A New Methodology in Support of Critical Systems Thinking: Critical Systems Intervention

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Abstract

Purpose – Total Systems Intervention (TSI) was designed as a methodology supporting Critical Systems Thinking (CST), a philosophy trying to unite systems thinking with radical politics. However, TSI has been critiqued on different grounds, which resulted in revisions like Local Systemic Intervention (LSI) and Critical Systems Practice (CSP). We believe that the revisions did not pay sufficient attention to the criticism, so we are presenting a new revision of TSI called Critical Systems Intervention (CSI).

Design/methodology/approach – Four criticisms of TSI are identified and used as input for the design of CSI. The CSI design is illustrated by revisiting a TSI case study of questionable merit to show how the revised approach cleans it up. An important part of the cleaning up consists of showing how the case study's use of the Viable Systems Model (VSM) should be executed by focusing more explicitly on CST themes like collaboration, self-governance and workplace democracy.

Findings – CSI is sounder, simpler and more aligned with CST philosophy than TSI.

Originality/value – CSI is based on ideals and ideas from classic CST literature that were identified at the time but not sufficiently explored and thus abandoned too quickly.

Research/ Practical/ Social/ Environment implications - CSI should make it easier for CST interventionists to align with CST's commitments to critical awareness, emancipation and multimethodology.

Research limitations – CSI has so far only been used for revisiting old TSI narratives and needs to be tested further through action research.

Keywords:

Critical Systems Thinking, Total Systems Intervention, Viable Systems Model, Critical Systems Intervention

1 Introduction

Critical Systems Thinking (CST) is a holistic mode of thinking that is developed within the field of Management Science and Operational Research (MSOR), committed to critical awareness, emancipation and multimethodology (Flood & Jackson, 1991a; Jackson, 1993; Midgley, 1996). It is a systems philosophy taking the view that "the world is as it is because those that have power control the many without, [making] the pillars of our society such as science and industry […] reinforce the status quo in order to sustain the dominance of the possessor" (Stowell & Welch, 2012, p. 154).

To give guidance on how to translate CST into practice, various efforts have been made, including the development of a methodology known as Total Systems Intervention (TSI) (Flood & Jackson, 1991b). While TSI met an important need, it was shortly critiqued on both philosophical and practical accounts (e.g. Tsoukas, 1993a; 1993b; Flood, 1995), which resulted in revised approaches such as Local Systemic Intervention (LSI) (Flood, 1996) and Critical Systems Practice (CSP) (Jackson, 2003), although both of them ignored aspects of the criticism that had been raised against TSI (Midgley & Rajagopalan, 2020), indicating an uncertain CST future of "surprises and developments" (Pinzon-Salcedo, 2023, p. 10).

In this paper, we want to respond to this future challenge by looking at the past. While some of the early literature gives the impression that TSI started out as a framework for doing CST-driven interventions through broad diagnoses based on Morgan's (1986) work on organisational metaphors and selecting remedies based on Burrell and Morgan's (1979) work on sociological paradigms, the important way Morgan (1980) identified the relationship between paradigms, metaphors and methodologies seems to have been ignored in favour of opportunistic ideas as TSI developed. When we present our revision of TSI, called Critical Systems Intervention (CSI)[1], this new methodology is driven by the question of whether TSI had been more robust against critique if it had been less quick to replace its root ideas with unfortunate alternatives. As we are trying to rejuvenate old debates, we will also investigate whether it is likely that CST is sufficiently alive to accommodate such debates.

The paper is structured in six sections. The introduction is followed by a literature review to explain some of the lacks and limits of TSI. This is followed by the methodological proposition where CSI is presented and explained. To show how CSI compares with TSI in practice, a case study is presented, followed by a discussion. The concluding section summarises the importance of CSI as a better way of turning CST into practice and makes a call for more CSI-related research.

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[1] Luckett (2004) uses the acronym CSI (Critical Systems Intervention) when referring to interventions more or less aligned with Midgely's Systemic Intervention (SI) methodology, but as Midgely explains why he does not want to use the term "critical" and thus ended up with SI rather than CSI (Midgely & Rajagopalan, 2020, pp. 127-128), we believe that CSI could be safely used for our approach without the risk of causing confusion.

2   Total Systems Intervention (TSI)

The literary review of challenges with TSI follows the structure of Tsoukas's (1993a) argument, starting with the System of Systems Methodology (SOSM), then the philosophy of complementarism, before moving on to metaphors and whether TSI effectively supports the CST commitments.

2.1   The Systems of Systems Methodology (SOSM)

TSI is designed as a cyclic process that starts with a broad diagnosis of the problematic situation ("creativity"), then comes up with a relevant remedy ("choice"), before executing the remedy ("implementation") and starts again. As the first step makes use of metaphors (Flood & Jackson, 1991b; Flood, 1993), one might expect that the metaphors were used for identifying the relevant sociological paradigm to produce a list of relevant methodologies (Morgan, 1980; 1986; 1993; Burrell & Morgan, 1979), but Jackson (1991, p. 27) claims (without experimental evidence) that the Burrell-Morgan paradigm matrix was difficult for people to understand, thus replacing it with his own SOSM matrix (Jackson & Keys, 1984).

While Tsoukas (1993a, pp. 59-61) saw the SOSM as logically flawed and Flood (1995) saw it as difficult for people to use, what we see as its main problem is that it corrupts the logic of the Burrell-Morgan matrix by confusing theoretical positions (subjective/objective) with ideological positions (regulation/radical change) (see: Flood, 1990, p. 83). Although Jackson refers to Habermas's writing about technical, practical and emancipatory interests, corresponding with the functionalist, interpretivist and radical paradigms in the B-M matrix, he ignores how the B-M matrix always aligns ideological and theoretical interests, such as practical-emancipatory (radical humanism), technical-emancipatory (radical structuralism) or non-emancipatory (interpretivism, functionalism), which could be used for creating a clean interface between the choice of metaphors ("creativity") and the next step ("choice"), allowing metaphors to frame the choice methodologies (Morgan, 1980). In SOSM, however, metaphors play no active role in which methodologies to choose.

Jackson (1991, p. 271) says that there is nothing wrong in using the B-M matrix rather than SOSM, although he does not recommend doing so. Today, Jackson (2021, p. 598) appears less confident in SOSM than he used to be, and is currently arguing for a new approach where five perspectives (metaphors) are used for selecting methodologies, although still ignoring the B-M matrix. However, from the viewpoint of developing CSI as a revision of TSI that tries to make the links between "creativity", "choice" and "implementation" work more smoothly, a return to the way CST emerged from discussions about the B-M matrix seems like a sensible approach (Ogland, 2023b).

2.2   Complementarism

Because SOSM does not separate theory and ideology along different axes, as done in the B-M matrix, it is perhaps not surprising that TSI is designed for allowing users to walk in and out of complementary paradigms as they see fit. Tsoukas (1993a, pp. 61-63) questions whether

such non-commitment is practically possible, and also finds it peculiar given the way TSI and CST were originally presented as solutions to the problem of how both Hard Systems Thinking (functionalism) and Soft Systems Thinking (interpretivism) tended to be blind to the patterns of power and oppression seen through CST (radical paradigm). While Jackson (1991, p. 260) admits that radical systems thinkers are more likely to be "imperialists" than "complementarists", meaning that they see the radical paradigm as the overall perspective while interpretivism and functionalism are reduced to playing a subservient role, which should indeed fit perfectly with the CST commitment to emancipation, he decides to reject imperialism because the "imperialist scenario seems […] unlikely to come to pass as a result of natural developments within the discipline [and forcing it may have negative consequences]". For us, however, this only illustrates the problem of how SOSM fails to make a clear distinction between theory and ideology. CST may look complementarist in the way it commits to multimethodology, but this should not distract from the way it is (imperialistically) committed to critical awareness and emancipation (Midgely, 1996).

2.3   Use of metaphors for outlining problem spaces

Tsoukas (1993a, pp. 63-65) says that metaphors may have relevance when they bring out new and unexpected perspectives, but in TSI case studies it looks like metaphors are only used in confirmatory and useless ways. This may not come as a surprise when we notice how the "creativity" step of TSI consists of having group discussions about which metaphors to choose rather than using metaphors to control the intervention in a manner that enforces a commitment to critical awareness, emancipation and multimethodology. Indeed, in the TSI revisions known as LSI (Flood, 1996) and CSP (Jackson, 2003), metaphors no longer have the same dominant role during broad diagnosis (the "creativity" step of TSI/LSI/CSP). This does not mean that metaphors are useless per se, but it supports Tsoukas's claim that the way TSI tried to use metaphors was wastefully redundant.

2.4   TSI and CST commitments

As Tsoukas (1993a, pp. 65-67) points out, when TSI is supposed to be the practical face of CST, one should expect that it is intrinsically linked with the CST commitments to critical awareness, emancipation and multimethodology. Although TSI could be seen as a tool in support of multimethodology, it seems much less clear whether it aids the oppressed in breaking out of their "false consciousness" and taking emancipatory actions. Tsoukas sees very little evidence of this, and it is thus noteworthy how emancipation was replaced by the broader notion of "improvement" when TSI was revised into CSP (Jackson, 2003, pp. 303-305). Although this allows CST/CSP to become more like General Systems Theory (GST) (von Bertalanffy, 1968) in acting as an umbrella for all sorts of systems theories and systems methodologies, it also corrupts its initial ties with critical theory. It thus seems to support Tsoukas's (1993b) view that TSI was never all that political in the first place.

3   Critical Systems Intervention (CSI)

In response to the TSI weaknesses identified above, we propose a revised TSI methodology, called Critical Systems Intervention (CSI), which is structurally similar to TSI in the sense that it uses the same three-step cycle of "creativity", "choice" and "implementation", but with accommodations such as replacing the SOSM with the Burrell-Morgan matrix, replacing complementarism with imperialism, and having a more structured use of metaphors to ensure alignment with the CST commitments; all of which should contribute to CSI becoming simpler, sounder and more intrinsically linked with CST than was the case with TSI.

3.1   First Step: "Creativity"

Rather than allowing people to choose any organisational metaphor they feel relevant, as is how TSI works, CSI follows the logic of plan-do-check-act (PDCA) interventions (Deming, 1986; Flood, 1993, p. 13; Jackson, 2021, p. 599) by assuming that each of the four steps requires a particular sociological paradigm to support CST, and where each paradigm gives rise to one or more metaphors (Morgan, 1980). Figure 1 lists the PDCA steps in the pragmatically useful CAPD order (Seddon, 2005; Jackson, 2021, pp. 599-600), and shows the corresponding paradigms (Burrell & Morgan, 1979) and how Morgan (1980) assigns lists of metaphors to each such paradigm.

Figure 1: How different organisational metaphors apply to different stages of PDCA interventions

| Stage of PDCA intervention	Sociological Paradigm	Organisational metaphors
Check (current status)	Radical structuralism	Instrument of domination, schismatic, catastrophe
Act (decide whether to intervene)	Radical humanism	Psychic prison
Plan (create consensus on how to act)	Interpretivism	Text, language game, accomplishment (enacted sense-making)
Do (carry out intervention to achieve specific goals)	Functionalism	Machine, organism, population-ecology, cybernetic system, loosely coupled system, political system, theatre, culture

The way the PDCA process creates different lists of metaphors for different paradigms is expected to enforce commitment to CST, for instance, telling the CSI user to start by visioning the organisation as an instrument of domination, regardless of how benign or altruistic the members of the organisation may think it is. In fact, the assumption at the second step (Act) is that organisational members are not aware of their own reality ("psychic prison"), but whether an intervention is possible will also depend on whether it is possible to establish

critical mass for taking political action. The next steps then consist of aiding the oppressed in understanding reality ("sense-making") and creating the necessary "machine" (or different functionalist metaphor) for carrying out political action, which may lead towards new cycles after we have returned to the initial domination metaphor for evaluating consequences.

3.2   Second step: "Choice"

Unlike TSI, where there is no explicit interface between diagnosis and remedy, the Burrell-Morgan matrix in Figure 2 makes it possible to see how each metaphor links with one or more methodologies. The content of the matrix is based on Jackson (1991), although he speaks of Community Operational Research (COR) as a basis for developing methodologies rather than a methodology in itself, which is why we have included "game theory for the oppressed" (Elster, 1982; Rosenhead, 1987; Frasca, 2001; Ogland, 2009a; 2014; 2023a; Klein, 2023) to show how there is methodological support for COR.[2]

Figure 2: Using the Burrell-Morgan paradigm matrix for classifying systems methodologies
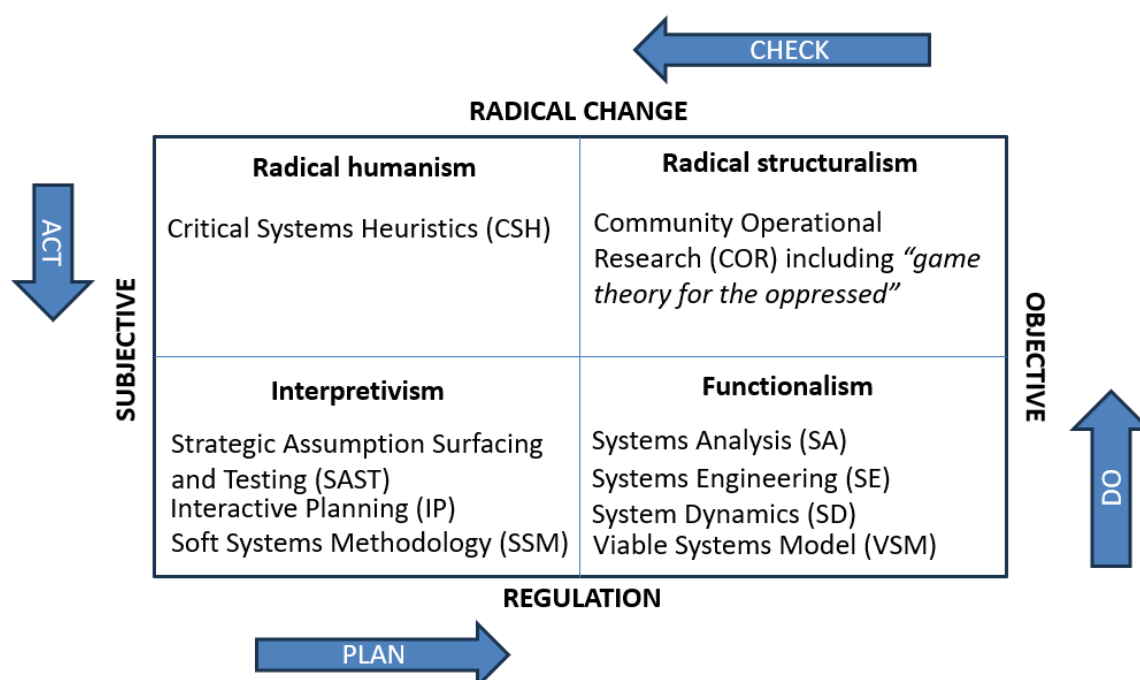
In Figure 2, a PDCA process encircles the paradigm matrix in correspondence with what was explained previously (Figure 1). In principle, it should be possible to use the metaphors within each paradigm as a discriminator between methodologies, like the "cybernetic system" metaphor (aka "brain" metaphor; Flood & Jackson, 1991b) produces a list that includes VSM. However, when starting with an instrument-of-domination metaphor taken from "the game theory of the oppressed", meaning that the metaphor gives rise to a particular mathematical model such as the *Pac-Man* or the *Space Invaders* video games (Frasca, 2001; Ogland, 2023a),

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[2] Jackson (1991) sees the Viable Systems Method (VSM) as an objective regulatory method (lower right quadrant of the matrix) while wanting to align it with structuralism rather than functionalism, but given his position in recent debates about Bogdanov and VSM (Jackson, 2023; Stowell, 2024), perhaps he would agree that politically motivated use of VSM (as assumed by CST) makes the methodology more at home within the radical structuralist paradigm (upper right quadrant).

the choice of methodology at each of the PDCA steps may be guided by the way such a model gives rise to drama (radical humanism), strategy development (interpretivism), skills (functionalism) and understanding of rules (radical structuralism).

3.3 Third step: "Implementation"

In reference to Figure 2, it should be noted how CSH becomes a mandatory part at the beginning of every CSI, which Midgley and Rajagopalan (2020, p. 122) also believe is necessary. It means that CSI tries to fix the problem of making TSI align with CST commitments in a similar way as Systemic Intervention (SI) does, but it is important how CSI departs from SI in the way it makes use of the methodologies in a PDCA-based stepwise manner rather than integrating them together as a total mix. CSI starts and ends within the paradigms of radical change but makes excursions into the paradigms of regulation when dealing with how the oppressed should think and act among themselves for planning and executing interventions. As seen from the previous steps of "creativity" and "choice", it is the ties between the PDCA and the paradigms, metaphors and methodologies (Figure 1 and 2) that make CSI intrinsically linked with CST.

3.4 Return to the first step for starting the next stage of the PDCA intervention

Each CSI intervention consists of four parts, corresponding with the four stages of the PDCA process, each part following the steps of "creativity", "choice" and "implementation", although the PDCA cannot be started before initial CA-steps have been done to get an initial organisational assessment from the viewpoint of radical structuralism and see whether the organisation is ready for change by using a radical humanist perspective. This means that a minimum CSI intervention goes through six steps CA-PDCA where the final C and A correspond with assessment after than intervention has been done ("Check") and decision on whether a new cycle or a new project is needed ("Act").

4 Case study

We have chosen to look at a TSI-oriented case study of using VSM for implementing TQM in a North American bakery (Flood, 1993, chapter 13), aiming to illustrate the difference between TSI and CSI. The first narrative below tells the story through TSI, making it open to the critique mentioned above, while the second narrative makes use of CSI, making it less open to this type of critique. After the two narratives, bibliometric trends for CST and TSI are used for arguing the need for research and development on methodologies like CSI.

4.1 Highlighting an old case study through TSI structure

Flood (1993) writes about TSI for implementing Total Quality Management (TQM), and uses the bakery study to illustrate some of his points. The bakery case is an interesting account of a successful process improvement, but the main purpose here is to contextualise the worries Tsoukas had with TSI, which is why it is retold by explicit use of the TSI creativity-choice-implementation cycle.

Creativity: There is no exact account of how metaphors are being used in the case study, but if one looks at how Flood (1993, pp. 209-212) gives his background information, the assembly of cakes is presented somewhat like a "machine", although there is also some talk of cultural challenges ("culture" metaphor) and perhaps the way TQM is to be used as an improvement strategy suggests the "brain" (cybernetic system) as an additional metaphor. However, the way metaphors are not mentioned in the original account fits with Tsoukas's claim that TSI's enforced use of metaphors has little practical relevance for how problematic situations are diagnosed and treated.

Choice: As no metaphors were explicitly mentioned, it is not clear how metaphors may have been used when selecting methodologies through SOSM, or even if SOSM was used at all, as there is no TSI-related explanation for the choice of VSM and the fishbone diagram. Corresponding with Tsoukas's view that TSI has little new to offer, fishbone diagrams and ISO 9001 assessments are standard tools for problem diagnosis in TQM, with structural analysis through VSM diagnosis seeming like a stand-in for doing ISO 9001 assessments. If SOSM had been used, the choice of VSM would make sense if the underlying socio-technical system was complex and the relationship between the actors was unitary ("in agreement"), or the VSM would make sense as a diagnostic tool if the system was complex and the relationship between actors was plural ("in search of agreement"). Still, as the choice of VMS is rather straightforward when trying to implement TQM, a reference to SOSM seems redundant, which is probably why it is not mentioned.

Implementation: In the account of how the intervention was executed and evaluated, technical, practical and emancipatory interests are mentioned (Flood, 1993, pp. 212-221). However, as Tsoukas points out, the way such interests are handled seems more like a consequence of common sense than anything having specifically to do with CST and TSI. As the consultant appears to be operating on behalf of senior management, the fact that the intervention results in happier workers seems motivated only in the way it contributes to increased productivity and reduction of error rates, which may then have a positive impact on profits and shareholder satisfaction. The case study seems to illustrate what Tsoukas says about TSI being contingently rather than intrinsically linked with CST.

4.2   Reconstructing the same case study with CSI
If we try to read the bakery study through CSI by using the PDCA process for circling through the Burrell-Morgan matrix, the story remains the same, but it reads in a different way. As explained previously, the creativity-choice-implementation steps will be used for each PDCA stage, and the PDCA itself is initiated at "check" (C) and then moves to "act" (A) before entering "plan" (P) and so on.

Check: According to CSI, the initial expectations of a CST consultant are that any organisation is oppressive and characterised by conflict (radical structuralism). Indeed, as Flood (1993, pp. 212-213) points out, managers and forewomen were shouting at the semi-skilled workers, giving us the impression of a noisy and unpleasant workplace. If one were to use the inner CSI cycle, the "creative" step could result in the instrument of domination metaphor or preferably a concrete game from the list of "video games of the oppressed" (Frasca, 2001). The "choice" step would then consist of choosing a structural assessment method in correspondence with

the chosen model, like the *Space Invaders* video game and seeing the effort of keeping up with the assembly line as similar to shooting the invaders as they are dropping bombs from the top of the video screen (Crawford, 2003, p. 30; Ogland, 2023a). The "implementation" step would consist of confirming whether *Space Invaders* would give an adequate structural analysis of what the situation is like.

Act: After having done the initial assessment, the decision to carry out a CSI intervention starts by asking whether the oppressed have developed a "false consciousness" that prevents them from taking political action (radical humanism). In the bakery case, Flood (1993, p. 210) describes a chaotic environment where people are uncertain of their roles and responsibilities, with workers not being informed about how well or badly their line is doing. He does not use metaphors for characterising he situation, but if one were to use the inner CSI loop, the "creativity" step might be useful for thinking about the bakery as a "psychic prison" (nobody daring to ask why work feels like *Space Invaders*), making it possible at the "choice" step to use something like Critical Systems Heuristics (CSH) at the "implementation" step for clarifying the difference between how the organisational system is and how it ought to be.

Plan: Once the CST consultant has become part of the group he wants to emancipate, an atmosphere of harmony and cooperation is needed for collective problem-structuration (interpretivism). In this particular case, the CST consultant seems to have been hired by senior management, which could explain why the VSM and the fishbone diagram are chosen as diagnostic tools and how they are used, although they could also have been chosen if the consultant was working on behalf of the trade union. If the inner CSI loop had been applied, perhaps "text" would have been a relevant metaphor, as the choice of VSM at the "choice" step means that "implementation" consists of reading the organisation through the lens of the Viable Systems Model (VSM) and the fishbone diagram.

Do: After the CST consultant has aided the chosen group in developing a plan for emancipatory action, the plan has to be carried out in a goal-oriented and objective manner in the real world (functionalism). Flood (1993, pp. 212-219) explains how improvement projects were designed and implemented. If the inner loop of CSI had been more explicitly used, thinking about the organisation as a brain (cybernetic system) at the "creative" step would explain why VSM was selected at the "choice" step and made sure the "implementation" step was carried out in alignment with the functionalist paradigm.

Check: In CSI it is important to make a paradigmatic distinction between the intervention process and its outcome, as the execution of the process is a technical challenge (functionalism) while the outcome is expected to have social consequences (radical structuralism). In the bakery case, Flood (1993, pp. 216-220) talks about structural change in order to align with the VSM, and how these changes were done in a manner to improve autonomy among workers and to generally improve the social climate along with making process and product improvements. If the inner CSI loop had been more explicitly used, it would have been interesting to revisit the *Space Invaders* game model used at the initial step to see whether this model still made sense or whether the organisation was now playing a different game. Such a comparison would require a relevant evaluation method at the

"choice" step, and make sure that its "implementation" step would be in alignment with the radical structuralism paradigm.

4.3   Is there a need for methodologies like CSI?

In order to get an impression of whether academics and scholars still care about CST and TSI, Google Scholar was used for counting the number of references to the philosophy and the methodology since the terms were introduced in 1990. Results are shown in Figure 3.

Figure 3: Using year-by-year Google Scholar counts to measure scholarly interest in CST and TSI (Feb 26, 2024)
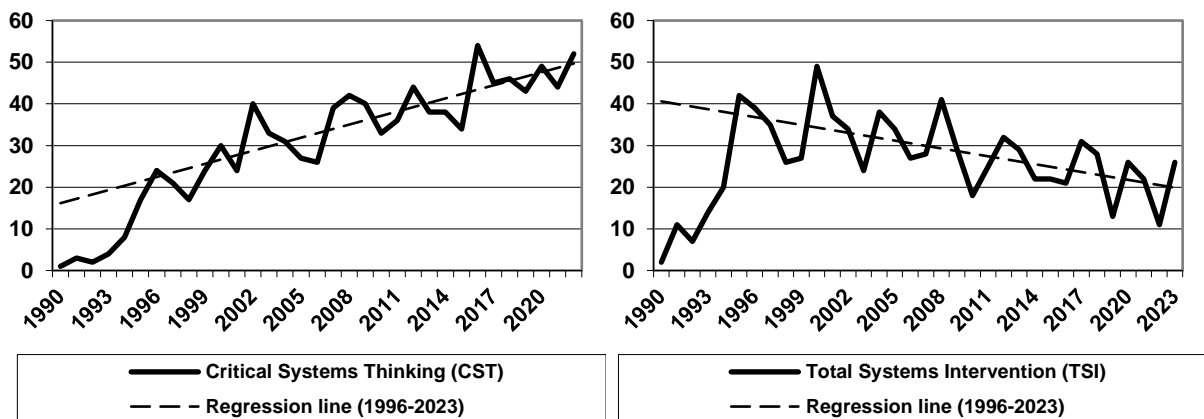
The diagram on the left side of Figure 3 shows a history of increased interest in CST, with the slope of the regression line saying there is an average increase of about one reference per year. The diagram on the right side shows how TSI grew rapidly in popularity between 1990 and 1996, just like CST, but has then been on a downward path. Increasing interest in CST in parallel with decreasing interest in TSI should make CSI relevant. When we look at bibliometric trends for earlier revisions of TSI, such as Local Systemic Intervention (LSI) and Critical Systems Practice (CSP), both of them look relatively dead, although CSP is not as bad as LSI.

5   Discussion

5.1   The methodological soundness of CSI in contrast to TSI

Although the story in sections 4.1 and 4.2 is the same, when using TSI as a narrative tool, it opens up to all the criticisms mentioned by Tsoukas. For instance, when he says that TSI tends to use metaphors in a circular or redundant matter, this is confirmed by the way no metaphors were mentioned in the TSI account and how it seems unlikely that the intervention would have worked differently if metaphors had been used. In a similar way, when Tsoukas accuses SOSM of being impractical and illogical, there is nothing about the study to suggest otherwise. Indeed, there is no mention of SOSM in any of the case studies or theoretical explanations of TSI as a TQM strategy (Flood, 1993), which was clarified in the later statement that SOSM was "not suitable for practical work" (Flood, 1995, p. 188). Finally, when Tsoukas says that there is no mechanism in TSI that links it with the ideology of CST, this is confirmed in the manner the intervention was owned by senior management, who was not expected to share the exact same interests as the potentially alienated and oppressed workers.

When we look at the case study from the viewpoint of CSI, it becomes radically different. For instance, CSI is intrinsically linked with CST in the way it makes default use of radical structuralism to focus on the emancipatory interests of those being oppressed due to issues like race, gender, age or whatever, and then switches to radical humanism if the CSI consultant decides to join the oppressed to raise critical awareness, aiding the radical group in planning an intervention (interpretivism paradigm), carry it out (functionalism) and evaluate it (radical structuralism). Unlike TSI, which leaves it to the organisation to decide whether the intervention should focus on technical, practical and/or emancipatory interests, CSI makes the emancipatory interest the focal point of the intervention.

When it comes to the criticism of SOSM, both the TSI version and CSI version of the case study ignore SOSM as being impractical. For Flood (1993; 1995), SOSM was simply abandonned, but for CSI it was replaced by the Burrell-Morgan matrix that Jackson (1991) had originally rejected for unclear reasons. Unlike the SOSM, the Burrell-Morgan matrix separates ideology from theory, and it also links intrinsically with the metaphors. Unlike the SOSM, the Burrell-Morgan matrix allows the "creative", "choice" and "implementation" steps of TSI/CSI to circle naturally, as was illustrated in the CSI narrative.

Finally, while the use of metaphors seems redundant in TSI, they play an important part in CSI. The metaphors are used during stages of sensemaking within the radical humanist and interpretive paradigms, and they are converted into "mathematical" models in the functionalist and radical structuralist paradigms. In the CSI version of the case study, this was illustrated by the way the "video games of the oppressed" (Frasca, 2001) were used for a game-theoretical framing of objective reality (radical structuralism), which paved way for critical systems heuristics[3], text analysis and cybernetical theory as the metaphors and models were modified during different stages. The metaphors and models played an instrumental role in deciding, framing, doing and evaluating the outcome of the CSI intervention.

5.2   Is complementarism the right approach to CST/TSI?
The TSI account of the case study is narrated in a manner that fits with Jackson's (1991) argument for complementarism in the sense that the decision-makers will have to decide on whether technical, practical or emancipatory interests are to be served and thus jump between sociological paradigms. However, the way this approach seems to put practical and technical interests above the emancipatory ones could be seen to be legitimising Tsoukas's (1993a; 1993b) worry that complementarism does not really work.

In the CSI version of the story, the philosophical approach is much closer to what Jackson (1991) calls imperialism, meaning that the critical or emancipatory perspective (radical paradigm) is used as a dominant world-view with interpretivism and functionalism subserviently used as the interventionists are trying to solve practical or technical problems

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[3] CSH was the only radical humanist methodology in Figure 2, and thus used in the case study, but the soft version of game theory known as drama theory (not unlike CSH but more focused on conflict structure) might have been an even more natural choice (Rosenhead & Mingers, 2001; Ogland, 2009b).

within the context of their overall emancipatory goals. Jackson (1991, p. 260) questions this approach because he finds it unrealistic to "convince the adherents of alternative positions that their unique insights were being fully respected". The CSI response to this, however, would be that the purpose of CST/CSI should not be to convince the adherents of alternative positions but rather to make sure the CST interventionists have a methodology that is scientifically sound while serving the political position CST is committed to.

5.3   Is there a need for methodologies like CSI?

The bibliometric results show an increasing interest in CST parallelled with a decreasing interest in TSI, indicating that CSI should be interesting both from a practical and theoretical perspective. Of course, the reason for increased interest in CST could also be a consequence of engagement from people who like the multimethodological aspects of CST without acknowledging its ideological content (e.g. DigitalCampus, 2022). On the other hand, there are also those who try to use CST more politically than ever by engaging in current debates about diversity, equity and inclusion (e.g. Muñiz et al, 2023). Whatever the reason for the engagement with CST, the positive bibliometric trends open up for all sorts of CST-related debates, including concerns about "fake" vs "real" CST and how CSI supports the real thing (as defined by: Midgely, 1996).

6   Conclusion

Midgley and Rajagopalan (2020) argue that the frontiers of CST research should be engaged with challenging foundational ideas like methodological pluralism or Western rationality in general. The approach in this paper has been the exact opposite, namely to go back to the roots of CST and try to reconstruct TSI in the shape of a new methodology CSI that should be simpler, sounder and more clearly in line with the CST commitments to critical awareness, emancipation and methodological pluralism. Contrary to the postmodernist philosophy that underlies much of the writing about CST and TSI in the 1990s and early 2000s, we wanted to return to the modernist roots of CST by introducing CSI as a way of transforming CST into practice.

Although we believe CSI should be immune to the kind of critique that was raised against TSI (e.g. Tsoukas, 1993a; 1993b; Flood, 1995), and which we believe could also be raised against revised methodologies such as LSI (Flood, 1996) and CSP (Jackson, 2003), there is still need for more research on CSI to provide examples and insights on how it works in different practical settings.

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