceived as symbols, images, pictures and formalisations, sooner or later, theories of representation become confronted with another challenge: with the relationship between mental representations and reality. This question, again, is a very old one and has been studied since the beginning of the European philosophy. It has produced a variety of answers, ranging from realism to scepticism. However, its current versions in the most important quarters of cognitive science seem to be losing any grip on reality by offering more and more extreme solipsistic positions. In these versions, by being excluded from the study, reality is deprived of any theoretical significance and, to that extent, of any human significance. For instance, Fodor's argument of methodological solipsism is based on the idea that mental states and processes are computations and computational processes to acquire environmental information. However, one cannot really say anything about the nature of reality. If mental processes have a formal character, which Fodor believes to be the case, those processes have access to the formal properties of such representations of the environment only to the extent sensory faculties can provide them. This in turn means that these formal processes have no access to semantic properties of such representations, which include properties such as being true, false, having referents or indeed having the property of being representations of the environment (Fodor, 1980). In other words, all that psychology can do is to account for the mind's mental representations purely in terms of a syntactic machine and be concerned with the internal workings of its cognitive mechanisms. The mind/brain has a built-in innate formalised language,

which can operate both as a medium of representation and a medium of computation. Mental representations do not tell us anything about reality.

In the end, it appears that the notion of a mental representation may totally lose its ground. Jackendoff (1992) expresses his own position concerning mental representation with some hesitation:

> A representation is not necessarily *about* anything; if you like, it does not strictly speaking *represents* anything . . . The point of this notion of representation is that it can in principle be instantiated in a purely combinatorial device like the brain as I understand it, without resort to any miraculous biological powers of intentionality such as Searle (1980) wishes to ascribe to the brain (Jackendoff, 1992, p. 162).

Having disposed of reality as an object of knowledge, theories of the mind/brain have reinforced their solipsistic presuppositions concerning the specificity of independent modules, of formal computations, of synchronic cause-effect structures or of teleological characteristics of mental representations. At the same time, doubts seem to be creeping in about what the cognitive science has achieved. While praising the computational theory of the mind as far the best and a strikingly elegant theory of cognition, Fodor (2000) acknowledges that this theory accounts for no more than a little part of truth. There are things that are right and wrong about the idea that the mind is a computer and that the structure of the mind is largely modular. And he concludes:

> In fact, what our cognitive science has done so far is mostly to throw some light on how much dark there is. So far, what our cognitive science has found out about the mind is mostly that we don't know how it works (Fodor, 2000, p. 100).

3 Breaking the perfect circle of stability

3.1 What can replace foundational epistemologies?

Opponents of foundational epistemologies, cognitivism and the computational modelling of mind/brain, hold just as diverse views as do those whom they criticise. However, there is one common point in their criticism: both the term 'epistemology' and 'representation' have lost scholarly credibility.

It has been suggested by many that the term 'epistemology' should be replaced by other terms evoking different kinds of association than those of mechanism and mental representation. According to Rorty (1980, p. 325) hermeneutics is 'what we get when we are no longer epistemological'. For Taylor, epistemology entails above all an attempt to

explain the knowing activity in mechanistic terms and by means of 'the whole representational construal of knowledge' (Taylor, 1995b, p. 8). In 'Overcoming epistemology', Taylor (1995a, vii) talks about the Hydra epistemology which, in its attempt to get at the bottom of knowledge without drawing on our life-experience, has become a 'terrible and fateful illusion'. Borrowing Bakhtinian terminology, he replaces this monological Platonic/Cartesian perspective with a dialogical point of view, according to which an integrated agent is engaged in a dialogue with her social environment. Like Bakhtin (cf. Chapter 3 and 4) Taylor (1995d, pp. 173–4), rather than using the term 'knowledge', refers to 'social understanding' as being fundamentally reflexive. 'Reflexivity' here does not mean mirroring of nature but a profoundly social and interactional capacity of humans to engage in a dialogically based construction of knowledge. Having conceived representations only in their foundational sense (rather than in a dialogical sense, see later in this book), Taylor finds Bourdieu's 'habitus' to be one of the key terms that reflects this dialogical perspective. In contrast, mental representations of the foundational epistemology, whether 'outside' or 'within', are monological and disembodied.

Putnam's (1988) argument against mental representations, again, is based on epistemological grounds. He shows that if mental representations are in the mind, then certain logical conditions must be fulfilled to satisfy the relations between words and mental representations. While he does not deny in principle the existence of phenomena like mental representations, he argues that none of the logical conditions, on which the notion of mental representation is based, are fulfilled. First, each word is not necessarily associated in the mind of the speaker with a certain mental representation. Second, he disproves the claim that two words are synonymous only if they are associated with the same mental representation by different speakers using these words. Finally, the mental representation does not determine what the word refers to. Instead, Putnam (1988) argues that language is a co-operative activity of a 'linguistic division of labour'. A reference is socially fixed and it is not determined by conditions in individual mind/brains.

In social psychology Rommetveit (1974, 1990, 1991) vehemently argues against mechanistic and representational models in various areas of human cognition and communication. He shows that even the study of most fundamental concepts in social psychology, like that of interaction, is still dominated by a mechanistic epistemology. Most conceptions of interaction are based on the presupposition that two or more independent entities, e.g. individuals, groups, etc. or variables, for various reasons become mutually dependent and start affecting one another. Each takes a turn in order to exchange ideas. But meanings, implied by terms like 'exchange'

or 'turn-taking', are highly misleading. They evoke an image of *external*, rather than *internal*, relations between the interacting participants. If entities, e.g. objects or participants in conversation, are conceived to be in *external relations*, this unavoidably means that each of them is an independent entity and that their relations can be modelled on mathematical or formal logical functions. For example, if a conversational partner describes someone as 'friendly' and the other participant describes the same person as 'intelligent', unless either of these claims is opposed by either of the participants, the truth value of these two claims, in terms of formal logic, becomes 'he is friendly and intelligent'. In other words, elementary conversational contributions can be mechanistically composed and decomposed into their parts by connectives like 'and', 'not', 'but', and so on. Such connectives bind elementary propositions externally as parts of a mechanism. Similarly, Rommetveit argues, 'turn-taking' implies that two (or more) individuals can both make a contribution to the dialogue, with each contribution being the sole responsibility of a single participant. Likewise, 'exchange' evokes an image of two or more independent give-and-take sequences, with each participant being responsible for either 'give' or 'take'.

In contrast to the position of 'exchange', Rommetveit (1974) argues that both participants jointly generate all dialogical and interactional contributions. Human cognition and communication is dual, always orientated both towards the speaker and the listener, who adopt simultaneously the roles of active participants. Self and others always dyadically share social realities because the human mind is dialogically constituted. In communication the participants reciprocally adjust their perspectives by drawing the focus of attention to what is being talked about from the position of temporal 'atunement to the atunement of the other' (Rommetveit, 1992, p. 23).

The main attack on the foundational epistemology comes from various brands of 'construction', 'social construction', 'constructivism' and 'social constructionism'. 'Construction', as an approach, is not new and can be found throughout the whole hundred years of the history of psychology, from Baldwin, Vygotsky, Piaget, Karl Bühler and Peirce, to more recent scholarly approaches, like the social construction of knowledge by Berger and Luckmann (1966).

Among constructivists, Arbib and Hesse (1986) challenge the positivist or verificationist foundational epistemology by drawing attention to a tradition, according to which reality is constructed rather than given. In their attempt to develop a constructivist information-processing theory of the mind, referring to Marx, Durkheim and Weber these authors describe their constructivist model as a social one. In their model, the

unit of representation is a 'schema' and it consists of both a synchronic and a diachronic aspect of knowledge. While the former aspect refers to the socially cumulated and schematic knowledge, which is mutually and culturally shared, the latter refers to a newly acquired knowledge of the individual. Avoiding the term 'epistemology', Arbib and Hesse consider cognitive science to be a potential basis for their new theory of 'the construction of knowledge' and the schema-theory a new framework for this cognitively and schema-based holistic system.

However, it is the most recent 'revolutionary turn' that distinguishes itself from earlier constructivisms of Baldwin, Vygotsky, Luckman and Berger. It is *critique* that is the major goal of the latest wave of constructivism (for a review of this approach see Danziger, 1997). There is no unified ontology and epistemology underlying these 'postmodernist', as they call themselves, versions of social construction. On the contrary, it could be claimed that as new interpretations of social construction emerge and further diversify, social psychology becomes more and more disintegrated. 'Postmodernism' presents itself as an essential critique not only of the foundationalist psychology, but also of all psychology that is not 'postmodern'. It emphasises deconstruction, dispersion and fragmentation of concepts, of theories and social phenomena themselves.

Paradoxically, in its most extreme versions, the 'postmodern' social constructionism is ontologically and epistemologically close to the most extreme versions of mental representation theories in the cognitive and computational science. Both individual solipsism and social solipsism reject the possibility of knowing reality. Just like Fodor and Jackendoff, who reject reality as something, about which nothing can be said, so Gergen (1994) is mute to ontology and adopts a profound relativism in epistemology, destabilising all kinds of knowledge. All knowledge is relativist. There is nowhere to go either from the individual solipsism of cognitivists or from the social solipsism of postmodernists. In both approaches reality loses 'reality' and becomes unreal.

Despite the range and profundity of their thinking, the majority of these scholarly critiques did not propose a viable alternative to foundational epistemologies. They put their fingers on the main characteristics of foundational epistemologies, such as their mechanistic conception of knowledge, static and formalistic nature of mental representations and the static theory of the mind. They argue that human agency is a historical agency, that the mind is dialogical and that the individual and social must both feature in the theory of knowledge. Yet, we are still lacking a theory of social knowledge that would bring the dynamics and dialogicality of the mind to a theoretical fruition.

The concept of change remains an epistemological problem.

3.2 Change: an epistemological problem

Social and human scientists have been for a long time well aware that change, temporality and historicity play essential roles in human and social affairs. For example, Gergen (1973), in his influential paper on social psychology as a history maintains that phenomena studied by social psychologists are historical phenomena. He is critical of contemporary social psychology because it examines social phenomena as if they were static and not historically embedded. Social psychology should not model itself on natural sciences like physics and chemistry, which try to explain objects of their study in terms of causes and effects. Humans are agents who act with intentions and therefore they are different in nature from physical phenomena. They do not act in identical, repeatable and predictable ways, as do physical phenomena.

However, if human agency is a historical agency, what should be the characteristics of a historical explanation? Surely, such characteristics would involve more than a description of successive events in which the human agent is involved. However, Gergen does not pose this question. His analysis does not concern the fundamental problem as to what kind of theory of knowledge is required in order to provide historical explanations of social phenomena. Therefore, we need to go one step further than Gergen. Not only should we claim that the human agency is a historical agency. In addition, we must propose a theory of social knowledge that will provide *a historical explanation* of human agency.

First, since the concept of stability has dominated theories of knowledge for centuries, we need to break the perfect circle of stability. Yet, our intellectual heritage, based on the concept of stability as the sole starting point of inquiry, is deeply rooted in European thinking. In her attempt to break the circle of perfection of stability a researcher might think that she has accomplished 'the revolutionary turn' through a fundamental criticism and through denuding all the presuppositions on which the Platonic/Cartesian paradigm rests. Yet she may totally deceive herself in thinking that she is presenting a genuine alternative. Without even being aware of it, there is a danger. Our concepts, theories and scientific methods may become, in no time, stealthily filled once again with presuppositions of foundational epistemologies. Let us reflect on some examples of the difficulty that the concept of change has presented for other researchers.

3.2.1 Saussure's problem Since the eighteenth century the idea of stability and change in knowledge has been associated with the concept of relatively stable socially and culturally shared traditions of thinking and

language on the one hand and with that of more variable individual agency in thinking and language on the other. The problem that has been the crux of the matter was how to conceptualise the interdependence between the relatively stable and variable characteristics of thought and language. The attempts to conceptualise this double-sided, relatively stable and at the same time variable, nature of the human mind ran into problems.

The founder of semiotics, Ferdinand Saussure (1857–1913), conceived of language as a relatively stable social phenomenon, which changes through the speech of individuals. His monumental work in linguistics exemplifies, more than any other work, the theoretical problem of studying *change* in social phenomena. He viewed language as a social fact. Speech, in contrast, according to Saussure, was an individual act. How can *change* be scientifically studied in linguistics, which is concerned with such a complex phenomenon that is both social and individual, both relatively static and dynamic, both passively adopted and reflectively created?

For Saussure it was a general semiotic fact that continuity over time is bound up with changes in time. He emphasised that 'This question of the necessity of change deserves further consideration, for not enough light has been thrown on it' (Saussure, 1910–11/1993, p. 100). He pursued the question of the static and the dynamic linguistics assiduously, pointing out that the rudiments of any change in a language are brought in only through speech and that every kind of change is started by a certain number of individuals (Saussure, 1910–1911/1993, p. 118). In order to consider the gravity of the problem for Saussure of change in language, let us consider the quotation from his work:

> I now come to the duality of the object which features in the title of this chapter. Linguistics comes to its second crossroads. (The first crossroads: should we study the language or speech?) Should we study synchronic linguistic facts or diachronic facts [?] (In fact, these are two disciplines.) You cannot mix the two approaches. This is the place to add, since at the first crossroads there was a choice between the language and speech, that everything diachronic <in a language> is born in speech. The rudiments of any change in a language are brought in only through speech . . . They will only become linguistic facts when they have come to be accepted by the collectivity. As long as they remain in speech, they do not count (speech being individual). When the change becomes linguistic, we study it.

But changes always begin with facts of speech (Saussure, 1910–11/1993, p. 118). After giving many examples of changes in language, he makes a decision:

> On reaching the bifurcation <static linguistics and dynamic linguistics>, I choose to pursue *static linguistics* (1910–11/1993, p. 125).

Saussure's critics, however, rarely recognise his theoretical problem of conceptualising change. While he admitted that he did not know how to study facts in language (synchrony) and changes in speech (diachrony) simultaneously, he has been criticised, often light-heartedly, for having studied language only *synchronically,* i.e. as a stable system, rather than *diachronically*, i.e. in its change. For Saussure, these two issues belonged to two different scholarly disciplines, which could not be mixed. And since he thought that they could not be mixed he chose to pursue static linguistics.

And thus, according to Saussure, one can only capture changes in language by studying the sequences of stable, i.e. synchronic states – something like a succession of stable pictures which, if projected sufficiently quickly, would give an impression of a moving film (for more details, cf. also Chapter 3).

While Saussure was well aware of the problem of change that he could not solve, many contemporary psychologists are struggling with the same problem but, apparently, without Saussure's insight into their conceptual difficulty. Valsiner and his colleagues (e.g. Valsiner, 1989, 1998; Dodds, Lawrence and Valsiner, 1997; Valsiner and Lawrence, 1996) have brought this general problem to the open. They have discussed the difficulty, in psychological theories, of conceptualising interdependencies with respect to the personal and social phenomena. These authors argue that, although the human individual has both personal and socio/cultural attributes which should be conceived together, it is common in psychological theories that one or the other is ontologically denied.

Concerning the socio/cultural accounts of personal development, the main problem that arises is that they tend to split the individual from the social. As Dodds, Lawrence and Valsiner (1997, p. 484) maintain, 'their attempted resolutions focus on the constitution of the personal within the social through dialogue, discourse, fusion, joint or mutual activity, narrative or voice'. Such accounts, however, the authors argue, have difficulty in explaining the interdependence between the personal and the social, because they conceive them as primarily, i.e. ontologically, separate. This means that the individual is primarily conceived as one unit and society as another unit. Consequently, these theories have difficulty in explaining how the individual and society can interact and how they maintain their interdependence.

3.2.2 Is 'equilibration' the answer to the problem of change? While Ferdinand Saussure was concerned with change in language, Jean Piaget was concerned with developmental changes in thinking. Saussure did assume that the change in language has something to do with the interdependence

between the relatively stable, social aspect of language and the dynamic, individual aspect of speech, but he did not know how to address this problem. In contrast, Piaget's theory of equilibration takes into consideration both stability and change in the development of a child's thinking. Despite that, however, Piaget's theory does not solve the problem of change.

Piaget posed the question of the development of thinking in a different way to Saussure with respect to the development of language. While for Saussure language was above all a social phenomenon, for Piaget, thinking started in the mind of the individual.

Like all great scholars, Piaget developed and reformulated his theory throughout his whole life. Therefore, one might be mistaken in focusing rigidly on a specific aspect of his theory that was postulated at a certain period of his life and ignoring the fact that he changed or developed his views on the subject as time went on. Nevertheless, we are fairly safe in drawing attention to the following issues. According to Piaget, the individual is engaged in the dialectical relationship with his environment. Moreover, Piaget acknowledged the historical and cultural effects of society on the individual's process of thinking. However, as Chapman (1992) points out, Piaget did not present any account as to how thinking could be affected by social factors because he was not concerned with these questions. Instead, his primary aims were to explain 'the *generativity of intelligence* and the *progressive increase of rigor observed in intellectual development*' (Chapman, 1992, p. 46). In other words, in contrast to Saussure, Piaget did not pose for himself the epistemological question of the interdependence between the social and the individual nature of thinking.

Piaget's theory of a child's thinking is based on the postulated developmental stages that become progressively more complex with the child's age. The less complex stages form the necessary ground for the next ones in the hierarchy. Within each stage Piaget explains stability and change as an equilibration of cognitive structures. Equilibration is a process of reorganisation of the existing cognitive structures, which occurs when new contents and the newly formed knowledge are integrated. He views cognition as an open system interacting with the environment through assimilation and accommodation, which provides the necessary conditions for equilibrium (Piaget, 1985, p. 170). Piaget insists that his cognitive equilibria are totally different in nature from equilibria in mechanistic physics. Equally, they are also very different from thermodynamic equilibria in physical sciences because cognitive equilibria, in contrast to physical equilibria, are open systems: they assimilate environment into their structures.

When cognitive structures within a given developmental stage can no longer cope with the environmental pressures coming from new

knowledge and new contents, the whole structure transforms to the next level. However, as many critics have pointed out, equilibration, a central concept of the dynamics in Piaget's theory, refers only to activities within each stage. Piaget does not explain how any given stage changes into the next one in the hierarchy. Beilin (1992) comments that Piaget agreed with this criticism on several occasions.

Interestingly, Piaget himself viewed similarity between his theory of stages and Saussure's synchronic analysis of language and he referred several times to some sort of dynamic equilibrium when he spoke about Saussure's system. Piaget's concept of equilibrium refers to a state of relative stability during which the system can accommodate new structures and contents without any conflict that would disturb the existing level of development. His theory of equilibration is a sophisticated device which involves actions of the individual's cognition that operate within the boundaries of the existing stage of the development, just like the synchronic system of language allows for novelty within its limits.

3.2.3 'History' with a goal If foundational epistemologies argue for an a-historical explanation, let us turn to historically based explanations. For example, teleological and functional explanations consider phenomena in their development and see them as purposeful. Teleological and functional explanations are based on the idea that organisms, throughout their histories and development, strive towards a pre-determined goal. Piaget's theory of cognitive development can serve as an illustration of this point.

The concept of the development of child's logic in Piaget's theory is based on hierarchically postulated stages, which are *universalistic*. All children are expected to go through the same stages, as the child's cognition unfolds, progressing from illogical to more logical thinking. As Piaget (1970, p. 35) says, if we study children all over the world, 'in Geneva, Paris, New York or Moscow, in the mountains of Iran or the heart of Africa, or on an island in the Pacific' we find similar ways in which children conduct social exchanges. We observe them between children as well as between children and adults and they take place 'regardless of the context of information handed down through education'. By the age of approximately 12 the child's thinking reaches the stage of formal operations and therefore, of logical thinking, where development arrives at its peak.

Later in his life Piaget placed more emphasis on the constructivist possibilities of the mind and he focused more on the mind as an open system with further possibilities of cognitive development. However, while he emphasised the dialectic of forces between the individual and

environment, his theory of stages, which is based on the intellectual development of the individual and which has a universalistic orientation, did not allow him to develop this dialectic any further. Universalistic theories never pay sufficient attention to the world in which organisms live and Piaget's theory of stages is not an exception. Despite the fact that Piagetian scholars emphasise Piaget's constructivism, his theory has a predetermined goal: to achieve the operational stage.

Such teleological or functional 'histories' with a predetermined goal are based on the notion of continuity in which each stage is a firm preparation for the next one. However, living organisms have their personal histories. Life and its history, moreover, imply a degree of unpredictability and this contradicts the point of view according to which change is predetermined by some final cause, e.g. by achieving the final stage in a predetermined hierarchy.

The ideas of final causes, goal-directed behaviour, means-ends models and teleological explanations in evolution and development are common not only in psychology but also in functionalist approaches in other sciences, like biology and linguistics.

In biological sciences, for example, a teleological explanation became fashionable in the 1940s in the study of voluntary movements of organisms (Rosenblueth *et al.*, 1943). Later, with the development of cybernetics, teleological explanations became widespread during the 1950s and 1960s. The question 'for what purpose?' dominated the anticipatory models in biological evolution. Biologists of that period, e.g. the reputed Soviet scientist Bernstein (1967) argued that the purposeful aspect of organisms and their movement dominates every response of an organism with respect to any motor problem. Motor actions of an individual, whether of an animal or a human being, are attempts to find solutions to specific kinds of problems.

The idea that intelligible human behaviour must be viewed as the pursuit of goals was not only generally accepted but also there were many theories put forward to show how sciences aimed to define these goals.

These theories tried to understand the use of information and the ways information is organised in the organism. It was believed that sciences like embryology, ontogeny and phylogeny, all show purposefulness in their activities. It became commonplace to argue that the developing organisms strive for the maximum of negative entropy and for vital stability. For example, a fish develops fins in order to swim; and birds develop wings in order to fly (for criticism of these functionalist theories see Lewontin, 1990). The teleological explanation was behind any changes in the human brain. Drawing on investigations of fossils, Eccles (1989, pp. 56 and 95) argues that the change in the habitat of hominids from living on trees to

living on the ground required a redesign of their nervous system and was 'a challenge to develop a language of sounds for communication'. Thus, teleological assumptions were also implicit in the explanation of the development of language, the self, and in the emergence of consciousness and self-consciousness.

In linguistics, a teleological explanation was developed and defended by Roman Jakobson in his genetic approach to language. Jakobson's means-end model of language seems to have been inspired by several factors. First, Jakobson objected to the synchronic approach to language by Saussure and to Saussure's idea that changes in language are arbitrary (see Chapter 3). Second, Jakobson was a Hegelian scholar and no doubt was influenced by Hegel's finalistic conception in philosophy. Moreover, he accepted and commended the idea of purposefulness in the work of his linguistic predecessors like Baudouin and Kruszewski as well as in the social philosophy of the Czech social scientist and humanist T.G. Masaryk (Jakobson, 1958/1985, II, p. 416). Third, later in his career, Jakobson was strongly influenced by cybernetics and information theory and by the notions of teleology in these disciplines, which he applied in linguistics.

We can only conclude that histories with a goal are *a-historical histories*: their focus is on the predicted final outcome. Any unpredictable development can take place only within the limits of that predicted outcome. Whether these explanations are suitable for the biological development of an organism, I am not qualified to comment. However, their suitability for the study of the interdependence between the socially shared knowledge and human agency is more than questionable.

In the end we are left with a series of unanswered questions. What is in and through the mind, if not mechanisms and mental representations? If knowledge is both socially and individually generated, how can we conceptualise this interdependence? On what presuppositions can we postulate a theory of social knowledge?

4 The mind in dialogue

In order to attempt to answer these questions, let us take a different tack.

Let us characterise the mind as the capacity of human beings to communicate, to make sense of signs, symbols and meanings in their experience as well as to create new signs, symbols and meanings. Let us further presuppose that this capacity is rooted in history and culture. It is specifically activated in social events that matter to humans and that humans experience as fundamentally important for life and its extension.

Such phenomena that touch and disrupt in some fundamental ways the lives of individuals, groups or societies, are phenomena in communication and in tension. They make social change not only possible, but also unavoidable.

These propositions explain why the theory of social representations is fundamental to developing my arguments. In the last four decades, the theory of social representations has shown its theoretical power in the study of phenomena, which have had fundamental effects on social thinking and communication all over the world.

Thus in order to explain dialogicality of the mind, we need to view the mind as if it was not a mechanism without history but a historically and culturally constituted phenomenon in communication, tension and change. For something to be alive, it must withstand tension and conflict within itself and must have the force to endure the conflict and tension, because antinomies in the mind are the source of all movement and vitality (Hegel, 1830/1873). The analyses of many scholars and humanists concerned with the nature of the human mind as well as the insights of magnificent writers guide us in the same direction. For example, thinking in oppositions or antinomies saturates all of Bakhtin's (see Chapters 3 and 4) writings. Oppositions, through polemics, collisions and quarrelling, all of which are ridden with tension, always leave a loophole, exposing human dialogue to an openness of different interpretations and therefore to novelty. Where there is dialogue, there is human activity. Words want to be heard and similarly, ideas are live events and they want to be understood and answered by others from their positions.

One of the masterpieces of the twentieth century, *The Magic Mountain* of Thomas Mann, swells with oppositions in characters, situations, internal dialogues and also with interpenetration of contraries at different levels of thinking and dialoguing. Antinomies in thinking and dialogue are, for Mann's heroes, the criteria of life and realities:

> We dispute. We quarrel until blood nearly every day, but I confess that oppositions and hostilities of his thoughts become attraction the more I am acquainted with him. I need friction. My fundamental convictions live only to the extent that they have opportunity for fight and I am then confirmed in them.

In the next chapter we turn our attention to oppositions and antinomies of the mind.

NOTE

1. I do not claim that there is no difference with respect to these questions and answers between Plato, Descartes and Chomsky. These scholars lived in different epochs, which prioritised different issues. Theories of knowledge do

not exist in a vacuum but in societies. For example, religion was a different issue for Plato than it was for Descartes and Chomsky. Thus, Plato included God among universals. Descartes did so too, although one is not sure whether Descartes would have done so if there had not been pressure by the Church. Chomsky and Fodor leave God out of universals. One could give other examples of issues affecting the theories of knowledge like a well-developed mechanistic theory of the world, which was part of Descartes', Chomsky's and Fodor's theories but not that of Plato. Darwin's evolutionary theory influenced Chomsky and Fodor but not Plato and Descartes; and so on. Nevertheless, with these concessions, we observe that the reference to the nature of universals, as timeless monuments of knowledge, has undergone little change.