Review

Towards concentric spatial systems for sustainable social development: Beyond western ethnocentric diametric spatial opposition and empty space

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Abstract: This article outlines key features of an emerging spatial turn in education, the social sciences, and the humanities and its relevance to developing sustainable social systems, with a particular focus on inclusive systems. This is cognisant of UN Sustainable Goal 4 on Equitable Inclusive Education and Goal 1 on No Poverty. Offering a necessarily illustrative selection of key conceptual traditions and recent applications of spatial understandings pertinent to education and inclusion, with wider applicability, this proposed spatial turn is examined as offering critical alternatives to Western ethnocentric frames of space. This leads to contrasts between concentric spatial systems of inclusion, assumed connection, and relative openness and diametric spatial systems of exclusion, splitting, and mirror image oppositions in education and community spaces of relation.

Keywords: concentric space; diametric space; inclusion; systems; education; nature

1. Introduction: A spatial turn to challenge the neutralising of space in social systems

Sustainable social development requires not only a systemic understanding but in doing so, it needs to address a frequently overlooked dimension, namely, that space is itself a system, a malleable system of relations impacting on causal trajectories and social meanings. Across education, the social sciences and the humanities, there is increasing interdisciplinary recognition of a so-called spatial turn, to accelerate a focus on spatial system dimensions. This spatial turn is now recognised in geography as being wider than simply treating space as place [1]. Place is one aspect of space and is long recognised in anthropology as bridging the material and symbolic. However, relational space is a wider conception than simply place, with alternative relational spaces relevant to sustainable social systems and their development [2]. This includes recognition that relational space is a systemic concept pertinent also to understandings of marginalisation [1] and inclusive systems [2].

Japanese conceptions of *ma* offer a spatial-relational dimension to space, space is a framing condition for social relationships. The Japanese concept of *ma* can signify the space between one thing and another and can also be used for understanding of human relationships [3]. A 2018 European Journal of Education, Special Issue Editorial on transitions asks the question, can Eurocentric modes of space be identified and challenged? [4].

A spatial turn is also being recognised for hermeneutics [5]. In seeking to understand spatial divisions and connections, Ferrare and Apple's critical education studies approach seeks understandings of 'spatial processes in education … we not only need these "new" theories, but we also need to employ methodological tools that "think" spatially' [6].

This concern applies beyond simply education systems and more widely to sustainable social systems, including at local community level for engagement and inclusion of marginalised groups. Building on the UN Sustainable Development Goal (SDG) 4 on equitable and inclusive education, and SDG 1 on No Poverty, sustainable social systems must be inclusive systems and thereby incorporate a spatial focus on inclusion and challenge to exclusionary processes, structures, practices and discourses.

Interrogating a spatial turn for systems relevant to promotion of sustainable social development involves a cross-cultural focus on different kinds of space that challenge Western spatial ethnocentrism. A Western Cartesian tradition tends to operate through treating space in two ways, as 'empty space, which almost everyone is convinced is mere nonentity' [7] or as a diametric oppositional space bringing splits between for example, reason and emotion, mind and body. These Western traditions of spatial divisions as dualism precedes Descartes and includes nature versus culture diametric oppositions that can be traced to Ancient Rome [8].

Reconfiguration of the relational space of schools concerning nature requires challenge to traditional Western diametric oppositional contrasts between nature and culture. Descola's cross-cultural anthropological review highlights the constructedness of this diametric opposition:

'This Roman landscape, together with all of the values associated with it that colonization had introduced around cities as far away as the banks of the Rhine and in Britain, was the landscape that introduced the notion of a polarity between the wild and the domesticated that we still recognize today. This opposition is neither an objective representation of the properties of things nor an expression of a timeless human nature' [8].

The ramifications of this for opening spaces in schools and wider sustainable social development of systems requires amplification.

Descola further challenges the Western bias of this split between nature and culture, 'In China, India and Japan, it is hard to discover any dichotomy of 'wild' and 'domesticated' comparable to that which the Western world has forged' [8]. While Teo [9] seeks to challenge a Western ethnocentric intuition in psychology, it is this Western ethnocentric intuition of diametric oppositional space that needs reconfiguration to promote sustainable social systems to overcome endemic exclusions and rigid boundaries. The diametric spatial opposition between us and them [2], any ingroup or outgroup in a given society, is not the hallmark of sustainable social systems. Similarly, the hierarchy of above versus below in diametric oppositional space has underpinned a conception of humans as being above nature, for their control and domination of nature, as part of a Western modernist tradition of subjugating and conquering the spaces of nature to human beings' acquisitive needs. A different concentric relational space is needed for sustainable social systems.

Spatial understandings require reconstruction beyond a Western tradition of treating space as empty and homogenous, as a mere abstraction or metaphor. Space is a framing condition sustaining system trajectories and requires uncovering as such; it needs a conceptualisation beyond related diametric oppositional Western categories of ideal versus real to more directly examine the materiality of spatial impacts on systems.

2. Key contrasting cross-cultural spaces of relation: Diametric and concentric spatial systems

Key contrasting concentric and diametric structures of relation have been observed cross-culturally by a range of anthropologists as embedded in both physical and social structures, as well as in myths. These were developed into a framework of mutual interaction by Levi-Strauss' [10] structural anthropology, though diametric and concentric systems were treated mainly as structures more than spaces as such. A diametric spatial structure is one where a circle is split in half by a line, which is its diameter, or where a square or rectangle is similarly divided into two equal halves (see **Figure 1**). In a concentric spatial structure, one circle is inscribed in another larger circle (or square); in pure form, the circles share a common central point (see **Figure 2**), a co-centre.
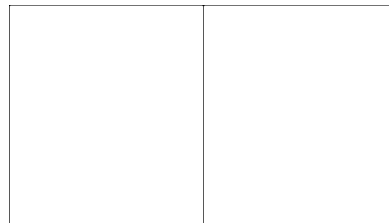
Figure 1. Diametric dualism.
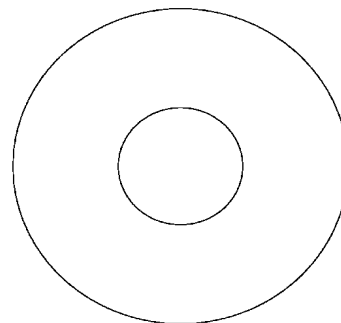
Figure 2. Concentric dualism.

A purportedly key distinguishing feature of concentric and diametric spaces, observed by Lévi-Strauss, is that they tend to co-exist in 'functional relation' [11] and not simply in isolation. They are structures of relations as part of a system of relations. In other words, this relational interaction offers a conception of movement and interplay between these spaces.

Lévi-Strauss observed two key contrasts between concentric and diametric structured systems. Diametric spaces are i) relatively more closed and with firmer boundaries than the more interactive with background and open concentric spatial systems. For concentric systems, 'its frame of reference is always the environment … In a diametric system … virgin land constitutes an irrelevant element; the moieties are defined by their opposition to each other, and the apparent symmetry of their closed structure creates the illusion of a closed system' [10]. Diametric space offers ii) a feature of mirror image symmetry [11]. A mirror image is not an identical one but a left-right inversion of polar opposites, for example, hierarchies of good/bad,

success/failure, powerful/powerless. Diametric mirror image oppositions include weak/strong, sacred/profane, above/below, love/hate [2].

A further contrast is as follows: iii) A concentric spatial relation between poles is one of assumed connection, of mutual overlap around a common centre, a co-centre; in contrast, any interaction between diametrically oppositional poles is one of assumed separation and splitting [2]. Though Lévi-Strauss did not explicitly highlight this difference, it is geometrically evident that the inner and outer poles of concentric structures are more fundamentally attached to each other than diametric structures. Both concentric poles coexist in the same space around a common centre so that the outer circle overlaps the space of the inner one. The outer circle surrounds and contains the inner circle. The opposite that is within the outer circle or shape cannot detach itself from being within this outer shape. And though the outer circle or shape can move in the direction of greater detachment from the inner circle, it cannot fully detach itself from the inner circle (even if the inner circle becomes an increasingly smaller proportion of the outer). A concentric relation assumes connection between its parts, and any separation is on the basis of assumed connection, whereas diametric opposition assumes separation, and any connection between the parts is on the basis of this assumed separation [2]. Concentric space offers a relation that allows for distinction between an inner and outer pole, while retaining an underlying connection.

These geometric and empirical contrasts are between concentric space as assumed connection between poles and relative openness and interaction with background on the one hand, and diametric space as assumed separation, an oppositional process of splitting, a mirror image inverted symmetry of us/them, above/below and of relative closure and noninteraction with background. This expands the cross-cultural observations of these structural contrasts in Lévi-Strauss' structural anthropology, though not confining the importance of a spatial turn to the framework of structuralism.

3. Sustainable social development as promoting a shift towards concentric spatial systems and away from diametric spatial systems

Diametric spaces of opposition, closure, and fragmentation are less sustainable socially than more concentric spaces of assumed connection and relative openness. This emerging spatial turn to promote a shift from diametric spatial systems to concentric relational system spaces is gaining notable momentum in education, as part of a focus also on local community outreach spaces. The European Commission's Education and Training Expert Panel Paper 2019 [12] calls for a spatial reconfiguration away from diametric spaces in education and towards concentric spaces, as does a focus on social and emotional education as relational spaces in another paper published in 2021 by the EU Commission [12]. The question arises regarding the expansion of concentric spatial systems for more domains to promote sustainable social systems as part of a concentric spatial turn.

More fluid, relatively open, and flexible concentric spatial systems are required for sustainable social development than the desiccated rigid boundaries of closed diametric oppositional spatial systems. The European Commission's Education and Training Expert Panel 2019 recognises the importance of "creating concentric spaces,

which will bring people together, can create feelings of social and emotional belonging" [12].

Concentric and diametric spatial structures invite application to relations between self and other [13], thereby entwining the spatial and relational, as with the Japanese concept of ma [3]. Diametric opposition as a relational space of assumed separation can pertain to the domain of interpersonal relations. For example, diametric space emerged in Conquergood's three-year ethnographic portrayal of how male teenage street gangs in Chicago divide into diametric structured opposition, even though there is no tangible reason for the content of these oppositions such as ethnic, socio-economic, racial, or regional differences. Observing that 'there are hundreds of gangs in Chicago, but all of them align with one of two nations: people or folks' [14], Conquergood emphasises that 'the division between the two nations, people and folks, is absolutely arbitrary and constructed' [14].

Bronfenbrenner's [15] hugely influential social-ecological systems framework in psychology and education conceptualises in concentric spatial terms of nested systems containing the individual. These nested systems include the individual's microsystem environment in which the person directly participates, as well as relations between wider social systems. It is notable, however, that Bronfenbrenner completely overlooked the contrasts between diametric and concentric structured systems identified crossculturally by Levi-Strauss' earlier structural anthropology. An implication of this neglect in Bronfenbrenner's ecological systems model is that the system interplay between connective concentric systems and more split, blocked, and fragmented diametric oppositional spatial systems was left unaddressed [2].

A spatial turn to develop sustainable inclusive systems for migrants in education internationally [16] has highlighted the need for a shift towards promoting concentric spatial system features of assumed connection for migrants to include spaces of social and emotional connection such as clubs, sports and social events for migrant youths to address loneliness and promote stronger social bonds; this promotes local community spaces for dialogue, including community based assertive outreach and lifelong learning centres; these sustainable concentric spaces of belonging are also sought in education through warm, supportive school climates and to challenge diametric oppositional spaces of not belonging, including bullying and authoritarian fear and anger based teaching in classrooms. This focus on inclusive systems for migrants in spatial terms also challenges the diametric structured oppositional spaces of social class discrimination and linguistic hierarchy importing a within-school segregation along language as a medium of instruction lines [16]. The antithesis of inclusive systems is the diametric space of school segregation based on race, ethnicity, or social class; diametric spatial processes of excluding students from school through school suspensions and expulsions and fractured relational spaces from the violence of school bullying must also be addressed to change relational spaces [2].

There is a need to reconstruct diametric mirror image above/below hierarchies in school systems to promote students' voices and marginalised parents' engagement [2]. A further system shift towards concentric spaces of assumed connection rather than diametric systems of assumed separation includes the expansion of multidisciplinary team wrap-around services for schools as part of a systems of care approach bridging health and education. This combats diametric spatial split systems of fragmentation

where services are in silos side-by-side in parallel distance of assumed separation from each other [2].

A concentric spatial relation between nature and culture places nature more central to the spaces of schools, such as with school gardens, so that access to nature is treated as an equity issue pertinent to sustainable social systems [17]. Treating school as the repository of culture, in opposition to nature, is a residue of a Roman colonialist legacy splitting nature and culture in diametric oppositional spatial terms. This is no longer a sustainable social environment for schools.

These examples of an ongoing shift in education and community systems towards promoting concentric relational spaces of assumed connection and relative openness and to challenge diametric oppositional spaces of splitting, closure, hierarchy, and us/them divisions offer a key lens for a spatial turn in the future development of sustainable social systems. Space matters, and relational space is a malleable system condition affecting causal trajectories and social meanings.

4. Developing a focus on challenge to diametric oppositional spaces in local communities to promote concentric relational spaces of assumed connection

Without strong empirical studies in psychology and education, a focus on relational spaces to facilitate local community outreach is an emerging one from a bullying and violence prevention perspective [18]. Bullying is a fracturing of concentric relational spaces of assumed connection [19]. Similarly, prejudice and discrimination embed diametric oppositional spaces in communities divided into us versus them, spaces requiring challenge in a shift towards concentric relational and physical spaces in local communities.

Research on prejudice highlights that building bridges between different social class, ethnic, or religious groups needs more than just opportunities for contact but also requires that this contact be structured around shared cooperative tasks [20]. This insight needs development as part of a community outreach approach to bridge-building between different groups. Intergroup structured cooperative activities to overcome prejudice [21] need to be wider than a community approach as awareness through social marketing approaches [18,22]. Relevant questions here include: Are there high levels of community services (such as sports, arts, community centers, libraries) as mediating spaces where intergroup cooperation takes place in a structured way for the relevant age group? A background system focus already takes place to some degree in the socio-ecological approach of Swearer et al. [23], with a focus on community profiles of school attendance in the district, crime, etc. Poverty, mobility, crime, singleparent families, and racial diversity have all been measured and linked to youth outcomes, while US census data has been used on the community profile, as well as area school attendance data and crime statistics [24]. However, this lens interrogating background systems supporting and hindering conditions is still underdeveloped in psychology and education [2].

The potential utility of smaller units of community analysis has been acknowledged [24]. In a Canadian context, a community outreach programme to situate social and emotional learning in diverse community contexts such as girl guides,

etc. has been initiated [25]. An exploratory study in a community context involved 30 children, aged between 7 and 12, in Paris [26] that sought to develop community education mediating spaces of assumed connection, tantamount to concentric spatial systems. The intervention took place over 7 months in 3 social centres in Paris. These socio-educational centres were also attended by a large number of children from Muslim populations. The intervention focused on corporeal activities, routine, space to talk, thinking, and group work. The activities were bodily focused, meaning that movement was always a big part of the proposed games. Some relaxing activities were also included. Though not conducted with a control group, this exploratory study found gains regarding improvement on behavioural problems, emotional symptoms, and pro-social behaviour, as well as psychomotor skills. Though gains on these dimensions were found, the children did not all present as aggressive or related to bullying. There were children that showed some anxiety symptoms and that were not aggressive at all. It was a community intervention in the sense that it was developed in a social centre. However, neither schools nor families were engaged [26].

In a small-scale Irish study [27] in a rural community context, the Iorras Le Cheile Community Development Project developed a broad strategic plan to help prevent bullying in the entire Erris community. The sample involved 95 primary school students and 207 post-primary students. There was an attempt to include the whole Erris community in all aspects of the initiative's planning and implementation, via the work of a local steering committee (involving members from youth and community development groups, the police, the Gaelic Athletic Association and soccer clubs, teachers, and Board of Management members from local primary and post-primary schools, psychotherapists, and parents), and the ongoing work of the Community Development Project. A basic relational space of assumed connection at local community level was promoted, a concentric space to challenge diametric spatial oppositions and splits as system fragmentations. It was found that, following the implementation of the programme, there were reductions in frequencies of reports of having been involved in all categories of bully/victim problems amongst primary school students. Amongst post-primary students, there were reductions in frequencies of reports in two categories of bully/victim problems [27].

These studies offer initial examples of a research focus in education and psychology. On local community spaces for development to challenge diametric oppositional, exclusionary spaces of bullying, violence, and prejudice as part of a wider inclusion agenda for promoting sustainable systems. This is an area ripe for further development for research on developing sustainable inclusive systems in education and community psychology contexts. Space requires understanding as being itself a system, a system framing and impacting relations within and between systems, such as in schools and communities.

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