On closed and open systems

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General Systems Theory introduced the terms ‘closed’ and ‘open’ in order to distinguish between non-living and living systems (von Bertalanffy, 1950; 1967).

A system is closed if no material enters or leaves it; it is open if there is import and export and, therefore, change of the components. Living systems are open systems, maintaining themselves in exchange of materials with environment, and in continuous building up and breaking down of their components. (von Bertalanffy, 1950: 23)

Specifically, open systems are characterised by (1) the maintenance of a steady state, despite continuous changes outside the system, i.e., the system is self-regulating; (2) equifinality or the ability to reach a final state or goal from different initial conditions and in different ways (e.g., solving a complex problem) in contrast to closed systems when the final state is determined by the initial conditions; (3) a tendency toward states of greater heterogeneity and complexity, i.e., higher order.

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In the social sciences, General Systems Theory has been applied to the analysis of social systems perhaps most notably by Emery and Trist (1960/1981) and Buckley (1967).

Emery and Trist have specifically applied the concepts of ‘closed’ and ‘open’ systems to the study of industrial enterprises. They note that social theory has tended to think of enterprises in terms of the 'closed' system model in which the system is regarded as being ‘sufficiently independent to allow most of its problems to be analysed with reference to internal structure and without reference to its external environment’ (Emery and Trist, 1981: 323). Merton and Radcliffe-Brown are cited as examples of ‘closed’ system thinkers. In contrast, Emery and Trist offer the alternative conception of the enterprise as an open system in which it is necessary to understand precisely what is involved in an enterprise achieving a steady state. ‘The continued existence of any enterprise presupposes some regular commerce in products or services with other enterprises, institutions and persons in its external social environment’ (ibid: 324). The idea of a steady state requires that these system-environment relationships be ‘regularized’. For this, the enterprise must ‘be able, efficiently, to utilize its material supports and to organize the actions of its human agents in a rational and predictable manner’ (ibid). Now, one can take issue with Emery and Trist’s analysis on several grounds, not the least of which is that its conception of ‘Openness’ is limited to work enterprises whose main goal is to control the environment for the purposes of productive gain; the priority given to the concept of ‘steady state’ in fact suggests that a more accurate definition of the system’s behaviour is to reduce environmental variety or uncertainty in the direction of a ‘quasi-stationary equilibrium’ (ibid). Let us suggest that this ‘quasi-stationary equilibrium’ is really another way of expressing the system's already-laid-down plans and goals which are then imposed upon the ‘environment’; in other words, we have here a form of closed system such as Shackle (1969: 100) has described as positing a ‘fully posed problem requiring only to be solved and possessing an answer which, in some sense, waits to be found and exists before the attempt to find it and independently of that attempt’. In this sense, the formal system of the enterprise is better characterised as a quasi-closed system which remains ‘open’ to the environment on terms which it must lay down beforehand.
One might argue that Emery and Trist are simply victims of the tradition in General Systems Theory which states that systems are *either closed or open* and there is no in-between state. Yet their own analysis swings between the terminology of ‘closure’ (e.g., ‘steady state’, ‘predictable’, etc.) and that of ‘openness’ (e.g., ‘variety’, ‘exchange’, etc.), thus suggesting that the reality of systems behaviour is simultaneously (or perhaps dialectically) closed and open.

The fact that Buckley’s analysis of social systems does not rely on the image of the industrial enterprise enables it to deal with a richer range of issues but the focus is still essentially on the ‘closed/open’ distinction. However, there are clear indications that, despite the tendency to view systems as *either closed or open*, Buckley is aware that social systems may be *more or less* open and one is, therefore, led to infer, may be *more or less* closed *at the same time*.

Buckley (1967: 18) expresses the open system in terms of *process*, which is ‘a complex, multifaceted, fluid interplay of widely varying degrees and intensities of association and disassociation’. The correlative of process is ‘structure’, which is ‘not something distinct from the ongoing interactive process but rather a temporary, accommodative representation of it at any one time’ (*ibid*). For Buckley, social systems ‘are inherently structure-elaborating and changing’ (*ibid*). The analysis of process is then taken up in terms of concepts from information theory: information and organisation, in particular. Despite his earlier picture of the open system as process, Buckley prefers at this point (*ibid*: 82–94) to subordinate process to structure: he finally equates information with ‘meaning’ and says that ‘society is an organization of meanings’ (*ibid*: 92). In other words, while recognizing the significance of process and openness, Buckley slips (perhaps unwittingly) into a style of argument and expression which privileges order and organization. Buckley is beginning to sound like Emery and Trist.

It is necessary to state that information and meaning are *inversely* related. Robbe-Grillet (1978) provides a simple illustration. Suppose it is the month of August and you are in Chicago. Someone comes into the room and says: ‘It is not freezing outside’ (*ibid*: 6). That statement would give you no information at all since extremely cold weather is practically non-existent in Chicago in the summer. But if we were told: ‘It’s freezing outside; the lake is frozen’, we
would receive a significant piece of information since the probability of Lake Michigan freezing in mid-summer is well-nigh unimaginable (ibid). In fact, the latter statement is so improbable that you would have difficulty in accepting it in other words, the message is very high on information but very low on meaning. With the first message, ‘It is not freezing outside’, there is no appreciable information but it is high on meaning. In short, the meaning of a message is related to its probability, while information is related to its improbability (ibid: 7).

Now this example brings us near to the conception of closed system held by the economist Shackle (1969). His argument is that a system is closed to the extent that it is complete, finished and therefore predictable. In other words, closure is tantamount to meaning.

In schemes of thought (of the closed type) the “decision-maker” is faced with a choice among existents in a system which is already complete and closed in the sense that its structure, the set of relationships composing it, cannot be added to by the decision-maker himself, but must be accepted by him and made the best of. His task is to understand this structure and then, by the exercise of judgement only, to deal with it by selecting among the possibilities, already existent, which it offers. (Shackle, 1969: 100)

The observer is in the position of a spectator who is looking for and acting on a ready-made system of rules. In contrast, in Shackle’s open system, the actor is more like an explorer than a spectator for he himself has to add to or make a structure which is not yet finished. What is unfinished cannot be predicted (i.e., stated or known beforehand) so that openness is equivalent to information.

Barthes (1977) has provided a similar characterisation of closed and open systems in his concepts of the ‘work’ and the ‘text’. The work is always a finished product (whether industrial, commercial, literary, academic, artistic, educational, etc.); it is produced to be ‘consumed’ or as an object of ‘spectacle’ in which it promotes the human subject’s passivity; it is the product of a prior plan (idea, expectation, anticipation) and as such is part of a general process for neutralising uncertainty; it is a product of specialisation; the producer (author, originator, capitalist) is regarded as the owner of his/her work (in legal terms, the work is copyrighted or patented); its meaning is fixed. The performativity principle of organized systems is always expressed in terms of
the work – the finished form or preformed object is what guides the system’s notion of reality. Against the work, Barthes posits a sub-systemic structure – a microphysics of human life – which he calls the text. The text is subversive with respect to the totalizing efforts of the work system; it is a form of spontaneous play which emerges from the unplanned relationship between human subject and context; it is paradoxical, celebrating uncertainty and ambiguity; it is a socio-historical network which has no (privileged) author; it invites, even demands, the subject to collaborate in its production as a kind of ‘co-author’.

Simplifying, let us suggest that the concept of closure can be equated with the general ideas of predictability, certainty and meaning and that of openness with unpredictability, uncertainty and information. Further, following Robbe-Grillet’s analysis, let us also suggest that closure and openness are inversely related, that they are mutually defining and therefore that the traditional distinction in systems theory between closed and open systems is no more than a convenient fiction. In short, it is the interaction of predictability/certainty/meaning with unpredictability/uncertainty/information that creates the closed/open dialectic of social life.

**Information and meaning**

Information is essentially a *binary structure*, based on the idea of division. The human world is constituted by such divisions, e.g., man-woman, teacher-student, day-night, summer-winter, etc. Figure 1 below illustrates the concept. There are two ways of interpreting this figure: (a) by placing the emphasis on the two separate halves, A and B, or (b) by focusing on the actual line of division. Experience suggests that people tend to do (a), i.e., they perceive the world mainly in disjunctive terms (as we saw, incidentally, in the approach of traditional systems theory to the separation of the ‘closed’ and ‘open’ concepts).
To focus on (b) requires a conscious effort which can be helped along by expanding figure 1 thus:

In figure 2 the line of division (of figure 1) is no longer seen as a line of separation but also as an undifferentiated area in which A and B are actually joined together, i.e., *division both separates and joins*. In fact, it is the act of
separation which, paradoxically, creates the perception of something that is also whole or unitary. This observation of fundamental significance in understanding the nature of information can be more clearly seen in the following figure which illustrates the separation-wholeness paradox of information:

Figure 3: Information as an ‘alternating’ structure

The separate faces of Figure 3 share the same profile yet at the same time they repress each other in the sense that the perception of one face is always at the expense of the other. Now no longer a simple binary structure, information appears as the sharing or alternation of a whole between two terms. It is the idea of alternation or reversibility that distinguishes information.

Figure 3 provides us with a model of information which reveals the latter’s essentially interactional, even dialectical, nature: a process in which form (each face) is wrested out of non-form (the shared line which fuses – and therefore confuses – the two profiles). Form is: bounded, framed, fixed, certain, finite, made firm, i.e., closed. Non-form is: inform, unformed, vacillating, uncertain, infinite, i.e., open. More specifically figure 3 reveals openness to be a state of undecidability (another way of saying unpredictability or uncertainty). Closure is therefore a process which seeks to bind an intrinsically indeterminate structure; we call this process, meaning.
In Lacan’s work (e.g. Lacan, 1977), we see how meaning emerges from information through the interrelated concepts of *signifier* (information) and *signified* (meaning). The signifier is the material support of the signified; it is the physical marks on the page or the sounds we hear which in themselves are capable of taking on a whole variety of meanings, often at the same time; this polymorphous property of the signifier has to be repressed and this is precisely the function of meaning: ‘Interpretation is directed not so much at the meaning as towards reducing the non-meaning of the signifiers’ (Lacan, 1977: 212). In other words, meaning does not pre-exist the human subject in an objectively independent world but is essentially an operation which filters out excessive difference or information. It is, nevertheless, ‘instinctive’ (automatic) to language as the paradox of the Lacanian signifier shows: the ‘unconscious’ must be made conscious for us to know it (i.e., we must give it some kind of meaning) which is of course to lose it as both signifier and unconscious. Similarly, in order to talk about nothing, one must say ‘nothing’, i.e., it is necessary to say something to identify nothing). This process is the psychoanalytic repetition compulsion which is also basic to all forms of communication. Its specific logic is spelled out by Lacan (1970) in terms of number theory (Frege) which also leads us back to figures 1-3. The number ‘one’, which we normally associate with the concept of ‘unity’ or an ‘individuated whole’, is logically equivalent to the status of the signifier (e.g., as ‘unconscious’ or ‘nothing’), i.e., it is rather a condition of ‘lack’ (Lacan equates ‘one’ with the German negative prefix *un*, thus moving the meaning from ‘one’ to ‘negation’ and finally to ‘lack’). The signifier is therefore ‘open’ in the very special sense of being perpetually unfinished, incomplete or ‘lacking’; it has the character of Barthes’ ‘text’, that which can never be named but is always there. Since the human subject is itself constituted in language, it too is subject to this same process, i.e., it is predicated on lack. Meaning is the process which attempts to close the gaps opened up by the constituting function of language. The open and closed circuits of social communication thus have a *pulsative* character which necessitates the continuous repetition of meaning, to which non-meaning or lack is attached like a shadow. The pulsative nature of the open-closed relationship in language can be clearly observed in Figure 3 where the impossibility of viewing the two faces at the same time is expressed as a continuous oscillation. The ‘one’ of figure 3 (i.e.,
the joined profiles) can only be understood as a divided ‘one’ (i.e., the separated profiles) in other words, as an instance of lack.

In ridding the social system of excess information in other words, in closing the open meaning standardizes, i.e., it reduces the rich differences of ‘open’ information to a ‘mean’ or ‘average’ value. Now, this is precisely how Simmel (1950) views the formation of the ‘social’ in society and Simmel reminds us especially that this ‘averaging’ process is not the same as the statistical one:

> It is ... misleading to designate the level of a society that considers itself a unit and practically operates as a unit, as an ‘average’ level. The ‘average’ would result from adding up the levels of the individuals and dividing the sum by their number. This procedure would involve a raising of the lowest individuals, which actually is impossible. In reality, the level of a society is very close to that of its lowest components, since it must be possible for all to participate in it with identical valuation and effectiveness. The character of collective behaviour does not lie near the ‘middle’ but near the lower limits of its participants. (Simmel, 1950: 37)

The concept of community or social mass is expressed in the principle: ‘what is common to all can be the property of only those who possess least’ (ibid). Clearly this process involves the operation of division (such as we saw in figures 1-3) so that meaning itself is founded in division, but note especially that the division of social meaning runs counter to the ‘divisions’ of the signifier (and of the Lacanian unconscious, more generally) which, like an embarras des richesses, overwhelm us with their simultaneous polymorphy. (The joke would be an example of such ‘un-division’, so would James Joyce’s later writings and certain kinds of modern painting.) Simmel’s insight, taken together with Lacan’s analysis of the language of the unconscious, leads us to suggest that the language of the collective represents an inversion of the unconscious. We thus have here a way of picturing the closed/open relationship as terms which not only complement each other but do so inversely, i.e., the ‘undecidable’ and mobile characteristics of the signifier and the unconscious are excised in social signification in the direction of the communal properties of simplicity, vividness and stability. Closure is a process that is relative to the size of the mass the larger the mass the more pronounced the forces for simplification and stabilization.
Ludwik Fleck and the thought collective

Simmel’s thoughts on the ‘social’ can be seen as a variant on the old sociological theme that individuals do not themselves think – it is the social collective that thinks for them. In order to connect this Observation with Lacan’s analyses, it is necessary to remind ourselves that (following Figure 3) the individual person enters the ‘human condition’ through the medium of language as a signifier who necessarily relates to other signifiers (as A does to B in Figure 3), i.e., the social collective is not made up of individuals or even social persons but of signifiers. In order to constitute itself, the collective must repress or constrain the undecidability intrinsic to the signifier. What ‘thinks’ at the level of undecidability is what one might call the ‘doubting subject’ the subliminal phenomenon of the signifier which constantly eludes conscious thought. The signified is now to be seen as a function of the doubt occasioned by the undecidable; the function of the signified is to exclude doubt and include certainty (see Cooper, 1986). In order to recollect itself, the collective has to maximize the certain.

The work of the medical historian Ludwik Fleck (1979) provides empirical support for the foregoing introductory comments. Fleck’s thesis is that the so-called ‘facts’ of scientific knowledge are socially conditioned via the thought collective. Facts are not objectively ‘out there’ but are collectively produced; they are not the result of the scientific method and logic, nor are they ‘discovered’ by the incisive penetration of the individual scientific ‘genius’; they ‘arise collectively, spontaneously and impersonally’ (1979: 157). Similarly, there is no such thing as absolute truth or error; there are only ‘correct’ facts or theories – the extent to which they are ‘correct’ depending on their acceptability to the collective. In other words, the collective provides the assurance of certainty.

Fleck takes as his material the concept of syphilis and the discovery of the Wassermann reaction, a form of treatment for syphilis. When syphilis first appeared in Europe in the 15th Century, it was thought to be a punishment for sin. It was also associated with the idea of ‘bad blood’, which had mystical-ethical overtones. The blood association later gave way to the discovery of the agent of the disease in the blood by Wassermann and his colleagues, thus
becoming scientifically sound. Analysis of the development of a scientific attitude to syphilis reveals the profound influence of the collective.

Fleck summarizes his case study analysis in terms of characteristic features of modern science as a thought collective. The thought collective consists of a small *esoteric* circle of experts and a larger *exoteric* circle of non-experts which leads Fleck to distinguish between *expert* and *popular* knowledge. Expert science is further constituted by *journal science* and *vademecum science*. Implied here is a movement from the more open, less certain position of journal science to a more organized and firmer statement of the same phenomena in vademecum science. A more extreme position of certainty is further expressed in the *popular science* of the exoteric circle; it approximates Simmel’s characterization of the most common knowledge being the least refined. What characterizes popular presentation is an extreme simplification through the omission of both detail and especially controversial opinions. ‘Simplified, lucid, and apodictic science’ – these are the most important characteristics of exoteric knowledge. ‘Popular exoteric knowledge stems from specialized esoteric knowledge. Owing to simplification, vividness, and absolute certainty it appears secure, more rounded, and more firmly joined together’ (Fleck, 1979: 113), i.e., more *closed*.

An example of this process is provided by two contrasting diagnoses of a medical specimen, one written by an expert for a general practitioner, the other by the expert for another expert. The first diagnosis is simple and vivid; the second, far more detailed and hedged with qualifications (yet to the expert the latter is already too simplified and apodictic to be a genuine scientific report) and, incidentally, unacceptable to the practitioner. ‘Every communication’, writes Fleck, ‘and, indeed, all nomenclature tends to make any item of knowledge more exoteric and popular. Otherwise each word would require a footnote to assign limitations and provide explanations. Each word of the footnote would need in turn a second word pyramid. If continued, this would produce a structure that could be presented only in multidimensional space’ (*ibid*: 114). In other words, in relation to the unity and identity of the collective the expert poses the threat of *infinitely sliding meaning*. In effect, this is the pursuit of the lack or the undecidable which recedes like an horizon when approached; there is no final, ultimate signified; the ‘one’ as ‘un’ or lack is a vanishing point.
One can equate this sliding of meaning with the vacillation of the dividing line of the profiles of figure 3 and also with Simmel’s depiction of the ‘vacillation’ of the individual compared to the group: ‘The mass does not know the dualism of egoistic and altruistic impulses, a dualism that often renders the individual helpless and makes him embrace a vacuum’ (Simmel, 1950: 27). The function of the thought collective is to constrain these vacillations (called ‘caprices’ by Fleck) into a communal structure: to realize ‘maximum thought constraint with minimum thought caprice’ (Fleck, 1979: 95). In this realization, it is necessary to ‘proof’ the thinkers against caprice by inculcating a particular thought style as a ‘way of life’ and not merely as the learning of a mental technique; the thought collective has to become ‘tacit’ knowledge. As Fleck writes:

The discovery – or the invention – of the Wassermann reaction occurred during a unique historical process, which can be neither reproduced by experiment nor confirmed by logic. The reaction was worked out, in spite of many errors, through socio-psychological motives and a kind of collective experience. From this point of view the relation between the Wassermann reaction and syphilis – an undoubted fact – becomes an event in the history of thought. This fact cannot be proved with an isolated experiment but only with broadly based experience; that is, by a special thought style built up from earlier knowledge, from many successful and unsuccessful experiments, from much practice and training, and epistemologically most important from several adaptations and transformations of concepts ... error and the failure of many experiments are also part of the building materials for a scientific fact. (Fleck, 1979: 97-98, emphasis in original)

What is crucial to Fleck’s conception of a ‘fact’ is its slow development by means of the elimination of error and mistake. As Fleck notes, the development of a branch of knowledge entails a reduction in differences of opinion. The history of the concept of syphilis shows widely divergent views. Far fewer differences occurred in the development of the Wassermann reaction. ‘It is as if more resistance were generated, and the free unfolding ideas were restricted. This is very important, though it belongs no longer to the analysis of fact but to the analysis of error’ (Fleck, 1979: 83-84). We are back with Lacan’s (1977: 212) statement that: ‘Interpretation is directed not so much at the meaning as towards reducing the non-meaning of the signifiers’.

Meaning, therefore, assumes the force of an ‘orthopaedic’ function correcting aberrations and deviations, guiding thoughts and actions in the direction of a
supposed norm – through the taming of difference. Difference (information) is reduced to its opposite, the Same, which, in the collective, appears as a concept of ‘equality’. The first step in this process for the scientist is to suppress him/herself as an ‘individual’ (a difference):

This obligation is also expressed in the democratically equal regard for anybody that acquires knowledge. All research workers, as a matter of principle, are regarded as possessing equal rights. And all in the service of the common ideal, must equally withdraw their own individuality into the shadows, as it were. (Fleck, 1977: 144)

The smoothing out of differences, the formation of a central set of directing values and forms based in the idea of the Same, are expressed in the thought collective in terms of a centrifugal-centripetal movement of knowledge which serves to bring together the esoteric and the exoteric circles. The objectivization of this movement is a further step in the process of collectivization – special symbols, perhaps a whole new sign language, are created to guarantee fixed meanings. A reverence for number and form, clarity and vividness, add up to the closing of the system.

Here, the closed, fixed and stable system results from the unification of differences to create the sameness of an afferent mass. We can connect this with our earlier observation, from Lacan, that the ‘one’ of ‘unity’, via its movement through ‘un’ to ‘lack’, places sameness (unity, community, collectivity) in the category of deprivation or loss. To explicate, let us return to Freud, specifically to the long essay on *Group Psychology and the Analysis of the Ego* where the genesis of group identification or collectivity is exemplified through a

Troop of women and girls, all of them in love in an enthusiastically sentimental way, who crowd round a singer or pianist after his performance. It would certainly be easy for each of them to be jealous of the rest; but, in the face of their numbers and the consequent impossibility of their reaching the aim of their love, they renounce it, and instead of pulling out one another’s hair, they act as a united group, do homage to the hero of the occasion with their common actions, and would probably be glad to have a share of *his* flowing locks. Originally rivals, they have succeeded in identifying themselves with one another by means of a similar love for the same object. (Freud, 1949: 87)
Like Fleck’s scientists, Freud’s enamorata express a basic principle of ‘division’, namely, that ‘two’ into ‘one’ won’t go. (See Lacan’s, 1970, essay on the relationship between number theory and the unconscious). The renunciation of the ‘one’ by the ‘many’ is the experience of lack on which all knowledge is based. In the wider social context (and in the thought collective) it is, as Freud points out, the formation of Gemeingeist, esprit de corps, etc., out of an original feeling of envy.

No one must want to put himself forward, everyone must be the same and have the same. Social justice means that we denyour selves many things so that others may have to do without them as well, or, what is the same thing, may not be able to ask for them. This demand for equality is the root of social conscience and the sense of duty. It reveals itself unexpectedly in the syphilitic’s dread of infecting other people, which psychoanalysis has taught us to understand. The dread exhibited by these poor wretches corresponds to their violent struggles against the unconscious wish to spread their infection to other people; for why should they alone be infected and cut off from so much? Why not other people as well? And the same germ is to be found in the apt story of the judgement of Solomon. If one woman’s child is dead, the other shall not have a live one either. The bereaved woman is recognized by this wish. (Freud, 1949: 88)

Furthermore, Lacan (1977) has shown that envy (operating in the above way) is related to the construction of ways of seeing and knowing. Lacan relates envy to the Latin videre (to see) through invidia (envy in Latin), a seeing or knowing which emerges in the experience of deprivation or lack. What Fleck’s scientist gives up is the fragmentary, contingent, even ‘textual’ sense that derives from his own personal knowledge of his material; what he eventually comes to know is predicated on this ‘loss’ (which the thought collective now calls ‘error’).

The thought collective as social science

Collection is always a re-collecting or re-membering. To re-collect is to translate information into meaning, the signifier into the signified; this is essentially a process of inversion. Information/signifier is a ‘unity’ that we experience as a ‘lack’. In figure 3, this ‘unity’ appears as the line of division that holds together two competing forms; if you like, it is a ‘whole’ that we experience as a ‘hole’. Again, it is a question of how one approaches the operation of division. For Lacan (and others), there can be no ‘two’ without
the ‘one’ (of ‘lack’); the act of division which brings about ‘two’ is a severing of a structure that in itself cannot be severed, so that ‘two’ is always contained in a ‘lost whole’; Freud exemplifies this in terms of the joke which brings together two (or more) apparently different and often incompatible ideas in one concept. In the joke, one sees differences ‘condensed in the same term; a form of extreme economy seems to operate, which is so alien to our conventional modes of thought that takes us by ‘surprise’. As Freud said of the unconscious itself, at this ‘primitive’ level of experience there is no temporal or spatial difference – everything condenses. The world of social organization is created through a process of reversing this ‘state’, by ‘unreeling’ the ‘unconscious’ by means of dividing it up and allocating the divisions according to certain spatial and temporal principles. Essentially, this is the process of making meaning, of enclosing the undecidability of the signifier and information. This is what we mean when we say that the idea of the thought collective is a re-collecting or re-membering one repeats the polymorphous and open properties of the signifier in a form that makes it suitable for social organization. All thought is re-thought, every collective is a re-collective.

The question of the collective as a re-collective raises the related issue of the ‘subject’. The collective is a form of social subject. We have said that the collective can only know itself through the process of inverted division. It is this process that makes the collective into its own subject. It is well-known that the real objective of the object is to constrain (Ashby, 1956) and that what it constrains is the subject of the signifier (and the unconscious, Lacan would say). This is precisely the relevance of Fleck’s work: the collective thinks (or rather re-thinks) itself into existence through the construction of objects and objectives and these objects/objectives take on the aspects of a relatively closed system of certain, simplified and vivid knowledge. The process is briefly described by Spencer-Brown:

Let us ... consider ... the world as described by the physicist. It consists of a number of fundamental particles which, if shot through their own space, appear as waves, and are thus of the same laminated structure as pearls or onions, and other wave forms called electromagnetic which it is convenient, by Occam’s razor, to consider as travelling through space with a standard velocity. All these appear bound by certain natural laws which indicate the form of their relationship.
Now the physicist himself, who describes all this, is, in his own account, himself constructed of it. He is, in short, made of a conglomeration of the very particular he describes, no more, no less, bound together by and obeying such general laws as he himself has managed to find and record. (Spencer-Brown, 1969: 104-105)

In this process, the world (i.e., the subject, subject matter)

must first cut itself up into at least one state which sees, and at least one other state which is seen. In this severed and mutilated condition, whatever it sees is only partially itself. We may take it that the world undoubtedly is itself (i.e., is indistinct from itself), but, in any attempt to see itself as an object, it must, equally undoubtedly, act so as to make itself distinct from, and therefore false to, itself. In this condition it will always partially elude itself. (ibid: 105)

Some part of the world (which we now name as the ‘subject’) is continually lost (i.e., in Lacan’s ‘lack’). However, it is the ‘subject’ which, although never itself directly observable, does the observing. This is yet another way of stating that it is the ‘collective’ that thinks and that the objects of knowledge which the collective constructs in this process are ‘thought’ by the collective as ‘subject’ (i.e., not by its individual members).

Echoing this theme of the subject-object division of collective knowledge, Canguilhem (1978) compares and contrasts the structure and action of living organisms and social organization. In a living organism the rules for co-ordinating part and whole are ‘immanent, presented without being represented, acting with neither deliberation nor calculation’ (1978: 154). But in social organization ‘rules must be represented, learned, remembered, applied’ (ibid). Social organization mimics living organization. Furthermore, there is a further difference in that, in the case of the organism, the ‘therapist of its ills’ knows’ in advance and without hesitation, what normal state to establish, while in the case of society, he does not know’ (ibid: 159).

The function of closed systems of social knowledge is to imitate the instinctive action of living organisms. In this process they dissemble the constructed basis of the collectivity, inhibit the (conscious) perception of the ‘subject’ who thinks (automatically) for the system, represent the world and its objects as though the latter exist independently of the system that constructs it (and itself), and thus, finally, tries to deny its own openness.
references


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Robert Cooper (1931-2013) was a prominent theorist of organization, known for introducing postmodernism and post-structuralism to organization studies. He has also been highly influential in process studies of organization. After writing and publishing poetry in his early years, and a PhD at Liverpool University, he held academic positions at various English universities – Aston, Lancaster, Keele – finally ending as an honorary Professor at the University of Leicester.