

The Road to Emancipation Is Through Organizational Development: A Critical Evaluation of Total Systems Intervention

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Total Systems Intervention (TSI) has been claimed to be the “practical face” of critical systems thinking. This article reviews the central principles of TSI, describes its theoretical base, and outlines its logic. It is argued that, far from being the way forward for management science, as its supporters claim, TSI is beset by logical and conceptual problems which render its use problematic. More specifically, TSI appears to confuse logical types; its use of metaphors tends to be circular and unnecessary; and its avowed complementarism is insufficiently thought out. It is also argued that TSI is only contingently linked to critical systems thinking and that the latter’s assumptions are not followed through in practice. TSI, in the final analysis, appears to be relying on commonsense, eclectically drawing on other problem-solving methods, but in itself unable to present a distinctively new, theoretically sound, and methodologically consistent approach.

KEY WORDS: critical systems; metaphors; paradigms; problem management.

1. INTRODUCTION

Management science has traditionally been seen as an applied science. The world is viewed not merely as an object of wonder, speculation, or analysis, but as an opportunity for human *intervention* with the view of improving it to suit particular human purposes. True, the definition of “scientific method,” the “problems” to which it applies, and the criteria according to which “improvements” are decided have remarkably changed during the last 40 years. It remains the belief, however, that rational interventions are possible, although the very idea of what is “rational” has not remained immutable.

The development of an applied science usually follows sequentially three stages. The first stage is a common-sense, merely descriptive understanding of a particular domain, accompanied by low conceptualization, uninformed intui-

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tion, and trial and error driven by conventional rules of thumb. The next stage is that of intense conceptual development and abstraction. A particular object of study is represented in abstract, its key properties are outlined, and its underlying dynamic is sought to be described. The final stage is the construction of technologies which, having been conceptually developed and empirically validated, are used to achieve particular results. At this stage, informed interventions are possible on a large scale, in a variety of contexts, and at a distance (Latour, 1986).

Within management science at large, the critical systems perspective (CSP) has recently shown signs of the transition to the third stage, at least in the work of Flood and Jackson. From a relatively high level of abstraction whose main feature was the philosophical-cum-sociological critique of the positivist (CSP) and interpretive systems perspectives (ISP), a technology of intervention has developed in which the main tenets of CSP are attempted to be put into practice. From a rhetorical point of view, the transformation is remarkable: The uncompromisingly radical language which characterized CSP at the second stage has given way to the professional analysis of the independent consultant interspersed, of course, with the occasional pronouncement about the promotion of "human well being and emancipation" (Flood and Jackson, 1991a, p. 49). Put simply, critical systems thinking conceived as a body of abstract theorizing has receded to the background in favor of critical systems practice, that is, a technology of Total Systems Intervention (TSI) for effecting organizational change (see Flood and Jackson, 1991a,b).

CSP has elsewhere been reviewed and criticized on philosophical, epistemological, and sociological grounds (see Tsoukas, 1992). Building on this earlier critique, the purpose of this paper is to look at CSP as a technology of intervention and assess its claims and assumptions. For such a task I concentrate mainly on the work of Flood and Jackson since they have been on the front line of those arguing for the practical utility of CSP. In doing so, I am fully aware of the fact that Flood and Jackson's work is a subset of the more general work on critical systems thinking. However, to the best of my knowledge, no other critical systems theorist has attempted to put critical systems thinking into practice in a relatively formalized and systematic manner. Ulrich's (1983, 1987) critical heuristics is an exception, but as I have argued elsewhere (Tsoukas, 1992), it is much closer to ISP's rather than CSP's categories.

Below I first review the main tenets of TSI, describe its theoretical basis, and outline its methodology. This is followed by a critical assessment of TSI. The main thesis of this paper is that TSI is fraught with logical contradictions, methodologically weak, and practically incoherent. Contrary to the claims of its supporters, it is found to be permeated by an unreflective eclecticism which renders its links to CSP extremely tenuous. It is concluded that these weaknesses are inherent features of CSP, namely, that its utopian and rationalistic discourse

is extremely difficult to be translated into a methodologically sound and practically relevant technology of intervention.

2. TOTAL SYSTEMS INTERVENTION: A BRIEF OUTLINE OF ITS PRINCIPLES AND METHODOLOGY

Following Churchman (1971) and Checkland (1981), the proponents of TSI argue that systemic thought should not seek to describe a social world which is presumed to be ontologically systemic; rather, it ought to be systemic in its method of inquiry about the social world by employing a variety of perspectives and models. In other words, systems exist in our minds, not necessarily in an objectively given world of social phenomena (Flood and Jackson, 1991a). The epistemological implications of such an interpretive ontological position are clear: We can understand organizational phenomena by using the widest possible set of systemic images, metaphors, and methodologies. None on its own is good enough. The more languages we speak, the better it is. This is a fundamental premise of TSI which leads its proponents to argue for the complementary use of systems methodologies in tackling organizational problems.

There are three phases in employing TSI as a technology of intervention, with each phase consisting of three components (i.e., a task, a set of tools, and an outcome). First is the *creativity* phase. Here the task of the analyst is to use systems metaphors as organizing images for understanding current organizational practices and postulating likely solutions. The tools provided by TSI for such a task are a range of "systems metaphors" which are derived mainly from Morgan's (1986) work. These metaphors are the "machine," the "organism," the "brain," the "culture," the "team," the "coalition," and the "prison." The outcome from the creativity phase is a "'dominant' metaphor which highlights the main interests and concerns and can become the basis for a choice of an appropriate intervention methodology" (Flood and Jackson, 1991b, p. 202). The dominant metaphor is usually accompanied by a number of dependent metaphors which, in a complementary fashion, help elucidate some of the complexities of the observed phenomena that have not been adequately illuminated by the dominant metaphor.

The second phase is that of *choice*. Based on the outcome from the first phase, the task here is to choose an appropriate systems methodology in order to tackle the particular situation at hand. The tool for such a task is the so-called "system of systems methodologies." The latter is a typology in which systems methodologies are classified according to their assumptions about the systems they deal with (i.e., simple vs complex systems) and the relationships between the actors within those systems (i.e., unitary, pluralist, and coercive relationships) (see Table I). Combining the knowledge of the dominant and dependent metaphors and the system of system methodologies, it is possible to derive the

Table I. A System of Systems Methodologies^a

| Unitary | Pluralist (P) | Coercive (C) |
|---|--|-----------------------------|
| Simple | | |
| S-U | S-P | S-C |
| Operational research Systems analysis Systems engineering | Social systems design Strategic assumption surfacing and testing | Critical systems heuristics |
| Complex | | |
| C-U | C-P | C-C |
| Cybernetics GST Sociotech Contingency theory | Soft systems methodology Interactive planning | ? |

^aSource: Flood and Jackson (1991b, p. 203).

outcome, that is, to choose an appropriate dominant methodology as well as a set of dependent methodologies which may be additionally used.

Finally, the third phase is that of *implementation*. Having chosen a toolkit of methodologies (one dominant plus a few dependent), the task now is to put them into practice in order to effect “coordinated change brought about in those aspects of the organization currently most vital for its effective and efficient functioning” (Flood and Jackson, 1991b, p. 205). A general outline of TSI is presented in Table II.

Flood and Jackson (1991a,b) have explicitly made the claim that TSI is theoretically founded on critical systems thinking. According to them, what distinguishes the latter from other strands of systems thinking is (a) its methodological complementarism, (b) its social awareness, and (c) the promotion of human well-being and emancipation. Complementarists assert that although different systems methodologies have different rationalities and paradigmatic allegiances, they are nonetheless compatible and can be used in a complementary fashion, insofar as they serve three fundamental anthropological interests—the technical, the practical, and the emancipatory (see Habermas, 1972; Jackson, 1990b, 1991). Consequently, the system of systems methodologies does nothing but to translate theoretical complementarism into methodological complementarism. As Jackson (1991, p. 141) put it,

All human beings have a technical, a practical, and an emancipatory interest in the functioning of organizations and society. So a systems perspective which can support all these various interests has an important role to play in human well-being and emancipation. And this is exactly what critical systems thinking wants to achieve. It

Table II. The Three-Phase TSI Methodology^a

| Creativity | |
|----------------|---|
| Task | To highlight aims, concerns, and problems |
| Tools | Systems metaphors |
| Outcome | “Dominant” and “dependent” metaphors highlighting the major issues |
| Choice | |
| Task | To choose an appropriate systems-based intervention methodology (methodologies) |
| Tools | The “system of systems methodologies”; the relationship between metaphors and methodologies |
| Outcome | “Dominant” and “dependent” methodologies chosen for use |
| Implementation | |
| Task | To arrive at and implement specific change proposals |
| Tools | Systems methodologies employed according to the logic of TSI |
| Outcome | Highly relevant and coordinated intervention |

^aSource: Flood and Jackson (1991b, p. 206).

wants to put hard and cybernetic methodologies to work to support the technical interest, to put soft methodologies to work to assist the practical interest, and to employ emancipatory methodologies to aid the emancipatory interest.

For similar remarks see also Flood and Jackson (1991a, p. 49, 1991b, p. 201).

The system of systems methodologies, therefore, cannot—it should not—be used in a functionalist or interpretive or radical spirit, for it purports to provide analysts with a “meta-understanding” (Jackson, 1990, p. 662) which respects the theoretical and paradigmatic predispositions of all systems methodologies and seeks to utilize them according to the appropriate interest they serve (Flood and Jackson, 1991a,b; Jackson, 1991).

The social awareness of CSP implies that its advocates are particularly conscious of the likely consequences of applying systems methodologies to solving management problems. PSP is criticized for substantially neglecting the social implications of interventions based on its methodologies—a natural consequence, one may argue, of the fundamental premise underlying PSP, that is, of the presumed single reality characterizing social systems and the concomitant

postulation of the latter's fixed boundaries and transparent functions, causes, and purposes.

Similarly, ISP is criticized for excessively focusing on individuals' intentions and worldviews at the expense of including the broader "material" reality, that is, the social structures and power relationships underlying actors' interpretations, in their analyses. In contrast, CSP urges analysts to be fully aware of the consequences (especially the unintended ones) of their systemic interventions, and the system of systems methodologies purports to aid them to do that. As Jackson (1991, p. 138) put it, "Attention is also drawn to the need to be aware of the social context within which a methodology is to be used, because this will condition the purpose to which it is put. In particular, the prospect of authoritarian or conservative usage of existing regulative methodologies is highlighted by drawing attention to the potential existence of coercive contexts and the need for approaches suited to the peculiarities of these situations."

Finally, "critical systems thinking is dedicated to human emancipation and seeks to achieve for all individuals the maximum development of their potential. This is to be achieved by raising the quality of work and life in the organizations and societies in which they participate" (Jackson, 1991, p. 141). The concern for emancipation stems from the emancipatory interest human beings have, that is, "freeing themselves from constraints imposed by power relations and in learning, through a process of genuine participatory democracy, involving discursive will formation, to control their own destiny" (Flood and Jackson, 1991a, p. 49, 1991b, p. 200). The emancipatory interest will be achieved by creating an "ideal speech situation" (Habermas, 1972; Jackson, 1985; Flood, 1990) in which the communicative competence of human beings is enhanced so that genuine debate and undistorted communications may flourish and a rational consensus may be reached.

3. A CRITICAL ASSESSMENT OF TSI

Responding to an imaginary critic, Flood and Jackson (1991a, p. 242) acknowledge the centrality of the "system of systems methodologies" (SYSM) in their work. They go further to argue that a successful assault on SYSM would be "damaging" to their whole project. Without wishing to be destructive, I hold the view that SYSM is a very fragile typology, and it is used in a confused manner, which indeed jeopardizes the methodological soundness of TSI. In addition, TSI as a whole is fraught with conceptual problems, while its applications are far from reassuring that it really constitutes a theoretically informed, distinctive contribution to systems thinking and practice. The reasons for these assertions are outlined below.

3.1. A Confusion of Logical Types

It is not clear at what logical level of analysis SYSM operates and, consequently, what it is supposed to achieve. Jackson (1990b) and Flood and Jackson (1991a) have made contradictory claims about the function and utility of SYSM. Consider, for example, the following remarks.

- (a) “[T]he ‘system of systems methodologies’ neatly unearths the *assumptions* that each methodology makes *about* the ‘systems(s)’ with which it deals and *about* the relationship between the ‘actors’ concerned with that ‘system’” (Flood and Jackson, 1991a, p. 52; see also pp. 41–42, 242, 243) (italics added).
- (b) “For example, *if* the *problem context* is characterized by there being clear and agreed objectives (unitary) and by being transparent enough so that it can be captured in a mathematical model (simple), *then* a methodology based upon simple-unitary assumptions can be used with every hope of success” (Flood and Jackson, 1991a, p. 52). Also, on p. 243 (Flood and Jackson, 1991a) it is asserted that SYSM categories are “ideal-type representations of *problem contexts*” (italics added).

The difference between these two remarks is more than rhetorical; it represents a confusion of logical types (see Bateson, 1972), thus generating logical contradictions, and defuses much of the critique that Flood and Jackson have launched against others.

The error of not distinguishing different logical types is clearly manifested in Jackson’s (1990b, 1991) criticism of a “functionalist” reading of SYSM [allegedly committed by Banathy (1988) and Keys (1988)]. He neglects, however, the fact that problem-solving methods belong to a higher logical type than problem situations per se (i.e., at a meta-level), and a discourse on problem-solving methods (which is one version of what SYSM aspires to be) would belong at an even higher logical type (i.e., at a meta-meta-level) (see Fig. 1). As Bateson (1972) argued, it is nonsensical to talk about, let alone criticize, one logical type in terms of the others.

Jackson’s “critical” interpretation of SYSM is situated at a meta-meta-level and stands in the same relation to problem-solving methods as methodology to methods (cf. Watzlawick *et al.*, 1974). In contrast, a “functionalist” interpretation is located at a meta-level, attempting to match problem-solving methods to problem situations. One can choose any logical level one likes, and the discourses employed at different levels are logically incommensurate. While, therefore, Jackson is free to view SYSM as a typology for classifying problem-solving *methods* (in which it is the latter’s assumptions which are of crucial importance), he is not free, from a logical point of view, to criticize others for viewing the same typology as a device for the classification of *problem situa-*

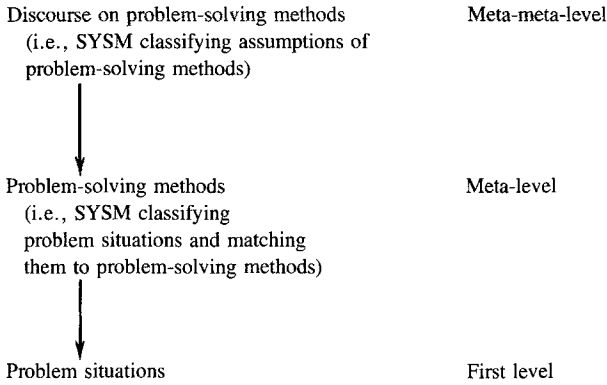


Fig. 1. Logical types in problem management.

tions. But one thing is clear: One cannot do both at the same time—which is, in fact, what Jackson and Flood have done!

The irony, of course, is that although Jackson and Flood criticize others for a “functionalist” reading of SYSM, they themselves, as a result of having not clarified the logical level at which SYSM is used, *apply* SYSM in an entirely functionalist manner. Two examples illustrate this point. One of the most consistent lines of criticism permeating CSP and TSI is the alleged inability of PSP and ISP to cope with “coercive contexts.” [Incidentally, even Ulrich, whose method was hailed by Flood and Jackson as providing a way of tackling “coercive contexts,” is now found unable to deal with structurally embedded “coercion” (Flood and Jackson, 1991a, p. 217)]. But if one works with SYSM as one’s guide to the *assumptions* particular methods have made, why is their alleged inability to make several assumptions simultaneously a weakness in these methods? If, for example, I find the viable system model (VSM) a persuasive technology of intervention, and I am aware of its unitary assumptions, should I criticize it for not making assumptions about pluralism or coercion? Why? Conceivably, I might be justified in my criticism if I knew that a particular situation was indeed pluralistic or coercive, but this would mean that I already accept a world “out there” having particular objective characteristics. Flood and Jackson’s preoccupation with coercive contexts implies that they accept the reality of such contexts, namely, that these contexts exist in the real world and not simply in the analyst’s method of inquiry, which, of course, contradicts an important premise of CSP. In other words, if SYSM addresses the meta-meta-level, all it can do is to classify assumptions; but at this level particular methods cannot be criticized for their assumptions per se. They can be criticized only with reference to the level of problem situations, which, however, implies that the latter do have an “objectively true” nature, an implication that, however,

Jackson (1990b) and Flood and Jackson (1991a) have rejected. At any rate, there is a confusion of logical types here; it would be like attempting to describe gear-shifting in a car in terms of the thermodynamics of fuel supply (Watzlawick *et al.*, 1974).

The second example is Flood and Jackson's (1991a, p. 168) argument that "[S]oft S[ystems] M[ethodology] would be considered redundant in unitary contexts where there is genuine agreement about what should be done, although not necessarily how to do it. Time spent on drawing out possible other ways forward that may offer potential benefit, which is a main strength of SSM, would largely be wasted." Similar arguments are advanced against the suitability of SSM in coercive contexts, and the conclusion is reached that only in pluralist contexts is SSM a suitable method (Flood and Jackson, 1991a). Would I be wrong to interpret this claim that, in this instance, SYSM is used at the meta-level where the key task is *not* to detect the assumptions made by SSM (or any other method) but to first describe and then match a particular problem situation with an appropriate method? In other words, in this case SYSM is used to classify *problem situations*, whereas, as we have seen, Flood and Jackson have argued that SYSM is used primarily to classify *assumptions* about problem situations made by problem-solving methods. Which one of these two versions should we believe?

3.2. The Inadequacy of Complementarism

Jackson (1990b, 1991) and Flood and Jackson (1991a,b) acknowledge that there might be an opposition to their lumping together different problem-solving methods underlain by very different paradigmatic assumptions. They defend, however, their methodological complementarism, as we saw in the preceding section, by resorting to Habermas (1972) and his distinction among the technical, the practical, and the emancipatory interests, which correspond roughly to the positivist, interpretive and emancipatory perspectives and problem-solving methods, respectively.

Complementarism is feasible, however, only if PSP and ISP are viewed as sets of neutral techniques and not as reality-shaping paradigms. If they are regarded as paradigms, that is, as means through which social reality is constituted and framed, there is very little that is common between them to allow them to be included in a contingency framework such as SYSM. Furthermore, if the main assertions in the earlier work of Flood (1990) and Jackson (1982, 1985, 1987, 1990a) were accepted, it would indeed mean that PSP and ISP are not simply valid only under certain conditions (i.e., serving the technical and practical interest, respectively), but that they are, plainly and bluntly, wrong under all conditions.

Jackson and Flood (as well as CSP proponents more generally) have

directed, after all, most of their arguments against the ideological, philosophical, epistemological, and sociological assumptions and assertions of their rivals. A positivist social science, for example, has been criticized by CSP supporters not simply for dealing with only certain aspects of social reality (after all, this can hardly be a criticism; any perspective has, of necessity, a delimited field of inquiry), but for *misconstruing* social reality. CSP claims to have a superior understanding of social phenomena and their underlying dynamics vis-à-vis its competitors, and this understanding is reflected in an altogether different mode and scope of inquiry.

Are Flood and Jackson now saying that positivist social science is not necessarily bad or useless, provided that it is used within a well-delineated territory? If this is what they are really saying, this is perhaps a path worth exploring, but they would have to describe in some detail the conditions that render positivism useful. To say, following Habermas, that “work” leads “human beings to have a ‘technical interest’ in the prediction and control of natural and social affairs” (Flood and Jackson, 1991b, p. 200)—hence the need for positivism—is only half-true. The other half is that “work” is fundamentally, and inextricably, linked to “interaction” (the practical interest) and “power” (the emancipatory interest) in ways that a discourse addressing “work” alone inevitably makes assumptions about the other two anthropological interests.

What I am trying to say is this. One cannot separate “work” (in a technical sense) from “power” (in a political sense)—only inanimate objects do not engage in, and are indifferent toward, power relations. Power is *not* externally related to work; it is deeply implicated in its constitution. The discourse, therefore, that is articulated when one is concerned primarily with the prediction and control of human affairs is not merely technical (that is, a mere technique) but also *constitutive* of the phenomena at hand (that is, it has an irreducible paradigmatic dimension): It invariably assumes, and shapes, a set of particular power relations. As Ackoff (1981) has aptly argued, a machine view of organizations is not just a set of techniques concerned with prediction and control, but also a paradigm that inevitably presupposes (and necessitates) an instrumental-cum-hierarchical functioning of organizations. Similarly, positivist problem-solving is not simply useful in achieving technical mastery over social processes; it also serves as an underlying image of the relations among social actors as well as of the relations between them and nature. To say, therefore, that hard systems methods work to support the technical interest, and soft systems methods can assist the practical interest—hence their compatibility—would be true only if these methods were mere techniques disconnected from broader paradigms. However, Flood and Jackson (as well as others) have spent a great deal of their time trying to convince their colleagues that these methods are not just neutral instruments but also ways of managing problems that incorporate fundamental

ontological and epistemological assumptions. Which interpretation do they want us to believe?

3.3. The Redundancy and Circularity of Metaphors in Organizational Diagnoses

As described in the preceding section, the first phase of TSI is that of creativity, in which a variety of metaphors is used in order to capture different aspects of complex organizational phenomena. Flood and Jackson (1991a,b), however, refrain from explaining why the use of metaphors in the creativity phase (which is, in effect, the diagnosis phase) is important. Why, in other words, cannot one proceed directly to the choice phase and select a particular problem-solving method to suit the features of a particular situation? Why should the use of metaphors in the creativity phase be necessary? Flood and Jackson acknowledge these questions but are remarkably reticent in suggesting answers. They contend that metaphors are organizing frameworks that help systematize descriptions of particular phenomena, but this is hardly a satisfactory claim if one looks at the applications of TSI described by Flood and Jackson.

Flood (1991), for example, having applied TSI to a Singaporean company, summarizes the outcome of the creativity phase in a list of unsurprising descriptions, such as lack of mission, no sense of pride or commitment, poor communication and coordination, unclear competitive advantage, etc. Why does one need an armoury of metaphors to make sense of this apparently common-sense diagnosis? Is it not transparent enough, so that one may proceed directly to select a particular set of problem-solving methods (e.g., VSM, SSM, etc.), without passing through the stepping stone of relevant metaphors? In this example, what value do the “brain” or “culture” metaphors add to our understanding of, and intervention in, these phenomena?

Flood and Jackson appear to neglect the fact that metaphors (and figurative language more generally) are useful heuristic devices in those cases in which we deal with unfamiliar phenomena. Transferring knowledge from the (familiar) source domain to the (unfamiliar) target domain is a useful way of reducing a diverse variety of experience that may be otherwise difficult to conceptualize adequately because of the unavailability of literal terms (Tsoukas, 1991, 1993). In such a case metaphors and analogies serve as the guarantors of “disciplined imagination” (Harre, 1984) guiding the generation of new knowledge. In Flood and Jackson’s examples of TSI application, and, one may argue, in most cases in which relatively familiar problems are addressed, there is no *cognitive* necessity for the utilization of figurative language. One may wish to do it on literary and rhetorical grounds—possibly because it may facilitate communication with an audience—but on strictly cognitive grounds metaphors appear redundant. In other words, the use of metaphors in the creativity phase appears to be *contin-*

gently connected to TSI, not intrinsically. One may dispense with the use of metaphors altogether without harming the utilization of TSI in any way.

In their attempt to identify the causes of particular organizational problems via the use of metaphors, Flood and Jackson cannot avoid being circular. Consider, for example, the following statements.

- (a) “For example, the key difficulties in an organization suffering from structural collapse may be best highlighted using the metaphors of ‘organism’ and ‘brain’ but the cultural metaphor might also appear illuminating, if in a subordinate way, given the immediate crisis” (Flood, 1991, p. 569).
- (b) “In the case study of Chapter 5, using viable systems diagnosis, the issue was organization ‘now, or bust,’ a priority that was grasped through the ‘creativity’ phase of TSI (Flood and Jackson, 1991a, p. 168).

In both statements Flood and Jackson put the cart before the horse, for it is precisely because we do not know whether an organization actually suffers structural and/or cultural and/or political, etc., problems that we may want to use some illuminating metaphors. But, then, the very use of these metaphors will not merely reveal an otherwise mute, independent reality but, in an important way, will also help define that reality. For example, if you use the brain metaphor, you will discover problems with regard to communication and coordination; if you use the culture metaphor, you will come across weaknesses in the values holding organizational members together; and so forth. How do you know that these problems are “out there,” independent of the analyst’s vocabulary, rather than being created by the analyst as a result of using a particular vocabulary? Furthermore, how do you decide which of these problems are the most important? Can the descriptions resulting from the use of particular metaphors be prioritized in *causal* terms? Do some of these metaphors deserve more attention than others, and why?

If it was so easy for Flood and Jackson to diagnose problems of “structural collapse” or of imminent bankruptcy, how would they have diagnosed the persistently falling profitability of, say, General Motors during the last 10 years? What about the issues that surfaced in the miners’ strike in 1984? Whose interpretation would they accept and why? British Coal management was precisely invoking reasons of imminent threat from competition unless rationalization measures were taken, a claim that was vehemently contested by the other side. What about the NHS reforms? The British government has been similarly using the efficiency argument to justify the internal market system, which has encountered wide opposition by professional groups.

How can one independently identify in these examples what are the real causes of a certain organizational pathology—if, indeed, there is a pathology in the first place? In all probability, all of the systemic metaphors would be useful

in such a diagnosis—and Flood and Jackson (1991a, pp. 20–21) readily concede this—but, then, where is the discriminating power of a diagnosis if it cannot tell practitioners what the real problems are and causally prioritize them? It is not very illuminating to say to an executive that almost anything is responsible for the problems he/she experiences—it is like going to a doctor for specific advice about persistent stomachaches and, instead, being given a lecture on the interconnected causes of psychosomatic illnesses in industrial societies!

As Popper (1972) has remarked with regard to scientific theories, a theory is more informative the more possibilities it rules out; the more it prohibits, the more it reveals. A theoretical formulation that never conflicts with observation statements allows for every event happening in the world, thus telling us nothing new about it. Could Flood and Jackson tell us what their use of metaphors rules out, and under what conditions?

If one or two metaphors can be singled out as being dominant (meaning that they alone account for most of the problems at hand), according to what criteria—noncircular criteria, that is—are they selected? What makes an analyst think that they are, indeed, the dominant metaphors? The seniority of people interviewed, the frequency of particular problems mentioned by various sections of employees, or what? What if the interviewees' perceptions are wrong? How do Flood and Jackson reconcile conflicting interpretations of the same problems? Flood and Jackson have very little to say on this. In their consultancies they seem to have relied on their common sense in discriminating dominant from dependent metaphors, which may not be such a bad thing. But one would expect more reflection, critical awareness, explicit criteria, and informed choice from those who have persistently preached those values.

Finally, what Flood and Jackson seem to ignore is that unlike other sign systems, language—particularly figurative language—has an inherent quality of reciprocity: It is both descriptive and constitutive of reality (Giddens, 1976; Hayek, 1988; Morgan, 1980; Pinder and Bourgeois, 1982; Rorty, 1989; Tsoukas, 1981). As Srivastva and Barrett (1988, pp. 34–35) put it, “The process of giving language to experience is more than just sense-making. Naming also directs actions toward the object you have named because it promotes activity consistent with the related attribution it carries.” Figurative language is particularly poor at being subject to independent criticism, improvement, and refutation. The key question, which has not been seriously addressed by those subscribing to the unrestrained use of metaphors in systems thinking and organizational theory, is how analogies and metaphors can be conceptually developed so that they may yield scientific knowledge (Tsoukas, 1993).

3.4. TSI Is Contingently, Not Intrinsically, Linked to CSP

Flood and Jackson sense that they may be criticized for unreflective eclecticism and are quick to point out the derivation of TSI from critical systems thinking: CSP is, they contend, the theoretical base for TSI. In other words,

critical systems thinking is the abstract theory, and TSI is the concrete technology.

Well, let us put it to the test by a thought experiment. Let us assume that I am a rather knowledgeable and reflective manager. Despite my knowledge of management science, however, I have not really kept in touch with the very latest developments in systems thinking, so I have heard very little about the critical systems perspective; but I know rather a lot about VSM, SSM, interactive planning, SAST, and cognitive modeling. I have also read Morgan's (1986) *Images of Organization* and found his reconstruction of organization theory in terms of eight metaphors illuminating. At the moment I am faced with problems of work overload, communication difficulties, and poor coordination manifested in missed messages, unkept key deadlines, significant rework, falling quality, and a strained morale. That is my description of the problems facing our company; no doubt other people will give you different accounts. I want to do something about this, and for that purpose I want to make use of my knowledge of management science. SSM seems to be a good start. It concurs with my view of participative management; and not being a naive rationalist, I do believe that the more people are free to express their view of the situation, a richer picture will emerge. I try to use my political skills to convince my colleagues of the sincerity of my intentions to see things improved for the benefit of all of us, and I do take advantage of meetings and gatherings (formal and informal) to signal symbolically my belief in participative, constructive change. SSM, therefore, is a good start. I have also been fascinated by Beer's ideas and set up a task force to do a VSM analysis of the situation. I am eagerly waiting for their results.

The above fictitious story could go on and on. Did you see anything in it implying my use of critical systems thinking? No, of course you did not, since I stated earlier my ignorance of critical systems thinking. Did you, however, notice the similarity between my approach to problem management and that propounded by TSI supporters? Are not both approaches examples of just plain common sense? Unless a practitioner is ideologically committed to one or the other problem-solving method, would you expect him/her to act differently? Does this type of common-sense intervention necessarily require a theoretical foundation on critical systems thinking?

And if my fictitious story was not persuasive enough, take another look at Flood (1991) and Flood and Jackson's (1991a,b) accounts of their application of TSI. Flood (1991) advised Diagnostic Biotechnology Ltd., a Singaporean company, to solve their problems through the introduction of Total Quality Management. Had critical systems thinking been a prerequisite to such an endeavor? If it had been, it certainly was not reported. Flood's consultancy case is permeated by common sense which, very probably, many consultants would have similarly adopted.

Not only does critical systems thinking appear to be redundant when concrete applications are sought, but, in Flood's case study, TSI itself seems to have been more the consultant's legitimation device rather than a method which was actually used! In addition to my earlier claim that metaphors often are totally redundant since they simply confirm the obvious without adding anything to our understanding, the outcome of the choice phase in this case study was the setting up of a series of committees focusing on a particular organizational area, and only peripherally was there any reference to the use of a problem-solving method (in this case the VSM), about which no details were provided.

The jewel in Flood's analysis, however, is his account of the implementation stage. It turns out that the outcome of this phase was the definition of a mission by each committee; the identification of internal and external customers by the respective groups, along with an analysis of their requirements and how these requirements might be better satisfied; and finally, the setting up of a number of projects, each accompanied by some effectiveness criteria, aiming at improving customer service. Did you notice a set of "dominant" and "dependent" problem-solving methods to have been used in this case? Even the VSM diagnosis gets nothing but a scant mention in the whole exercise. What about SSM, interactive planning, etc? What emerges from this case study is that not even formal problem-solving methods are necessary for tackling management problems, let alone a theoretical grounding of the attempted intervention on critical systems thinking. The application of TSI is not merely eclectic; it is the triumph of atheoretical common sense.

Admittedly, in other case studies, Flood and Jackson (1991a,b) do use whatever method they think is suitable to tackle the problems at hand. The questions they still need to address, however, are these: How is it manifested in practice that TSI is founded upon, or that is intrinsically linked with, critical systems thinking? Could not one use TSI without subscribing to CSP? What happens to all those lofty ideals of "emancipation" and "social awareness" when CSP is put into practice? How is concern with those ideals manifested in practice? And what makes Flood and Jackson's concern with the "well being" of organizational members different from similar concerns by mainstream organizational development consultants?

4. CONCLUSIONS

Reflecting on Total Systems Intervention, Flood and Jackson (1991a, p. 224) boldly remark, "We are confident that we have constructed a new way forward for the systems and management sciences which is theoretically coherent, practically useful and which does not involve wholesale commitment to just one body of thought or approach." However, if my critique of TSI is valid, a rather different picture emerges: TSI appears to be logically confused, methodologi-

cally weak, theoretically unsound, and practically a mix of “pick and choose” and common sense.

More specifically, I have argued in this paper that the cornerstone of TSI, the “system of systems methodologies,” is used in a logically confused manner. SYSM is simultaneously claimed to classify assumptions of problem-solving methods *and* problem situations. However, problem-solving methods and problem situations belong to two different logical types, and any typology that fails to acknowledge this will inevitably yield contradictory claims. Furthermore, when one is not sure about the logical level at which SYSM is located, one is bound to resort to an “objectivist” reading of it, since, in applications, it is typically the encounter with concrete problem situations that is given conceptual priority rather than a solipsistic persistence on considering the assumptions of problem-solving methods.

The theoretical base of SYSM is that of complementarism: In the final analysis, it is argued, diverse problem-solving methods can be used in a complementary fashion since they address different “anthropological interests.” Such a position would be true if, indeed, problem-solving methods were neutral instruments cut off from their paradigmatic roots. However, as Flood and Jackson themselves have argued in their earlier work, this is not the case. Problem-solving methods inevitably and irreducibly contain assumptions about the nature of social reality, our knowledge of it, and the most appropriate ways of managing it. The analytical distinction of different “interests” is not particularly helpful insofar as the techniques addressing each particular “interest” cannot avoid making assumptions about the other “interests” too. Positivism and interpretivism have indeed been operationalized and yielded sets of techniques for practical problem-solving, but these techniques are naturally permeated by their respective paradigmatic ethos. It is difficult to see how complementarism can overcome paradigm incommensurability.

TSI supporters claim to make extensive use of metaphors in the creativity stage of their interventions. I argued, however, that the use of metaphors is both redundant and circular. In TSI applications it has not been clear what the cognitive value of metaphors is, and with what additional understanding they provide their users. The organizational diagnoses that have been reported typically end up in unsurprising conclusions without the need for metaphors to enhance the analysts’ (or the participants’) comprehension of organizational phenomena. Furthermore, metaphors, and figurative language more generally, do not just reveal the “facts” in a problem situation but also “create” those facts for the analyst. The end result, exemplified, as we saw, by Flood and Jackson’s remarks, is circular thinking. The analyst has no independent means of knowing whether he/she describes problems in the world out there or whether the problems he/she notices are created by his/her own cognitive framework. In addition, the plethora of descriptive statements generated in the creativity phase is not *causally*

prioritized, so that practitioners are unable to differentiate between primary and secondary problems.

Finally, I have also argued that TSI as a problem-solving method is only contingently connected to critical systems thinking. With the exception of complementarism, there is no evidence whatsoever, in the various case studies reported, to suggest that key notions and fundamental assumptions of CSP are carried over in the TSI approach. Concern with “emancipation” and “social awareness” turn out to be merely rhetorical ornaments when TSI is applied to concrete problem situations. Their passionate interest in “coercive contexts” has not deterred Flood, at least, from using their method even in societal contexts which are not exactly renowned for their distinguished democratic credentials and respect for human rights. Stripped of its radical rhetoric, TSI supporters make the same bland pronouncements that the human relations and organizational development consultants have made—the only difference being that TSI advocates have done so with a delay of just a few decades.

Overall, it seems to me that critical systems thinkers are in a “tug of war” between complementarism and fundamentalism. On the one hand, even if complementarism is accepted, it is doubtful what it contributes to our understanding of problem management, other than the common-sense recommendation that practitioners will benefit from as many problem-solving methods as possible. One does not need to labor an elaborate theoretical and methodological position to come to such a noncontroversial conclusion.

On the other hand, critical systems thinkers may continue to employ radical analyses, seek philosophical and sociological means for describing and/or explaining organizational problems, and preach liberation and emancipation. Such a fundamentalist position, however, motivated by “pure” philosophical-cum-sociological concerns, will be less interested in *applied* problem management and, thus, of very little relevance to practitioners. It appears that the more CSP’s concepts are inspired by a fundamentalist spirit, the less able it will be for CSP to be practically relevant and useful. As Whitley (1989, p. 19) remarks, “the more radical the reconstruction of everyday accounts and the lower the dependence on current dominant rationalities, the less directly and closely connected are social theories with managerial practices and the more contingent is their application to managerial problems.” Critical systems thinkers have yet to convince the rest of the management scientific community that they can offer a problem-solving method that is distinctively novel, theoretically sound, methodologically consistent, and practically relevant.

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