

ISSN 2633 1640

Volume 44(2) Winter 2023

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**Petter Øgland
Department of Informatics
University of Oslo, Norway**

SYSTEMIST

**Publication of
The UK Systems Society**

Published by the UK Systems Society

Registered office: Sidelands, Nutgrove Lane, Chew Magna, BRISTOL, BS40 8PU

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Managing Editor: *Systemist*

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Portsmouth PO3 5EJ

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Critical Systems Thinking and Sociological Paradigms

Petter Øgland

Department of Informatics, University of Oslo, Norway

Abstract

Critical Systems Thinking (CST) is an attempt to integrate systems thinking with the politically radical philosophy known as the critical social science paradigm, emphasising ideas like critical awareness, emancipation and methodological pluralism. However, the way CST consultants typically work with top managers and representatives of the organisational elite, for example when using it for implementing Total Quality Management (TQM), it can be difficult to stay within the paradigm. TQM implementation may end up being planned and implemented through interpretivist and functionalist philosophies, ignoring the politics and perhaps even making the organisation more oppressive than it used to be. In this paper, it is argued that CST-based implementation of TQM is more likely to become successful when being run by internal CST consultants who identify with the oppressed, view critical awareness and emancipation within the context of their own political struggles, and use the PDCA process of TQM for managing methodological pluralism.

Key words: Critical systems thinking, social paradigms, total quality management, action research.

1. Introduction

If we want to solve technological, psychological or sociological problems in a sustainable manner, it is often useful to look at the problems within the context of the wider technological, psychological or sociological systems that have caused them or prevented them from being fixed. For instance, in the early history of industrial engineering, proponents of scientific management argued that “in the past man has been first; in the future, the system must become first” (Taylor, 1911, p. ix). Not only was system thinking promoted, but, as Kelly (2016) points out, the proponents were often aligned with progressive and socialist ideals, although, in practice, reductionistic or cynical implementation resulted in deskilling, alienation and oppression (Braverman, 1974;

Rosenhead & Thunhurst, 1982; Hales, 1986). In the 1980s, when scientific management was reinvented under the name of Total Quality Management (TQM), there was a similar gap between its articulation as a holistic and idealistic philosophy and the way it was frequently implemented in a reductionistic and cynical manner (Deming, 1982; Seddon, 1997; Brunsson & Jacobsson, 2000).

In response to related problems within the field of management science (MS) as a whole, Critical Systems Thinking (CST) presented itself as a solution from the mid-1980s and onwards, trying to integrate systems thinking with radical politics. Similar to how interpretivist systems thinking had been challenging the hegemonic position of functionalist systems thinking in previous decades, CST was challenging both positions by making explicit commitments to issues like critical awareness, emancipation and methodological pluralism. From the viewpoint of CST, the main issue was not necessarily the paradigmatic dichotomy between how to subjectively understand the problem and how to objectively test the proposed solution, but it was rather the observation that the MS implementation process itself could be seen as part of a political conflict that would impact different social groups differently. This was illustrated through the development of a CST-based theory of TQM (Flood & Jackson, 1991; Flood, 1993; Beckford, 2002), arguing how organisational improvement needed to be understood within the context of social and economic justice, although there turned out to be gaps between what the theory promised and what was delivered in practice.

For example, in CST-based TQM theory, there have been talks about organisations as prisons (Flood, 1993, p.86) and TQM strategies as means of disimprisonment (ibid, pp. 137-142), which, unfortunately, becomes less obvious when trying to illustrate CST-based TQM implementation in practice (ibid, pp. 195-169). Rather than analysing and challenging organisational power structures, the practical accounts give the impression of CST consultants implementing TQM in a traditional top-down manner, having workshops and seminars with top management and the rest of the organisational elite, thus paying little attention to the implications of their efforts on those at the bottom of the organisational ladder. Flood and Jackson (1991, p. 244) acknowledged the situation as follows:

We agree, this does raise a major dilemma. What should we do as ... consultants when all the evidence we have highlights coercive forces at work? Obviously, this would be a matter of strategy and conscience. We could refuse the work since we might be obliged to concede our interests to those in power. On the other hand, we might take on the job in the hope that some progress can be made towards our ideals, and that something is better than nothing.

Perhaps something is better than nothing, but given the way CST embraces multimethodology, allowing managers and the rest of the organisational elite to be the dominant voices in debates on the nature of a given problem and which systems methodology to use, including systems methodologies that were originally developed outside the context of the critical sociological paradigm, TQM may end up being implemented through non-critical paradigms, such as interpretivism or functionalism, potentially making the organisation more oppressive than it used to be (Steingard & Fitzgibbons, 1993).

Given the potential difficulty in committing to the critical paradigm when doing multimethodological top-down TQM implementation, it seems interesting to question whether the implementation process could take advantage of some method inherent to TQM for making it more CST-effective. For example, if one looks at the plan-do-check-act (PDCA) process of continual improvement (Deming, 1982, p. 88; Flood, 1993, p. 13), one might argue that each of the different steps requires different types of methodologies, like planning needs an interpretivist perspective, doing needs a functionalist perspective, and checking needs a critical perspective. If one could control the change of perspective and methodology by use of a process like PDCA, perhaps one could reduce the danger of CST-driven TQM being hijacked by organisational powers that do not commit to the ideals of CST.

The purpose of the paper is to investigate whether a bottom-up PDCA implementation might be a way of overcoming the way CST-based TQM implementation has been seen to be struggling with how to live up to its own ideals.

The paper is structured in six sections. What has been presented so far is motivation and background. The aim of the next section is to review literature on how CST methods like Total Systems Intervention (TSI) can be aligned with the PDCA cycle, making it into a potentially more robust strategy for CST-based TQM implementation. This is followed by a methodology section, explaining how the strategy has been investigated through five years of action research. The action account is then presented, followed by a discussion of results. The concluding section deals with implications for practice and directions for future research.

2. Literature review

In this section, a critical review of Critical Systems Thinking (CST) and the CST-method of Total Systems Intervention (TSI) is used to argue how CST efforts are more likely to succeed through TSI-like approaches when using the PDCA cycle of TQM to coordinate the change between different paradigms and methodologies.

2.1 Critical systems thinking (CST)

In a presentation of different methods and paradigms of systems practice, Stowell and Welch (2012, p. 65) explain the nature of Critical Systems Thinking (CST) in the following manner:

[CST] is characterised by three guiding philosophies: complementarism, sociological awareness and human emancipation. The first of these reflects the recognition that sticking to one well-understood method in attempting to solve any problem that arises would be unlikely to result in success. Equally, a pragmatic, 'trial and error' approach, which does not seek sound theoretical underpinning, is unlikely to be successful except through serendipity. Instead, a deep understanding of different rationalities on which recognised approaches are based enables a would-be problem-solver to select an appropriate method to address particular problem situations. At the same time, an awareness of the wider socio-political context within which the problem situation is experienced enables those who wish to address it to take into account relative acceptability of one approach rather than another to the involved participants. Such awareness can be helpful in choosing a method that will succeed. Finally, critical systems thinkers consider problem situations from a perspective of desire to bring about beneficial change, empowering interested individuals and organisations to fulfil their potential.

To give a deeper understanding of what is meant by complementarism, sociological awareness and human emancipation, Stowell and Welch (2012, pp. 153-162) point out how CST is an offspring of ideas developed by the Frankfurt school of sociology, associated with people like Adorno, Horkheimer and Habermas, meaning that awareness and emancipation are to be understood within a context of political conflict between the powerful and the powerless or the oppressors and the oppressed.

2.1.1 Sociological awareness

As seen from some of the early writings on CST (e.g. Jackson, 1991, pp. 184-5), the philosophy was originally committed to both critical and sociological awareness, where critical awareness was focused on “assumptions and values entering into actually existing systems designs or any proposal for a systems design,” while sociological awareness “involves recognising that there are organisational and societal pressures that lead to certain theories and methodologies being popular for guiding interventions at particular times.”

Jackson (ibid, p. 175) illustrates the typical lack of critical and sociological awareness when talking about theories and methodologies developed from a non-CST perspective:

[T]here is a tendency to accept at face value, and work with, existing perceptions of reality. No attempt is made to unmask ideological frames of reference or to uncover the effects of “false consciousness.” And there is a willingness to take as given compromises and accommodations achieved within the confines of prevailing power structures. Soft systems thinking has failed to take account of the possibility of systematically distorted communication and to develop in support of the emancipatory interest.

Although efforts like Soft Systems Methodology (SSM) could be described as having an explicit commitment to awareness, including a focus on cultural and political issues, it is aimed at creating understanding rather than unmasking what is perceived to be false understanding.

2.1.2 Human emancipation

When the CST characterisation stated that “critical systems thinkers consider problem situations from a perspective of desire to bring about beneficial change, empowering interested individuals and organisations to fulfil their potential” (Stowell & Welsh, 2012, p. 65), it is important to remember that this is supposed to be understood in the context that starts with unmasking the ideological frames of reference to uncover “false consciousness”. In other words, the aim of CST is first to make people realise that they are living in a psychic prison and then to help them break out (Morgan, 1998, chapter 7).

To understand the relationship between critical awareness and emancipation in CST, it might be useful to think of the role Marcuse’s critical theory played in the student riots and political activism of the late sixties and early seventies. While Adorno and Horkheimer were mostly focusing on critical awareness, Marcuse was engaged with political activists like Angela Davis and the Black Panthers, thus getting indirectly involved in the more militant aspects of the civil rights movement and related political struggles, contributing to critical theory by exploring ideology through action.

Although Jackson (1991) draws most of his inspiration from Jürgen Habermas, the purpose of CST is to integrate systems science with critical theory for the achievement of practical results, meaning that Marcuse may nevertheless be a more natural role-model for CST consultants wanting to engage more directly in political activism. In other words, the commitment to emancipation means that the CST practitioner may have to take an active part in the political struggle. Jackson (ibid, pp. 204-5) reflects:

According to Hales, management science under capitalism takes on a profoundly ideological character. It misrepresents the nature of the systems which it deals, seeing them as consisting of objects to be controlled and denying the possibility of their free development as the conscious expression of the social nature of their members. This misrepresentation takes place

primarily because of the social, political, and economic pressures under which the discipline evolved. Management science must be understood as an ideology in relation to the development of the capitalist society that it is its major concern to serve. Essentially, it has evolved in response to the demands imposed on twentieth-century capitalism by the need to control the work force.

[...]

For Rosenhead and Thunhurst, as for Hales, the ultimate solution to management science's problems lies largely outside its own sphere of influence. Only by joining in the wider struggle of labour against capital can management science hope to overcome its contradictions and speed the way when it becomes "self-management science," aiding active decision making by all rather than helping an elite to maintain control.

Jackson (ibid, pp. 246-9) illustrates how one might commit to emancipatory activism by giving an account of various CST-related projects, including applications of the Viable Systems Model (VSM) for developing decentralised management structures, using Strategic Assumption Surfacing and Testing (SAST) to provide insights for workers in a Co-operative Development Agency, and using Critical Systems Heuristics (CSH) in a conflict concerning potential development of a piece of land into a nuclear waste disposal.

2.1.3 Complementarism

The need for a complementarist approach follows from the focus on emancipation, as Jackson (1991, p. 186) explains:

This dedication to human emancipation requires an equal commitment to the complementary and informed development of all varieties of systems approaches. Different strands of the systems movement express different rationalities stemming from alternative theoretical positions. These alternative positions must be respected, and the different theoretical underpinnings and the methodologies to which they give rise developed in partnership. Further, the claim of any one theoretical rationality – whether functionalist, structuralist, interpretive, or emancipatory – to absorb all others must be resisted.

The final statement about avoiding an overall claim to any type of theoretical rationality, including the emancipatory choice, may sound a bit surprising. Jackson (ibid, pp. 253-270) elaborates by saying how it is not unnatural for functionalists to see interpretive methods as useful for problem structuration (ibid, p. 259), or for soft systems thinkers (interpretivists) to see hard systems thinking (functionalism) as a special case of soft

systems thinking (ibid, p. 260), how organisational cybernetics (structuralism) might place itself in a hegemonic position (ibid, p. 260), or in the case of emancipatory thinking (ibid, p. 260):

The emancipatory version of an imperialist strategy sees all other approaches as serving the interest of capitalist society; they offer various solutions to the perennial problem faced by capitalism – the need to control the work force. Emancipatory systems thinking is seen as exposing the ideological character of the other tendencies and laying the foundations for a genuine self-management science.

Although one might have expected that the statement above was in exact alignment with the very nature of CST, remembering that Jackson (ibid, p. 187) defines emancipatory systems thinking as a special case of CST, he nevertheless sees it as difficult for the following reason (ibid, p. 260):

The imperialist strategy holds out the hope of a unified management science discipline if one particular approach is able to dominate by incorporating into its mode of operation useful aspects of other tendencies. This would have to be done in such a way as to convince adherents of alternative positions that their unique insights were being fully respected. However, to believe this is possible would seem to ignore the difficulty of breaking down fundamental divergencies between what can reasonably be presented as positions emanating from different philosophical/sociological paradigms.

Clearly, it might be challenging to make somebody working within the functionalist or interpretive tradition stop serving capitalist interests by refocusing their work through the perspective of emancipatory logic, but one might also ask whether such challenges can be avoided when CST makes explicit commitments to critical awareness and emancipation. Jackson, however, believes it is better to align CST with a situational focus on Habermas's technical, practical and emancipatory interests, meaning that one should be allowed to switch between what Burrell and Morgan (1979) define as functionalist, interpretive and radical paradigms, depending on what particular interest is being served at a given moment. In 1991 he referred to this perspective as “complementarism”, but he later decided to describe it as “pragmatism” (e.g. Jackson, 2020).

Using the diagram in Figure 1, the match between the three interests and the four paradigms consists of seeing the functionalist paradigm in the bottom right quadrant to serve technical interests, the interpretive paradigm in the bottom left quadrant to serve practical interests, while the two radical paradigms on the top of the diagram serve emancipatory interests.

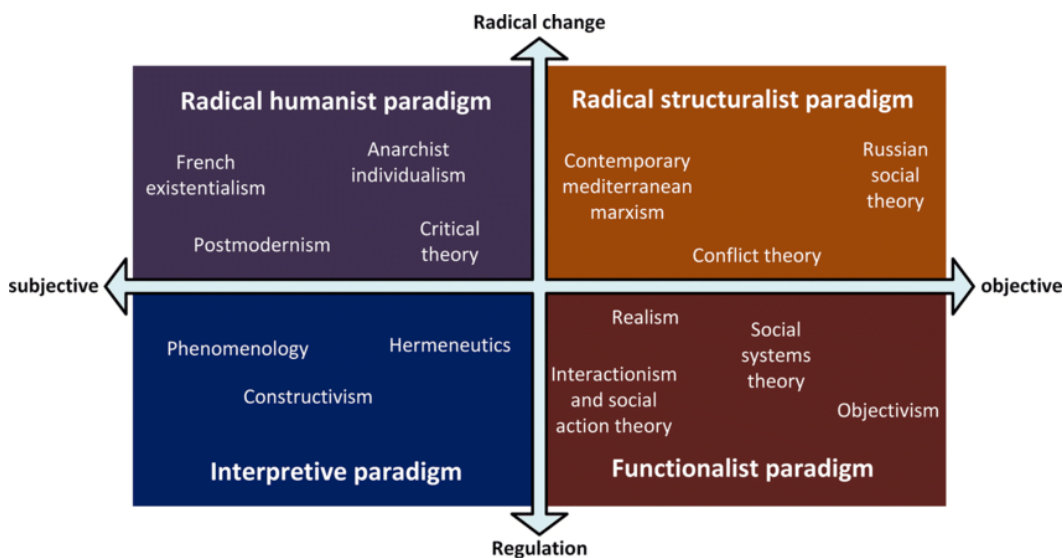


Figure 1. Updated version of the Burrell-Morgan matrix (source: Javanmardi et al, 2019, p. 910)

Despite this useful match between interests and paradigms, and the way Jackson (1982; 1991, pp. 17-23) uses the Burrell-Morgan matrix as a foundation, it should be noticed from the quote at the beginning of the section that Jackson decided to talk about functionalist, structuralist, interpretive and emancipatory paradigms rather than those defined in the Burrell-Morgan matrix, and it is difficult to understand why he decides to do so. For instance, when Burrell and Morgan (1979, pp. 99-102) see organisational cybernetics as part of the functionalist paradigm, Jackson (1991, pp. 21-23) argues that it is better understood as structuralism, although not necessarily radical structuralism. For this reason, he downplays the radical structuralist paradigm and splits the lower right quadrant into a functionalist paradigm and a structuralist paradigm. Rather than using the distinction between radical humanism and radical structuralism, he uses the term “emancipatory rationality” to cover both (ibid, p. 210):

Emancipatory systems thinking specialises in, and critical systems thinking accepts the strong possibility of, contradictions in social systems, the existence of conflict, and the domination of some groups over others. Where these conditions exist, the aim is to promote radical change and to emancipate the deprived majority.

[...]

Of course, Burrell and Morgan recognise two different paradigms that share the assumptions of the sociology of change. In radical humanism, the

critique is focused on the presently existing consciousness of people. In radical structuralism, the emphasis is on the contradictions and conflicts present in social systems. Critical systems heuristics is more akin to radical humanism. If one were to propose an emancipatory methodology based on Hales's or Rosenhead and Thunhurst's materialist accounts of how society and ideas interact, the result would be closer to radical structuralism.

The quote above shows that the emancipatory paradigm does indeed cover both radical humanism and radical structuralism, although there is no explicit reference to any existing systems methodology within the radical structuralist paradigm, despite the way his own account of using VSM in Community Operational Research (COR) (ibid, pp. 246-47) could perhaps be used as an example.

In later writings, Jackson (2003) replaces his own system of paradigms with the system suggested by Alvesson and Deetz (1996), consisting of functionalism, interpretivism, postmodernism and emancipatory rationality. The framework used for creating this set of paradigms makes use of other dimensions than the one in Figure 1, but it nevertheless ends up with a very similar classification of paradigms and theories, where functionalism ("modern") and interpretivism ("premodern") are placed at the bottom right and bottom left quadrants, exactly as in the Burrell-Morgan framework, while the emancipatory paradigm ("late modern") is at the upper right and postmodernism at the upper left. In other words, it almost looks like the same diagram with new labels, except that positions like critical theory are moved from the upper left to the upper right in order to stress how postmodernism breaks with the "grand narratives" and thus cannot be compared with anything else.

However, if we notice how the updated version of the Burrell-Morgan matrix in Figure 1 includes postmodernism among the perspectives within the radical-subjective quadrant, it seems less clear why it should be necessary for CST to abandon the easy-to-understand Burrell-Morgan framework in favour of alternative classifications that either seem to lack theoretical motivation or have an unnecessarily complex theoretical motivation based on the once fashionable but presently outdated philosophical perspectives (Gundersen, 2016). At least, from the current perspective, it is difficult to see why one should not return to the original CST idea of using the Burrell-Morgan matrix for identifying and navigating different sociological paradigms when using different systems methodologies in support of the human interests embedded in CST.

2.2 Total systems intervention (TSI)

CST is committed to sociological awareness, human emancipation and complementarism, but if the philosophy is to be of practical use, it has to be supported by methodologies that

allow for critical systems practice. This is the challenge Flood and Jackson (1991) responded to with Total Systems Intervention (TSI), illustrated as a cyclic process in Figure 4.

Stowell and Welch (2012, pp. 65-66) explain TSI in the following manner:

The objective of TSI [...] is to create a learning system about problem situations from which to generate an approach to solution. [...] Thus, TSI proceeds through three phases reflecting seven principles derived from critical systems philosophy. The first may be described as the Creative Phase, in which organisational problem-solvers are encouraged to make use of systemic metaphors to produce a vision of their problem situation and desired outcomes. The output from this phase is the creation of a 'System of Systems Methodologies' appropriate to the context. Next, a phase of selection among these methodologies (Choice Phase) drawing upon knowledge gained from consideration of metaphor, engages the problem-solvers. This clearly involves linking the assumptions underpinning particular methodologies with the relationships subsisting within the system of interest. Those metaphors that emerged most strongly during the Creative Phase will clearly influence choice. The outcome of this phase will be a selected methodology, adapted for use by consideration of the metaphors applied to the problem situation by participants. The final phase is Implementation of the selected methodology to bring about transformation of the organisation in which the problems are located.

The initial statement about TSI as a learning system is reflected in its cyclic nature, and learning becomes even more obvious when Flood and Jackson (1991, pp. 54-58) implement it through TQM action research. The metaphors they refer to were initially inspired by the eight organisational metaphors identified by Morgan (1998); organisation as machine, organism, brain, culture, political system, psychic prison, flux and instrument of domination. The System of Systems Methodologies (SOSM) (Jackson & Keys, 1984; Jackson, 1990) played an important part in the development of TSI, but there was no explicit reference to SOSM in Flood's (1993) book on how to use TSI for implementing TQM, and Jackson (1991, p. 271) says that Burrell and Morgan's work on sociological paradigms could equally well be used as a basis for a methodology of choice.

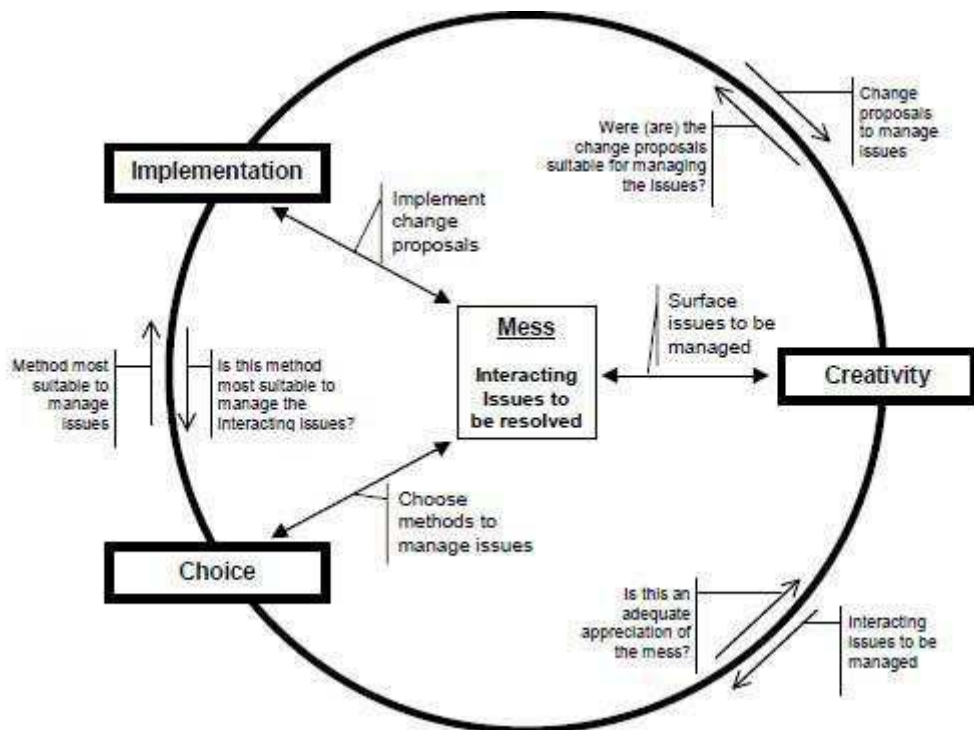


Figure 2. Total Systems Intervention (source: Mehregan et al, 2011, p. 167)

In addition to the comments about learning, metaphors and SOSM, it is also important to remember that the implementation of the chosen systems methodology should be done consistently with the overall CST commitments to complementarism, social awareness and human emancipation.

2.2.1 Learning system

When Jackson (1991, pp. 271-76) gives a short summary of TSI, he refers to a list of seven principles, where the sixth principle states that “TSI sets out a systemic cycle of inquiry

with interaction back and forth between the three phases”. A systemic cycle of inquiry may be more or less the same as a learning system, but one should remember how ontology and epistemology differ between different sociological paradigms. For instance, when Jackson (1991, pp. 157-58) talks about SSM, he quotes Checkland’s view that hard systems thinking deals with optimisation while soft systems thinking deals with learning, meaning that learning is understood from a hermeneutic rather than a positivist perspective.

In the case of CST, what is meant by learning may depend on whether one looks at it from the radical humanist or the radical structuralist perspective (Figure 1). In the case of the radical humanist perspective, learning should probably manifest itself (subjectively or intersubjectively) from whether one has succeeded in raising sufficient sociological awareness within the target group to make sure they have broken out of their previous state of “false consciousness,” while learning within the radical structuralist perspective should manifest itself in changes in the socio-political structure or some other material change that results from praxis.

As the phases of the TSI cycle consist of creating metaphors, deciding on methodology and implementation, the logic implies a connection between use of metaphors for understanding reality and how this understanding results in changes in the material world. According to Burrell and Morgan (1979, pp. 283-301), critical theory belongs to the radical humanism paradigm, which makes sense for CST if one thinks of the identification of metaphor (“Creativity”) in TSI as the hypothesis and “Implementation” as the hypothesis test (Figure 2). If one were to look at TSI from the viewpoint of action learning, it may produce knowledge and insights on which metaphors are most useful for breaking out of the imposed ideology (“superstructure”) in order to understand how reality actually works (“substructure/basis”).

On the other hand, if one sees “instrument of domination” as the organisational metaphor that defines the external world and is also necessary for introducing secondary organisational metaphors like “psychic prison,” as previously suggested (Ogland, 2023) and also consistent with Stowell’s (2021) interpretation of the Burrell-Morgan matrix, then it would be more natural to identify learning from the perspective of the radical structuralist perspective. This would also fit with the three phases of the TSI cycle, with the important distinction that the hypothesis for social change is articulated by choice of methodology (“Choice”, Figure 2). Interestingly, it is only when discussing the radical structuralist paradigm that Burrell and Morgan (1979, p. 366) mention action research:

Organisational theorists should seek to carry out ‘action-research’ which has discontinuous revolutionary change as its objective. Theory and practice

should be unified into a seamless, intellectual activity of which the theorist is well aware.

In a footnote relating to the above quote, Burrell and Morgan recommend Willener's (1971) sociological study of the political activism in Paris of May 1968, thus providing a possible model for how TSI could be used as a framework for doing action research on how to carry out radical social change.

2.2.1 Creative phase

Flood and Jackson (1991) write about the use of organisational metaphors as a way of developing critical awareness of problematic situations, meaning that different organisational metaphors may surface different aspects of the situation and thus function as a way of breaking out of the "false consciousness" of seeing the world from the viewpoint of those in charge. For instance, looking at the organisation as a machine, an organism or a culture might be useful from a managerial perspective while looking at it as a prison or an instrument of domination would perhaps be more natural if one identifies as a victim of managerial oppression.

Morgan (1980) lists fifteen organisational metaphors, where each metaphor is linked with a particular sociological paradigm.

- Functionalism: Machine, organism, population-ecology, cybernetic system, loosely couple system, political system, theatre, culture.
- Interpretivism: Text, language game, accomplishment (enacted sense-making)
- Radical humanism: Psychic prison
- Radical structuralism: Instrument of domination, schismatic, catastrophe

Later, Morgan (1998) focuses on eight of these metaphors as being particularly important; machine, organism, cybernetic system ("brain"), political system, culture, psychic prison, catastrophe ("transformation"), instrument of domination. In other words, he chooses five functionalist metaphors, none of the interpretive metaphors, one radical humanist metaphor and two radical structuralist metaphors.

Surprisingly, Flood and Jackson (1991) narrow down on five of the eight (machine, organism, brain, political system, culture and prison), and then add two metaphors of their own invention (team, coalition), ignoring the way Morgan maps the metaphors against paradigms by instead using their own mapping. They see the metaphors of the machine, the organism, the brain and the team as functionalist metaphors, the political system, the culture and the coalition as interpretive metaphors and the prison as a radical metaphor. The fact that they redefine the functionalist "culture" metaphor into an interpretive metaphor suggests that "culture" has to be understood more anthropologically, like in the

encountering of a foreign culture that needs to be mapped out as a system of interpretable signs (Lévi-Strauss, 1995). More importantly, however, they collapse the radical humanist “psychic prison” metaphor and radical structuralist “instrument of domination” metaphor into a single “prison” metaphor, thus violating the logic of the Burrell-Morgan matrix (Willmott, 1993).

The problem with using the prison metaphor to cover both radical humanism and radical structuralism is that TSI becomes unable to distinguish between problems that have to do with breaking out of “false consciousness” and problems on how to take emancipatory action. Flood and Jackson (1991) stress that their selection of metaphors is not supposed to prevent people from using additional metaphors, but it is still surprising how they decided to create their own theory of metaphors rather than taking advantage of what had already been established. As there are no explanations for this change, it becomes an open question why they found it necessary to abandon Morgan’s fifteen metaphors and the way he used them for covering all of the four sociological paradigms.

2.2.2 Choice phase

The story behind the creation of the System of Systems Methodologies (SOSM) framework is also surprising. Jackson (1991, p. 27) explains:

When interest first developed in examining the theoretical underpinnings of systems methodologies, it was Burrell and Morgan’s grid of sociological paradigms that was used as the point of reference (Checkland, 1981; Jackson, 1982). However, any way of seeing is also a way of not seeing, and that framework did not always cast the clearest light over some points of interest in the systems field. The language was foreign to management-science ears, and a job of translation was always needed to be done to make the analysis clear. The action orientation and problem centeredness of systems and management science posed additional complications in carrying over ideas. The failure of Burrell and Morgan to distinguish a functionalist from a structuralist approach to social science, and the consequences of this for an analysis of systems thinking, has already been noted. For all these reasons, Jackson and Keys (1984) sought to provide a “system of systems methodologies” – an alternative framework that would serve a similar purpose to Burrell and Morgan’s grid in organisational analysis but would be more suited to the language, concerns, and internal development of management science.

Although there is no reason to doubt the sincerity in what is stated above, like pointing out how the Burrell-Morgan matrix played an important part in the papers mentioned at the beginning, it is interesting to notice that there is no criticism of the Burrell-Morgan matrix

in the 1984 paper, and neither does the paper articulate SOSM as an attempt to overcome problems or weaknesses with the Burrell-Morgan matrix. On the contrary, the only mention of the Burrell-Morgan matrix is as follows (Jackson & Keys, 1984, p. 484):

The problem solver needs to be aware of different paradigms in the social sciences, and he must be prepared to view the problem context through each of these paradigms. Burrell and Morgan (1979) provide a framework of sociological paradigms which might be a useful starting point for the work that needs to be done in helping problem solvers identify problem contexts correctly.

In other words, the impression one gets from reading the 1984 paper is exactly the opposite of what is presented in the 1991 quote. One gets the impression that SOSM was developed independently of the paradigm matrix, using the complexity of the system and the relationship between the participants as discriminators (mechanical-unitary, systemic-unitary, mechanical-plural and systemic-plural), and then adding the importance of the social paradigms as an afterthought. If the SOSM was developed as a consequence of having experimented with the Burrell-Morgan matrix as a means for classifying systems methodologies, it is unfortunate that there are no references to studies explaining the planning, execution and evaluation of such experiments.

The purpose of the Choice Phase of TSI is to use organisational metaphors for selecting systems methodologies, and having systems methodologies mapped out within the Burrell-Morgan matrix would have made this task relatively simple, as Morgan (1980) explains how the metaphors map onto the matrix. However, there is no discussion of metaphors in the initial version of the SOSM (Jackson & Keys, 1984), and the later role of metaphors when using SOSM within TSI is far more complicated than one might expect (Jackson, 1991, p. 274):

Although it would be possible to link systems methodologies and systems metaphors directly, the pattern in the variety of systems methodologies is best discerned if the link is made through the systems of systems methodologies. [...] Combining the information gained about the problem context during the creativity phase and the knowledge provided by the system of systems methodologies about the assumptions underlying different systems approaches, it is possible to move toward an appropriate choice of systems intervention methodology. For example, if the problem context is characterised by there being clear and agreed objectives (unitary) and by being transparent enough so that it can be captured by a mathematical model (mechanical), then a methodology based upon mechanical-unitary assumptions can be used with every hope of success.

On the basis of the system of systems methodologies, it is possible to relate individual methodologies to the metaphors of organisation previously described [...]. Bearing in mind the metaphors that came out as dominant and dependent during the creativity phase and the conclusions of the system of systems methodologies, an appropriate choice of systems methodology (systems methodologies) to guide intervention and change can now be made.

What is stated above is that SOSM is first used without any reference to metaphors for identifying a group of possible systems methodologies, and then metaphors may be used for refining the choice. When using the mechanical-unitary case as an example, the underlying metaphor is the machine (Jackson, 1991, p. 275), so what happens if the TSI user should be thinking of the organisation as a culture, a brain or a prison? Does it tell them that their choice of metaphor is inappropriate, or does it tell them that the identification of problem context based on SOSM categories was inappropriate?

The first sentence, about how it would be possible to link systems methodologies and systems metaphors directly but not as effectively as using SOSM, seems unclear. Given how the output of the Creativity Phase is an organisational metaphor and how Morgan (1980) has shown how the metaphors link with the four social paradigms of the Burrell-Morgan matrix, one should expect the opposite. For instance, if the machine metaphor is an outcome of the Creativity Phase, Morgan (ibid, p. 608) recommends looking at theories related to “behaviourism, determinism and abstracted empiricism” within the functionalist paradigm, which would include hard systems methodologies such as Operational Research (OR), Systems Engineering (SE) and Systems Analysis (SA). On the other hand, if the metaphor had been that of an organism or a brain, the recommendation would have been to look at “social systems theory” within the functionalist paradigm, perhaps ending up with System Dynamics (SD) or the Viable Systems Model (VSM). As a third illustration, if the metaphor had been that of the psychic prison, the recommendation would have been to look at “anti-organisational theory” within the radical humanist paradigm, perhaps ending up with Critical Systems Heuristics (CSH).

How and why should the SOSM be simpler and more effective than simply using Morgan’s theory on how paradigms, metaphor and puzzles (methodologies) are connected? Not only does it seem much simpler to focus on how the metaphors are already connected with the paradigms, but Morgan’s theory also suggests that TSI is lacking in terms of metaphors for addressing systems methodologies within the interpretive and radical structuralist paradigms. For instance, why not use the metaphor of the organisation as a “text”, as Morgan does, for focusing on systems methods like SSM in trying to read the organisation? Why not use the metaphor of the organisation as an “instrument of domination” for addressing emancipatory systems interventions fitting with the radical structuralist paradigm?

2.2.3 Implementation phase

Some might believe that the Implementation Phase is fairly straight-forward, essentially executing the systems methodology that was decided upon in the previous phase, but Jackson (1991, p. 275) thinks otherwise:

The tools provided by TSI are the specific systems methodologies used according to the logic of TSI. The dominant methodology operationalises the vision of the organisation contained in the dominant metaphor. The logic of TSI demands, however, that consideration continue to be given to the imperatives of other methodologies. [...] Managers in another organisation might wish to redesign their information system but be held back by conflicting views about where the organisation should be going, exacerbated by some political infighting. The situation might usefully be understood with the culture metaphor as dominant, but with the brain and coercive-systems metaphors also illuminating. In this case, soft systems methodology might guide the intervention, but with aspects of cybernetics and critical systems heuristics also used.

In other words, the metaphor was not only used for identifying the relevant paradigm, theory and methodology, but it was also supposed to play a role in how the methodology is implemented. With CST being committed to human emancipation, the example of political infighting and the idea of integrating CSH into the use of SSM is interesting, although ignoring the challenge that TSI does not explain how to integrate CSH and SSM. On the other hand, as Jackson (ibid, pp. 159-60) admits, the philosophy and implementation guidelines for SSM are not violated if the methodology is used by a group of political radicals, meaning that there would be no need for the interference of other methodologies once the problem context was properly understood.

If one ignores the logic of SOSM and instead focuses on the logic of CST and TSI, one might ask whether the cycles of TSI become easier to execute if one considers the context of how a problem is often solved through stages of articulating the problem, designing and implementing a solution, evaluating the solution and deciding upon what to do next, what is known as the plan-do-check-act (PDCA) cycle in TQM literature (Deming, 1982, p. 88) and also mentioned in the literature on how to use TSI for implementing TQM (Flood, 1993, p. 13). This is the next theme to be reviewed.

2.3 Using TSI to implement the PDCA process of TQM implementation

Flood and Jackson (1991, pp. 54-58) illustrate the use of TSI by providing a TQM example. The example focuses on the introduction of TQM, so it does not evaluate the effect of TQM implementation within the given organisation in terms of technical, practical and

emancipatory interests, but it still explains the usefulness of working with metaphors, the challenge of selecting relevant systems methodologies and how execution is not always easy. As expected, the focus is on methodologies like SSM and SAST, as the main challenge during the TQM introduction stage is to help people understand organisational issues and how TQM may be of help.

In Flood's (1993) book on how to use TSI for implementing TQM, it is more clearly shown how TSI can be used during all stages of TQM implementation, and there is also a much stronger focus on the emancipatory commitment in CST. While Flood and Jackson (1991, pp. 15-21) discussed the utility of applying different metaphors for working with different aspects of TQM, Flood (1993, pp. 127-142) stresses the need for looking at the various metaphors and systems methodologies through an overall perspective of freedom. This includes the use of VSM as a methodology for designing freedom, SSM as a methodology for creating freedom by debate, and CSH as freedom by disimprisonment.

Although Flood does not refer to the Burrell-Morgan matrix, one way of framing the overall commitment to freedom before doing the first TSI cycle is to start within the radical structuralist paradigm, meaning that the world is understood as objectively oppressive. CSH is a methodology within the radical humanist tradition, in the sense that it tries to create discussion and debate about false consciousness and the need for taking emancipatory action, but the social paradigm for carrying out such actions in the material world is radical structuralism (Burrell & Morgan, 1979, p. 35):

Whereas the radical humanists forge their perspective by focusing upon 'consciousness' as the basis for a radical critique of society, the radical structuralists concentrate upon structural relationships within a realist social world. They emphasise the fact that radical change is built into the very nature and structure of contemporary society, and they seek to provide explanations within the context of total social formations.

An example of this within the context of TQM implementation could be to restructure bureaucratic organisations into anarcho-syndicalist communes, or at least replace the logic of the machine bureaucracy with the logic of the professional bureaucracy, making the factory more similar to a university or a hospital where the professionals (professors or doctors) are in charge and administrative units are given a supportive role. Jackson's (1991, pp. 246-49) account of his work within the domain of Community Operational Research (COR) is an example of how radical structuralism could be seen as an ideological foundation for CST, thus making the "instrument of domination" metaphor and the methodology of action research (PDCA) as the underlying assumptions that shape how TSI is used for implementing TQM. Given these initial assumptions, it becomes easier to

see how TSI should be used as one goes through the Plan-Do-Check-Act stages of TQM implementation.

2.3.1 Plan: Structuring the problem

While the organisation is understood through the metaphor of an instrument of domination, meaning that the theoretical position is within the radical structuralist paradigm, in order for the oppressed to plan emancipatory actions, it is necessary to change the mode of thinking at the first step of the PDCA. In correspondence with Habermas's theory of human interests, the emancipatory interest has to give leeway for the practical interest in order to understand the oppressive context that needs to be overcome.

A relevant metaphor to consider during the Creativity Phase is the metaphor of the organisation as a text. The organisational setting can be understood through the text metaphor in the sense that it needs to be interpreted in a way that makes collective sense for the activists. There is a need to understand who the enemy is and what needs to be done. The Choice Phase thus consists of deciding between methods like SSM, SAST and Interactive Planning (IP). Once the choice has been made, the method has to be implemented, hopefully resulting in a more clearly formulated problem, perhaps with a broad outline of a possible solution strategy.

2.3.2 Do: Solving the problem

When there is agreement on what the problem is, human interests change from practical to technical, corresponding with functionalist rationality. During the Creativity Phase, one might choose between metaphors like "machine", "organism", "brain", "culture" and "political system". The choice of metaphor can then be used as a guide during the Choice Phase, where appropriate systems methodologies like OR, Systems Engineering, Systems Analysis, VSM or SD are chosen. This is followed by the Implementation Phase where the chosen methodology is implemented, hopefully producing a workable solution.

2.3.3 Check: Evaluating the solution

Once there has been an attempt to solve the problem, it becomes important to focus on whether the solution produces the kind of emancipatory results that were expected. In other words, human interests change from technical to emancipatory. At the Creativity Phase there is only one metaphor of relevance, namely the metaphor of the organisation as a psychic prison. At the Choice Phase, a methodology like CSH has to be chosen for investigating whether people have been liberated from false consciousness and are thus able to see the world as it really is. At the Implementation Phase, the chosen methodology is implemented, hopefully producing an awareness of the current status.

2.3.4 Act: Deciding what to do next

After completing the evaluation of the planned intervention, the psychological emancipatory interest has to be replaced with a political emancipatory interest. Even if people have broken out of their false consciousness, thus seeing systemic oppression more clearly, the question is whether the world has also changed for the better. The purpose of the final stage in the PDCA cycle is to make a decision on whether the PDCA cycle needs to be repeated or whether changes in the political situation make it necessary to move in new directions (Deming, 1982, p. 88; Ogland, 2018b).

2.4 Summary: CST/TSI should focus on the Burrell-Morgan matrix and PDCA logic

Jackson (1991) explains how Burrell and Morgan's writing about metaphors and social paradigm played an important role in the development of CST, including how the relationship between the metaphors and the paradigm matrix could be used during the three phases of TSI, and then he came to the conclusion that an alternative set of metaphors were more relevant for the Creativity Phase, the systems of systems methodologies (SOSM) would be better suited for the Choice Phase, and the Implementation Phase should allow flexibility in how the chosen systems methodology was executed.

However, by reviewing early literature on TSI, specifically focusing on how to use TSI for implementing TQM, one gets the impression that the implementation process could have been made easier by using the PDCA cycle for defining a sequence of TSI cycles, implementing the Creativity Phase, Choice Phase and Implementation Phase by following the unaltered logic of Burrell and Morgan. In other words, the Creativity Phase should focus on the set of fifteen metaphors described by Morgan (1980), the Choice Phase should take advantage of how Morgan (1980) links the metaphors with groups of theories and methodologies within the paradigm framework (Burrell & Morgan, 1979), and the Implementation Phase should consist of executing the methodologies within their proper social paradigms.

By listing the systems methodologies from the SOSM (Flood & Jackson, 1991, p. 204) with respect to the social paradigm matrix, one gets the following result:

- Functionalist: Operational Research (OR), Systems Engineering (SE), Systems Analysis (SA), System Dynamics (SD), Viable Systems Model (VSM)
- Interpretive: Strategic Assumption Surfacing and Testing (SAST), Interactive planning (IP), Soft Systems Methodology (SSM)
- Radical humanist: Critical Systems Heuristics (CSH)
- Radical structuralist: Community Operational Research (COR)

Actually, there is no mention of COR in SOSM, so the fourth bullet point is short-hand for Jackson's (1991, p. 210) statement that "if one were to propose an emancipatory methodology based on Hales's or Rosenhead and Thunhurst's materialist accounts of how society and ideas interrelate, the result would be closer to radical structuralism". As Jackson (ibid, pp. 21-23) sees VSM as a structuralist approach (rather than functionalist), one might also consider the possibility of alternatively identifying VSM with the radical structuralist approach if implemented in compliance with the radical structuralist ideology, contrary to the way Burrell and Morgan (1979, p. 66) see organisational cybernetics as part of the functionalist paradigm.

Based on the review so far, the resulting hypothesis is that TSI becomes simpler and more successful for executing the PDCA cycle of TQM implementation by noticing how the Plan step benefits from interpretive metaphors, theories and methods, how the Do step benefits from functionalist metaphors, theories and methods, how the Check step benefits from radical humanist metaphors, theories and methods, and how the Act step benefits from radical structuralist metaphors, theories and methods, meaning that the whole PDCA cycle is embedded in the radical structuralist paradigm.

3. Methodology

Various ways can be used to investigate the way TSI could be used for implementing TQM. The approach used here follows the ideas of Whitehead (1989) in how to frame a social experiment into a personal experiment, avoiding ethical dilemmas of social research by turning it into an $N=1$ study, or what is sometimes called self-improvement research.

3.1 Self-improvement for change agents

Coghlan and Brannick (2001, pp. 42-48) identify three different kinds of action research by looking at whether the aim of the research is to change the system or the actor. When doing field experiments on the development of expertise, like how to master the violin, the focus tends to be on the acting performer and not the environmental system (Ericsson & Pool, 2016). When researching how to implement information systems, the problem tends to be on the system and not the change agent (Davison et al, 2004). However, it is also possible to combine self-improvement research with systems development research.

Whitehead prescribes a list of five steps for carrying out self-improvement action research for change agents, such as teachers, managers and political activists. If the problem remains unsolved at the final stage, or the study has not been able to produce sufficient validity and reliability, the final step can lead into a new cycle by returning to the first step for doing one or more loops.

- The researcher experiences problems when his values are negated in practice
- He imagines ways of overcoming his problems.
- He acts on a chosen solution
- He evaluates the outcomes of his actions
- He modifies his problems, ideas and actions in light of his evaluations

As seen from this sequence of steps, the research strategy assumes that the self-improvement researcher is involved in a situation where he is experiencing a conflict between his declaration of values and how the values are manifested in practice. In the case of an internal consultant trying to implement TQM within an organisation that functions as an instrument of domination, there are values associated with the change agent, like truth and justice, that are violated if he aligns with the oppressive side of the organisation. To prevent this from happening, the experiment consists of using TSI-driven PDCA for implementing TQM.

3.2 Articulate the problem and identify possible solutions (“plan”)

The five-step method is to be implemented in an explorative manner, starting with the two first bullet points and the initial feeling of being like a living contradiction by having difficulties implementing TQM through the values of truth and justice, when such values are not supported by the organisational culture. The step corresponds with the Plan step of PDCA, which can be executed through a TSI cycle of focusing on metaphors, paradigms and methodologies that are useful for clarifying the problem and sketching out possible solutions.

3.3 Act on a chosen solution (“do”)

The third bullet point in the five-step method consists of taking action, corresponding with the Do step of the PDCA. The Do step is executed through a TSI cycle, focusing on metaphors, paradigms and methodologies that are relevant to the technical problem of how to design and implement action.

3.4 Evaluate outcomes (“check”)

The fourth bullet point in the five-step method is used for evaluating the outcome of action from the viewpoint of whether the gap between espoused and experienced values has been reduced. In order to make sure that the Check step of the PDCA is carried out in a correspondingly critical manner, a TSI cycle focusing on relevant metaphors, paradigms and methodologies is used. McNiff and Whitehead (2006) recommend having

conversations with a critical friend to prevent the researcher from getting too trapped in confusion during stages of evaluation. In this study, the researcher has had regular meetings with critical friends both from the client organisation and academia.

3.5 Modify problems, ideas and actions in light of evaluations (“act”)

The fifth bullet point is concerned with the practical consequence of how the experiment turned out, which corresponds with the Act step of the PDCA. The Act step is carried out through a TSI cycle with metaphors, paradigms and methodologies that focus on the practical consequences of evaluation by asking what to do next.

4. Results

The 2019-2023 experiment of CST-based TQM implementation is told through a sequence of four TSI cycles, corresponding with the four stages of the PDCA cycle, using a first-person narrative.

4.1 Planning: 2019

The first TSI cycle was used for executing the Plan step of the PDCA cycle, where the general idea was to develop an understanding of the problem and a plan on how to solve it.

4.1.1 Creativity phase

As pointed out in previous accounts of how the TQM project started (Ogland, 2019a, chapter 4.3; 2019b; 2020; 2022a; 2022b), the central challenge for me, as an internal TQM consultant, was organisational politics. Those in formal charge of TQM implementation had a poor understanding TQM theory, and were exercising their power in a manner that made it natural to think of the organisational as an “instrument of domination”, so the radical structuralist paradigm became a natural sociological paradigm for doing action research.

Once having established the relevance of critical theory (Critical Systems Thinking, CST) as an overall framework, the immediate problem would be to identify members among the oppressed who would have the vision, knowledge and courage to take part in TQM implementation as means for personal liberation and organisational transformation. Using a systems approach for developing TQM would typically mean to develop a quality management system (QMS) based on the ISO 9001 standard (Flood, chapter 4), but the person in charge of TQM wanted no references to ISO 9001 and no ISO auditing, so it was necessary to find an alternative reference that could function similarly. The fact that the archive manager made use of the ISO 30301 standard made him an obvious choice, and the central metaphor for understanding the organisation through the perspective of ISO

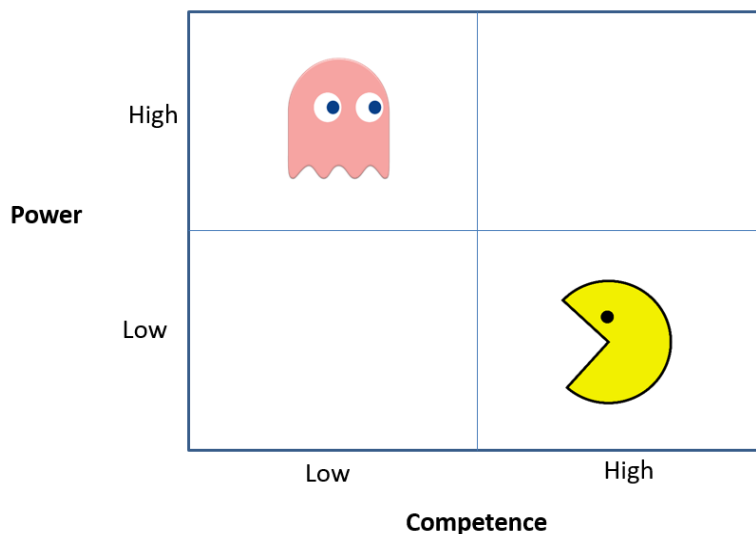
30301 was to use the text metaphor, leading towards the sociological paradigm of interpretivism.

4.1.2 Choice phase

Using TSI, there would be several systems methodologies to choose between, such as Interactive Planning (IP), Strategic Assumption Surfacing and Testing (SAST), and Soft Systems Methodology (SSM), but as the challenge was limited to understanding the mind of the archive manager and reach a common understanding, I decided on an intervention in the spirit of SSM rather than following the methodology in full detail. In retrospect, it might have been useful to focus on something like the Appreciative Inquiry Method (AIM), which could perhaps be seen as a simplified version of SSM, but I wanted to make use of the “rich picture” aspect of SSM, which is not a part of AIM.

4.1.3 Implementation phase

SSM was implemented in a somewhat loose “mode 2” fashion, which meant that meetings were conversations that were held somewhat randomly, trying to follow the key philosophy of “working above and below the line”, starting with a “rich picture” representation of the problem and ending up with a systemic model of actions to be taken in order to solve it. During the introductory conversations, we talked about the Pac-Man theory of TQM implementation (Ogland, 2009a; 2017; 2018a), which motivated a “rich picture” of the problematic situation, emphasising the difference between the oppressors with much power and little competence and the oppressed with much competence and little



power (Figure 3).

Figure 3. The problematic situation represented by a “rich picture” in the shape of a matrix

The “rich picture” was not as rich as is usually the case when applying SSM, and it was largely shaped by my own understanding of the situation, but it was developed on a whiteboard during one of the meetings, as an attempt to reach a mutual understanding of what the challenges were. The diagram was also important for developing an action plan that would focus on the lower right corner of those who scored high on competence and low on power. In practice, I wanted the archive manager to see himself as the true leader of the quality department, meaning that we could use his ties with top management, his ISO standards, his quality policy, quality objectives and quality management system as a basis for implementing TQM, ignoring those on the upper left side of the diagram.

The actual plan was not written down through diagrams of circles and arrows, as is usually done in SSM, but we developed a plan that consisted of tight collaboration, with him deciding on what was important to audit and improve, while I did the operational auditing. As a way of testing the plan, I managed to do twelve ISO 30301 audits in 2019, continually discussing the process and preliminary results with him, and then having him formally accept each of the audit reports and store them in the archive system.

4.2 Doing: 2019-2022

The second TSI cycle started after the characteristics of the problematic situation had been agreed upon and a plan had been roughly formulated.

4.2.1 Creativity phase

The “text” metaphor was still relevant, as the purpose of doing ISO 30301 audits was to understand the ISO standard, understand the organisation, and understand the match between the two. After having established the need for doing audits, however, the next challenge was how to do them, so the “text” metaphor had to be replaced with a metaphor relevant for design and execution. A central part of the ISO 30301 document is the model of the management system for records (MSR) shown in Figure 4, which describes the MSR as a feedback control system (cybernetic system).

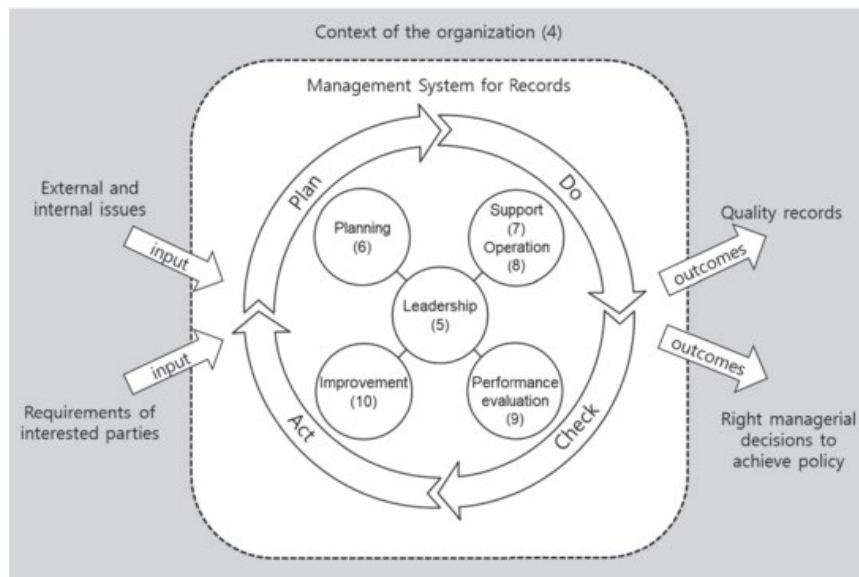


Figure 4. The MSR represented as a cybernetic system (source: ISO, 2019)

Not only do the ISO standards describe the management systems as cybernetic systems, but the ISO 19011 guidelines for auditing management systems describe the auditing system as a cybernetic system as well. Although the foundational “instrument of domination” metaphor of CST was not forgotten as an overall description, the relevant metaphor for establishing a process of emancipation was the “cybernetic systems” metaphor, which is also referred to as the “brain” metaphor (Morgan, 1998, chapter 3; Flood & Jackson, 1991; Flood, 1993).

4.2.2 Choice phase

TSI recommends several systems methods for technical systems design (functionalist paradigm), such as Operational Research (OR), Systems Engineering (SE), Systems Analysis (SA), Systems Dynamics (SD) and General Systems Theory (GST), but the Viable Systems Model (VSM) is the only one that is directly tied with the brain metaphor. However, in a similar way as to the manner of how SSM was selected in the first cycle,

there was at this stage no systematic evaluation of alternatives before deciding to use something like VSM as inspiration on how to proceed.

4.2.3 Implementation phase

VSM was used more like inspiration than blueprint, which meant that VSM diagrams and identification of subsystems evolved over time rather than being something identified at the very beginning. Nevertheless, the generic VSM model in Figure 5 turned out to be useful for describing the gradual development of the MSR and the audit system.

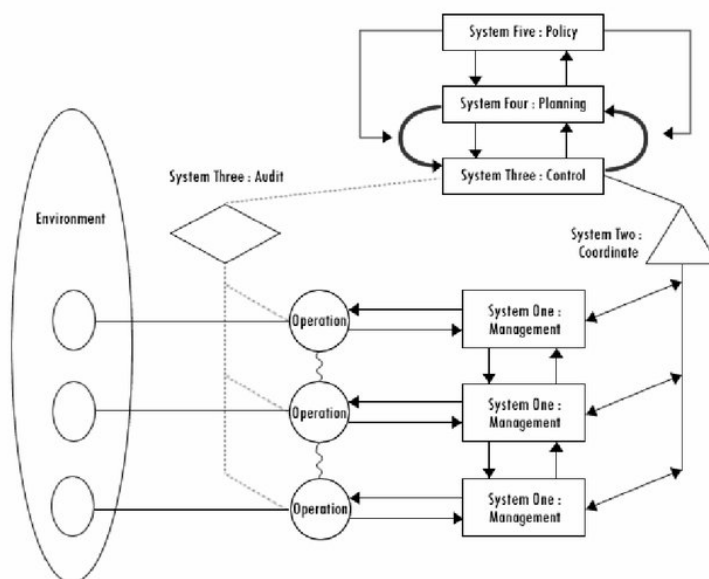


Figure 5. Generic VSM model (source: Ahmad & Yusoff, 2006, p. 91)

The idea consisted of using the VSM model (Figure 5) to understand the MSR (Figure 4) in a manner that would be useful for both exploring the currently existing MSR and how to improve it. System One in the VSM model, representing management of operations, was seen to correspond with operational records management in the MSR, assumed to be in line with the requirements of chapter 8 of the ISO 30301 standard. System Two, which is the coordination of operational management, was also an important part of the MSR, and it was soon discovered not to be working in perfect alignment with the requirements of the ISO standards. System Three was the control system that included the MSR audit program that I was trying to develop, so this was how I was able to see my own role in trying to make the MSR viable. System Four, which consisted of planning, objectives and goals, was an important but somewhat underdeveloped aspect of the existing system. System Five consisted of how to update the policy, which was the first system the archive

manager wanted me to look at, as the old policy was outdated and a new policy was in the process of being written.

Unfortunately, the people in formal charge did not recognise the importance of policies for implementing TQM, so the archive manager was told to delay development of the new records policy. Without an updated policy, it was difficult to know whether the planning (System Four) was operating correctly, so this non-acceptance for addressing the policy had cascading effects for the whole of the MSR, which was particularly easy to see by means of the VSM model, and it motivated the need for thinking about TQM implementation as an emancipatory process. The purpose of the work would be to develop an MSR where the people in power had as little destructive influence as possible.

While the archive manager was responsible for the MSR as a whole, I was informally responsible for developing and operating the ISO 30301 audit programme. From this perspective, System Three (control) of the VSM (Figure 5) would overlap with module 9 (performance evaluation) in Figure 4, but the VSM is supposed to be a recursive model, meaning that System Three (the audit system) would also be structured and run according to the logic of Figure 5. Figure 6 shows the process flow for the management of an audit programme as recommended by the ISO 19011 guidelines.

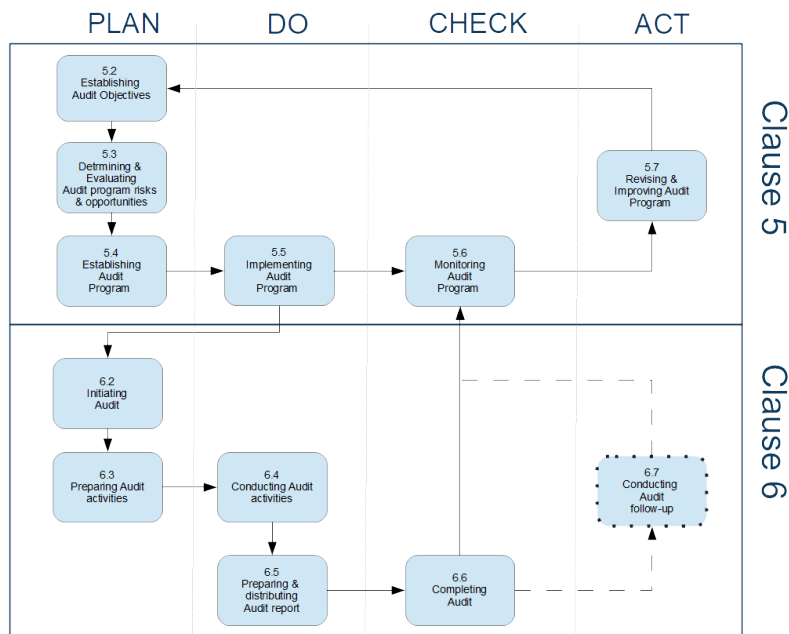


Figure 6. Process flow for ISO 19011 audit management (source: Pillar Management, 2023)

The diagrammatic representation of process flow for audit management is different from the process for the MSR in Figure 4, but the diagrams still have much in common if one

notices how the upper part of the ISO 19011 audit management model (clause 5 “managing an audit programme”) corresponds to the overall structure in Figure 4, while the lower part (clause 6 “conducting an audit”) depicts the inside of the operations module in the MSR diagram (ISO 30301, clause 8 “operation”).

From the viewpoint of the VSM in Figure 5, System One corresponds with the lower part of the audit programme (clause 6), while System Two corresponds with ISO 19011 clause 5.5, System Three with clause 5.6, and System Four with clauses 5.7, 5.2, 5.3 and 5.4. The purpose of System Five is to make sure that the audit programme fits with the MSR audit requirement of ISO 30301 (clause 9.2). In other words, System Five was the fundamental link between myself and the archive manager, as I wanted to make sure that I was auditing in a manner that helped him realise potential weaknesses in the current MSR and figure out ways to improve the situation. However, as the person in charge of TQM was my immediate superior, who was generally negative towards auditing, I could not hide what I was doing. Instead, I had to explain that I was doing it at the request of the archive manager, trying to help him succeed in his work.

During a span of four years, I was able to develop an audit programme that got increasingly effective and efficient. In 2019, I did 12 audits, the next year I only managed 6, but the year after that I could present 23 audits as input for the MSR management review of 2022. At this stage, the audit programme had reached a level of maturity that made it possible to carry out a complete walk-through of all the ISO 30301 clauses within the span of the year, which was partly caused by how I was trying to learn from the practice of Lean Auditing (Paterson, 2014).

Although the benchmark performance would have been a perfect platform for controlling and improving a complete annual cycle of ISO 30301 audits, which would have been immensely important for improving the quality of the MSR and also function as a basis for implementing TQM in general, the person in charge of TQM intervened and shut it down.

4.3 Checking: 2022-2023

The third TSI cycle started after it was clear that the solution was a failure. As the shut-down happened in a brutal and abusive manner, I was in need of medical aid and spent the next ten months in recovery, meaning that there was less interaction with the organisation during the third TSI cycle than in the previous two.

4.3.1 Creativity phase

The purpose of the auditing system was to turn TQM implementation into an emancipatory process, bringing people out of the false consciousness adapted for surviving in an oppressive environment, so the “psychic prison” metaphor became a natural choice for asking whether there had been any change.

4.3.2 Choice phase

Critical Systems Heuristics (CSH) was the systems methodology recommended by the TSI literature, but this was a methodology that required workshops and debate, which was difficult to achieve given the outcome of the TQM implementation, so I decided to apply the CSH framework in a simplified form by using the twelve boundary questions as a basis for self-reflection.

4.3.3 Implementation phase

Each of the twelve boundary questions of CSH are formulated in two shapes; an “is”-question and an “ought to”-question (Stowell & Welsh, 2012, p. 67). In this particular study, the “is”-questions were the ones used by Jackson (1991, p. 191), supported by the “ought to” variation when giving answers.

1. Who is the actual *client* of the systems design?

The client of the ISO 30301 auditing system was the archive manager. The audit plan, the results of individual audits and the annual summary report were all planned (more or less) in collaboration with the archive manager and formally controlled and signed by him when submitted into the archive system. When asking the question of who *ought to* be the client, it might have benefitted the TQM implementation process better if the auditing system had been part of an ISO 9001 auditing system that was owned by the person in charge of TQM, but this was not relevant as the person in charge was opposed to any type of quality auditing.

2. What is the *purpose* of the systems design?

The purpose was to understand the gap between the MSR and the ISO 30301 standard, measure the size of the gap on a regular basis, and to come up with ideas and priority lists on how to reduce the gap. This purpose was no different from what *ought to be* the purpose, although the latter aspects of coming up with ideas for improvement, and how to measure progress and effects, should be more strongly emphasised if the system had been allowed to mature.

3. What is its built-in *measure of success*?

The auditing system would be successful if it resulted in a steady stream of audits that aided the development and improvement of the MSR which would result in annual measurements of the compliance between the MSR and ISO 30301 standard. The measure of success *ought to be* an auditing system that also contributes to improving and measuring progress for the overall management system against ISO 30301, ISO 27001, ISO 9001 and other relevant standards.

4. Who is actually the *decision maker*?

During the implementation and run of the auditing system from 2019 to 2022, I was the decision maker in terms of deciding which clauses to audit, defining the scope of the audits and so on, although the archive manager was formally responsible and also carried out the final quality control and formal acceptance. While the archive manager also ought to be the decision maker in this formal sense, the actual decision on which audits to run should to a greater extent be automatically driven by the risk analysis generated by the statistics generated through the system.

5. What conditions of successful planning and implementation of the system are really controlled by the decision maker?

As the planner and the decision maker were essentially the same person, the answer is the same as above. If one had focused on the MSR rather than the audit system, a discussion of the difference between “is” and “ought” might have produced deeper reflections and insights.

6. What conditions are not controlled by the decision maker (i.e., are in the *environment*)?

The outcome of the third action cycle was that the person in formal charge of TQM decided to trash the system. What *ought to* have happened was that the system was developed in a manner that placed it outside the reach of people like the person in charge of TQM.

7. Who is involved as *planner*?

The audit programme was planned by me. It *ought to* have been developed in closer proximity with the archive people in further development if it had been allowed to mature.

8. Who is involved as *expert*, and of what kind is the expertise?

The archive manager and other members of the archive management community were used as experts whenever there was insufficient understanding of the MSR or it was unclear how to interpret the ISO 30301 requirements. A wider range of experts, like the information security audit community, *ought to* have been used as additional experts if the audit system continued to mature and expand.

9. Where do the involved seek the *guarantee* that their planning will be successful?

The guarantee consisted of producing measurements of progress, showing how the MSR was gradually getting closer to the ISO 30301 requirements, plus being assured that nobody was able to destroy the system. As the system was nevertheless destroyed, there *ought to* have been a stronger guarantee, but it is difficult to know how this should have been obtained.

10. Who among the involved *witnesses* represents the concerns of the affected? Who is or may be affected without being involved?

The audit system impacted the whole organisation, particularly those engaged in producing, controlling and storing documents. As the system was gradually expanding, the initial group of witnesses was relatively small while *it ought* to cover more or less everybody if it had been allowed to mature.

11. Are the affected given an opportunity to *emancipate* themselves from the experts and to take their fate into their own hands?

Without a properly working MSR, organisation records management would be completely chaotic, so the auditing system was designed as an emancipatory process, although the source of alienation and oppression was identified as coming from management rather than expertise. As the audit system matured, there *ought to* be a stronger focus on how making the MSR fit with ISO 30301 would liberate employees from humiliation and harassment.

12. What *world view* is actually underlying the design of the system? Is it the view of (some of) the involved or of (some of) the affected?

The audit system was developed in alignment with my CST worldview, aimed at aiding employees out of their “false consciousness” in trying to survive in an oppressive bureaucratic organisation, which means that the worldview did not necessarily represent the worldview of the affected. However, when the affected were gradually aided out of their “false consciousness” it *ought to* match with how they would then see the world.

4.4 Acting: 2023

The purpose of the fourth TSI cycle was to figure out where to go next. At the time when I submitted the paper to the UKSS international conference (April 2023), I had not yet reached a final decision on what to do, but not making a decision by accepting the status quo is also a decision.

4.4.1 Creativity phase

When trying to look at the organisation from an objective perspective, it felt like an instrument of domination. It was an Orwellian organisation in the sense that there was only one thing that mattered, namely power, illustrated by the way people like the person in charge of TQM were doing exactly the opposite of what a TQM philosophy would require, like making quality worse, treating people disrespectfully and creating a culture of fear. Matthews’s (2007) selection of power-related quotes from *Nineteen Eighty-Four* is useful for contextualising the metaphor:

O’Brien: "The real power, the power we have to fight for night and day, is not power over things, but over men."

"How does one man assert his power over another, Winston?"

Winston: "By making him suffer."

O'Brien: "Power is inflicting pain and humiliation. Power is in tearing human minds to pieces and putting them together again in new shapes of your own choosing."

"Power is not a means; it is an end. One does not establish a dictatorship in order to safeguard a revolution; one makes the revolution in order to establish the dictatorship. The object of persecution is persecution. The object of torture is torture. The object of power is power."

Even if TQM might have been introduced as a response to higher authorities wanting to make sure that the organisation was run according to TQM ideals like customer satisfaction, employee satisfaction, productivity, quality and continual learning, the way it allowed people like those in formal charge of TQM to gain and maintain power by creating human suffering showed the true nature of what the organisation was like.

4.4.2 Choice phase

Unfortunately, TSI does not offer guidance on which systems methodologies to select when working within the sociological paradigm of radical structuralism. As mentioned previously, Jackson (1991) believes that the development of systems methodologies within the radical structuralist paradigm is primarily a question of political will, seeing it as essentially a question of mobilising the non-managerial class against the managerial elite. He (ibid., chapter 9) also discusses how this type of “self-management research” could be implemented as Community OR (COR), which includes the following comment (ibid., p. 244):

Consideration of the purposes outlined above suggest COR practitioners need to engage in action research. The purposes embrace a commitment both to practical problem alleviation and to science. The two commitments can, to a large extent, be realised together through action research.

If one considered action research to be an emancipatory systems methodology, then it might be possible to fill the gap. Jackson does not explicitly propose action research as an “emancipatory methodology”, so there is no formal commitment to this idea, but it nevertheless seems relevant and useful for the purpose of allowing TSI and CST to achieve their inherent goals.

4.4.3 Implementation phase

Regardless of whether one sees action research done within the context of radical structuralism as an emancipatory systems methodology or not, the practical aspect of the fourth TSI cycle would consist of making a decision on what action research to commit to

next. At the time of writing, I am formally still part of the quality department of the client organisation, but I am applying for jobs elsewhere while also hoping it might be possible to be temporarily transferred to a different unit until other opportunities arise.

5. Discussion

The first part of the discussion tries to answer the question of whether revising the TSI by use of the Burrell-Morgan paradigm matrix, use of the PDCA process and use of an internal CST consultant made it perform as well as expected. The second part looks at the potential benefits of making use of the paradigm matrix, the PDCA process and internal CST consultants for allowing TSI to become more successful in implementing the politics of CST.

5.1 Did the revised TSI perform as well as expected?

The TSI diagram (Figure 2) consists of a mess encircled by a three-phased process for understanding the nature of the mess, selecting a systems methodology for dealing with the mess, and implementing the chosen methodology. As the TSI version presented in the case study challenges some of the arguments presented by leading TSI/CST experts, like ignoring the SOSM (Jackson & Keyes, 1984) in favour of the paradigm matrix (Burrell & Morgan, 1979) and making use of the PDCA process, the discussion will focus on whether this structural change has resulted in practical improvements.

5.1.1 The creativity phase

The way the case study is described as a TSI-driven PDCA cycle for implementing TQM, each of the Plan, Do, Check and Act steps started with using the Creativity Phase of the TSI for identifying a relevant metaphor. Due to the nature of the PDCA process, different types of metaphors and systems methodologies were needed for each of the four steps, but to make sure that the PDCA processes started with a commitment to CST, there was an initial Act step reported at the beginning of the account of the Plan step, explaining how the “instrument of domination” was used as an initial metaphor and thus placing the totality of the PDCA process within the context of radical structuralism before the actual experiment started. The metaphors used at each step of the PDCA cycle were as follows:

- Plan (interpretive paradigm): text metaphor.
- Do (functionalist paradigm): brain metaphor.
- Check (radical humanist paradigm): psychic prison metaphor.
- Act (radical structuralist paradigm): instrument of domination metaphor.

The way Flood and Jackson (1991) describe the nature of the Creativity Phase, the idea is to pick a metaphor that helps surface the presently most relevant problematic issues, which

may at a later stage be useful information when selecting systems methodologies associated with particular social paradigms. When following the PDCA cycle, it seems more natural to start by identifying paradigms relevant to the particular steps and then choose metaphors from within these paradigms that may be useful for specifying theory and methodology.

In the literature review, it was pointed out how Morgan (1980) identified fifteen organisational metaphors, each of them selected in a manner to make sure that each of the four social paradigms was represented by at least one metaphor. Unfortunately, neither Morgan (1993; 1998) nor Flood and Jackson (1991) make use of the metaphors associated with the interpretive paradigm when talking about TSI-like methodologies, which causes a potential problem for the Creativity Phase of TSI. Flood and Jackson “solve” the problem by taking some of Morgan’s functionalist metaphors, treating them as if they were interpretive metaphors. In the case of Morgan (1998, pp. 433-435), the text metaphor is implicitly used in the way that he describes his selection of eight organisational metaphors as texts or lenses that can be used for reading the organisation, making a comparison with how Checkland (1981) makes use of SSM in a hermeneutical or phenomenological manner. However, he is also stating that his approach is intended to be “postmodern” in the sense that the eight metaphors represent eight different ways of understanding the world without claiming that one of them may be truer than another.

If one interprets the text metaphor in this postmodern way, suggesting that a text can be interpreted in a wide range of incommensurable ways, one should perhaps emphasise how the text metaphor is used for creating divergence rather than convergence of understanding. The postmodern use of the text is more like the “psychic prison” metaphor, where the purpose is to break out of the “false consciousness” resulting from authoritarian readings of the text. This is not how the text metaphor is used within the interpretive paradigm. The purpose of the interpretive paradigm is to repeat the hermeneutic cycle until an agreement is reached among participants, which can only be achieved after having decided upon using one of the metaphors as an interpretive lens (“text”).

The identification of social paradigms and use of metaphors during the Do and Check stages of the PDCA cause no problems in the case study, but the transition to the radical structuralist paradigm during the Act stage may be useful to comment upon. What is achieved by using this particular paradigm is that CST is defined within the ideological framework of radical structuralism, meaning that the default understanding of the politics within the organisation is that of structural oppression in a material and objective sense, independent of whether the oppressed have developed a critical awareness or have uncritically accepted the ideology of the oppressors.

Not only does this identification between the four PDCA steps and the four social paradigms make it necessary to look at the world through a set of very different metaphors, but it also makes sure that CST and TSI stay committed to emancipation, critical awareness and complementarity. As seen in earlier case studies (e.g. Flood, 1993, chapters 12-15), it may not always be easy to stay committed to emancipation, so the alignment between PDCA steps and paradigms presents itself as a way of solving this problem.

5.1.2 The choice phase

For Jackson (1991), the SOSM is at the centre of the Choice Phase. Nevertheless, the usefulness of the SOSM was questioned in the literature review, and in the case study, it was not used at all. The Choice Phase instead consisted of selecting systems methodologies that fitted with the metaphors used for each step of the PDCA cycle:

- Plan (text metaphor): Soft Systems Methodology (SSM)
- Do (brain metaphor); Viable Systems Model (VSM)
- Check (psychic prison metaphor): Critical Systems Heuristics (CSH)
- Act (instrument of domination metaphor): Community Operational Research (COR)

In the case study, it was explained that the choice of methodology was not a formal process of looking at alternatives, so it could have been done more stringently, like considering Interactive Planning (IP), SAST, AIM and SSM instead of unreflectively deciding on doing SSM-like activities, but the case still illustrates how different needs at the different stages of the PDCA required different methodologies, and how the metaphors were used for grouping them.

The relevance of using metaphors for classifying methodologies, rather than using the SOSM, is perhaps particularly relevant for the Do step of the PDCA, as most systems methodologies can be found within the functionalist paradigm. Following the example of how Morgan (1998) talks about the brain metaphor as the key metaphor for understanding TQM, which is also echoed by Flood (1993) on the design of quality management systems, it felt more natural to use the brain metaphor than that of the machine, organism, culture or political system, although all of those could have been relevant as well.

In the bullet list above, there is a reference to COR at the Act step. COR simply means to use OR within the context of the radical structuralist paradigm, so what is meant here is that the decision (“act”) to be carried out at this stage was done within this particular context. As was also explained in the case study, there was no particular systems methodology in use at this stage, but the nature of the problem was that the decision had

to be made from the viewpoint of “self-management science” rather than leaving it to the managerial class or some external authority.

5.1.3 The implementation phase

In the case study, it was explained how the implementation of the chosen systems methodologies was done pragmatically, meaning that it was not done in perfect alignment with guidelines on how to do SSM, VSM and CSH.

The weakest implementation was probably the case of implementing SSM. As was also mentioned in the account of the case study, there was no formal alignment with the seven steps of doing SSM in Mode 1, and the “rich picture” used for trying to describe the problematic situation was not the chaotic diagram that usually follows at this stage. On the contrary, the “rich picture” came from having a conversation about the Pac-Man theory of TQM implementation (Ogland, 2009a; 2013; 2017; 2018a), which resulted in a two-by-two matrix containing Pac-Man characters. Nevertheless, the diagram was a cartoonish representation of the problematic situation, as is typical of SSM, and it was sufficient for creating a common understanding of what the problem was and to stimulate discussion on how to solve it. Unfortunately, there was no formal use of the CATWOE test and similar tools at the stage of trying to develop a strategy, and neither was the solution strategy of doing ISO 30301 audits written down, but there was agreement on the strategy and how it should be carried out.

In retrospect, it might have had been helpful to carry out a CATWOE, meaning that concepts like Customer, Actors, Transformation, Worldview, Owners and Environment were formally identified and analysed (Checkland, 1981). Or perhaps it would have been even more useful to carry out the simplified version of CATWOE known as OCCAM (Roderick, 2022), which stands for Owners, Clients, Complicit, Actors and Marginalised. As the implementation process was carried out from the viewpoint of the Marginalised, the OCCAM tool might have been more useful than the traditional CATWOE for emphasising this particular challenge.

When it comes to the implementation of the ISO 30301 audit system by use of VSM, the approach was similarly pragmatic as with SSM. There was no strict alignment with specific guidelines on how to use the VSM, but there is a cybernetic logic built into all of the ISO management systems standards, including ISO 30301, and the guidelines for developing ISO 19011 auditing systems follow a similar logic. Nevertheless, VSM was a useful tool for making sure that all the five subsystems of VSM-based cybernetic management were present and given sufficient focus as the system was developing. If the system had been allowed to continue, an even stronger focus on the VSM would probably have followed.

Just as with SSM and VSM, the implementation of CSH was done in a pragmatic manner, answering the twelve boundary questions from the perspective of “is” and “ought to” for the purpose of structured reflection. It was a useful exercise, helping to provide critical awareness into what had been done and what still needed to be worked on, which would be particularly relevant if one should decide to cycle through the PDCA process once more. However, at the Act step of the PDCA, there was no final decision on what to do next, although it was clear that the current approach was no longer viable.

5.2 Does the revised TSI make it easier to support the three CST commitments?

CST is committed to critical awareness, emancipation and methodological pluralism. Earlier in the paper, it has been shown how TSI promises to support the three CST commitments but often ends up having difficulties doing so in practice. The aim of the revised TSI was to improve on this situation by focusing on the Burrell-Morgan matrix, the PDCA process and the use of internal CST consultants.

5.2.1 Critical awareness

When framing TSI from the perspective of radical structuralism and using the PDCA process for traversing the interpretive, functionalist and radical humanist perspectives, because they are relevant in stages of planning, executing and evaluating, it is difficult to avoid critical awareness, as was illustrated in the case study. First of all, the way CST and TSI are framed within the context of radical structuralism means that the world is interpreted through the lens of oppression and victimisation. Even in cases that may appear harmonious, to understand a problematic situation through the lens of radical structuralism means that it is disharmonious, so there can be no understanding before elements of oppression and victimisation have been identified. Perhaps somebody would argue that this approach makes CST and TSI uncritically critical in the sense of identifying problems of oppression and victimisation where there are none, but that is an ideological critique against CST and critical theory in general, making it appear invalid as a critique of TSI.

When it comes to the individual steps of the PDCA cycle, one might say that there are elements of critical thinking during planning and doing, as one has to come up with relevant organisational metaphors and choose appropriate systems methodologies, where metaphors illuminate certain aspects and obscure others, while certain systems methodologies may be helpful for solving certain problems and less useful for others, but critical social awareness, in the sense of what CST commits to, happens most clearly during evaluation (“check”), when system methodologies fitting with the radical humanist perspective are to be used, as was illustrated by the application of CSH in the case study.

In the case study, CSH was carried out at a stage when the project was terminated by those in power, meaning that the use of CSH could not bring it back to life, but in a different

scenario, a CSH-type evaluation could be useful for stating whether the people involved had broken out of their “false consciousness” and were already engaged in emancipatory actions or whether the next cycle should continue to focus on the same psychological challenges.

The decision on whether to do another PDCA cycle or to exit and establish a new PDCA process somewhere else would come at the “act” step, which is why it is important at this step to re-enter the social paradigm of radical structuralism to make an “objective” assessment of whether the state of oppression and victimisation has changed, looking at measurable issues. Unfortunately, there are no such measures in the case study, as it is essentially an account of failed political activism, but if the story had ended with an organisational restructuring with the quality department being renamed the archive department, having the competent archive manager lead the unit and having the incompetent quality manager removed from a position of power, it would have counted as a victory from within the perspective of the radical structuralist paradigm.

5.2.2 Emancipation

In their explanation of TSI, Stowell and Welch (2012, p. 65) said that the objective of TSI “is to create a learning system about problem situations from which to generate an approach to solution”. In the theory section, it was pointed out how learning systems need to be understood within the context of the chosen sociological paradigm, using Burrell and Morgan (1979, p. 366) to argue how, for instance, a learning system from the perspective of radical structuralism should take the form of action research on how to succeed with political activism.

An important aspect of aligning TSI with the PDCA process was that the CST commitment to emancipation became a characteristic part of the approach. The key mechanism for achieving this was to insist on aligning the “act” step with radical structuralism, meaning both the entry and exit point for each PDCA cycle focused on institutional or structural oppression and insisted on defining measurable means of observing the outcome of emancipatory action.

As was noted in the discussion of critical awareness, the way the case study ended up as a failure is reflected in the way emancipatory actions did not result in structural changes that would allow democracy at work, but it still shows emancipatory commitment. From the viewpoint of TSI as a learning system, the Choice Phase of selecting a systems methodology is the action hypothesis and the outcome of the Implementation Phase is the test of the hypothesis. If the implementation resulted in emancipatory structural change, the hypothesis would be confirmed. Otherwise, one should try to learn from failure and come up with ideas that might lead to future success.

The revised TSI, using the PDCA process and the paradigm matrix, makes it clear how success and learning are connected to political action, which was not obvious in the earlier studies (e.g. Flood, 1993, chapters 12-15).

5.2.3 Methodological pluralism

Although methodological pluralism plays an important role in TSI and the way CST is communicated in much of the literature, it may seem like a less obvious commitment than the commitments to critical awareness and emancipation. However, the commitment to methodological pluralism is an important characteristic of CST because it allows for a wide range of different systems methodologies in the service of the previous two commitments. The idea is illustrated by the way the case study aligns TSI with the PDCA cycle to show how different methodologies, based on different sociological paradigms, are used at different stages of problem-solving. It was also illustrated how it is important to make sure that the problem context is understood from the viewpoint of critical theory (radical structuralism paradigm) before formulating the problem and after evaluating the solution.

Unlike some of the classical case studies on how to use TSI for implementing TQM (Flood, 1993, pp. 195-269), where the emancipatory aspect of CST seems to get lost, the case study above illustrates the usefulness of applying the PDCA cycle for showing how radical structuralism can and should be supported by interpretivism, functionalism and radical humanism during stages of planning, design and evaluation.

6. Conclusion

Critical Systems Thinking (CST) presents itself as a useful philosophy for dealing with problematic situations in political environments that need to be understood in a holistic manner, which is typically the case when trying to implement Total Quality Management (TQM). However, it has not always been easy to succeed with CST-based implementation in practice, particularly when the CST consultant is trying to implement TQM in oppressive organisations by means of engaging with top managers and representatives of the organisational elite.

Using the CST-based TQM implementation method known as Total Systems Intervention (TSI) as a basis for understanding the problematic situation, two major challenges have been identified. Firstly, traditional TSI has been too unstructured in the sense of allowing users to diagnose problematic situations and choose systems methodologies without aligning with the way TQM typically makes use of a PDCA process. Secondly, traditional TSI has primarily been used in a top-down manner, which seems to be exactly the opposite of what one would expect from a CST philosophy that puts emphasis on critical awareness and emancipation, risking to create an organisational understanding that conflicts with the viewpoint of those at the bottom of the organisational ladder.

It was these two concerns that shaped the theoretical basis for the revised version of the TSI method in this paper, showing through theory and five years of practice how one could implement TQM in a public sector organisation characterised by hierarchical oppression and politics. The fact that it was possible to survive as long as five years, using this revised TSI strategy, gives support to the hypothesis that a bottom-up PDCA-based approach is viable, although the five years were characterised by endless conflicts and frustrations. As CST is based on the metaphor of organisations as instruments of domination, in the sense that powerful managers and powerless non-managers typically have opposing interests, it is hoped that the study will stimulate further action research on how to survive in oppressive organisations.

Acknowledgement

The key ideas for this paper came from conversations with Prof. Frank Stowell in the aftermath of the 22nd UKSS International Conference *Joined-up Thinking for a Disconnected World* on June 20th of 2022 and the UKSS conference *Sustainable Systems; the Importance of Systems Thinking and Practice* at the University of Portsmouth on December 7th of 2022. I also want to thank Prof. Jens Kaasbøll for useful conversations and good feedback, show my gratitude for positive and useful remarks from the two anonymous *Systemist* reviewers, and share my appreciation for the nice comments from Shirley Thompson and Bruce McNaughton when the paper was presented at the 23rd UKSS International Conference.

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