Autopoietic interaction systems: micro-dynamics of participation and its limits

Article

Published Version

It is advisable to refer to the publisher's version if you intend to cite from the work. See Guidance on citing.

www.reading.ac.uk/centaur

CentAUR

Autopoietic interaction systems: micro-dynamics of participation and its limits

Angelique Chettiparamb

Published online: 17 Jun 2019.

Submit your article to this journal ↗

Article views: 74

View Crossmark data ↗

Autopoietic interaction systems: micro-dynamics of participation and its limits

Angelique Chettiparamb

Department of Real Estate and Planning, University of Reading, Reading, UK

ABSTRACT

This article engages with two published case studies describing participation in planning, a much-discussed aspect of spatial planning. After a brief review of the arguments advanced in the articles, the case studies are reinterpreted using the theory of social autopoiesis as advanced by Niklas Luhmann, in particular, one concept from the theory – interaction systems. The re-analysis yields two results: it illustrates the added contribution that the theory can make to understand public participation in spatial planning, but also highlights particular issues in relation to participatory planning and its use in spatial planning.

Introduction

This article engages with the systems theory of social autopoiesis advanced by Niklas Luhmann and aims to illustrate how and what it adds to current planning thought, focusing particularly on public participation, a much-discussed aspect of spatial planning. Besides the general theory of autopoietic social systems, the article introduces and discusses one concept from the theory – interaction systems – to help readers appreciate both the novelty of Luhmann's contribution as well as its relevance for 'second order planning' (Chettiparamb 2007b, 2018) or meta-operations (Chettiparamb 2019). The discussion here relates only to one concept from Luhmann's vast contribution, and is by no means exhaustive of the potential that exists for applying the theory to planning.[1]

In introducing the concept and arguing for what it might bring to planning, a secondary case study based approach is adopted. Two case studies are chosen from published articles. The use of published secondary case studies as a method is not common (see Chettiparamb 2006, 2018 for other instances of the use of secondary case studies). Its adoption in this instance allows me to highlight the added contribution that autopoiesis can make in understanding a case, since the cases here have already been analysed once. It must be noted that the articles were published a while ago and therefore may not reflect empirical realities today. Since the arguments claimed in this paper use the empirical material for illustrative purposes only, the arguments made in the initial publication themselves are not the focus of analysis here. Rather the focus is on what in addition can be said about the cases when analysed from the theory of autopoiesis.

Autopoiesis in social science theory is refined to a high degree of sophistication by Niklas Luhmann. However, the theory constructs its own reference points. Luhmann's general theory is presented in the next section. A summary of the two case studies are then provided. In the third section, the concept of 'interaction systems', including the reasoning that informed the choice is

CONTACT Angelique Chettiparamb ✉ a.chettiparamb@reading.ac.uk ▣ Department of Real Estate and Planning, University of Reading, Reading RG6 6UD, UK

introduced. The cases are then re-analysed using this concept. As the planning profession often engages with interaction systems, and uses them in the process of planning for society, three questions are asked: What and how does public participation events contribute to society and thereby the wider agenda of planning? What are the limitations inherent to public participation events if seen as an aid to planning? What are the institutional implications of this wider understanding? Though planning engages with other types of dissemination and participatory processes, the focus in this manuscript is only on participatory processes that involve face-to-face interactions in one space.

Social autopoiesis

This section summarizes the general ideas of autopoiesis as it emerged from its parent discipline of biology in order to orient the reader. The concepts introduced here are to give the reader a general flavour of the theory before focusing on specific concepts related to public participation itself, which is the focus of this article. A link to spatial planning is not provided here as this will follow in the sections to follow.

The term was coined by two Chilean neuro-biologists, Humberto Maturana and Francisco Varela in the 1970s, who were attempting to discern the meaning of life in the biological world. The term 'autopoiesis' from Greek approximates as 'self-producing' (autos = self, poiein = to make; Brans and Rossbach 1997, 425) and signifies Maturana and Varela's key finding that the capacity to produce itself through its own operations distinguish a living organism. The outputs of the system are its inputs. They define autopoiesis as

> a network of productions of components which (i) participate recursively in the same network which produced them and (ii) realize the network of productions as a unity. (Varela, Maturana, and Uribe 1974; in Kickert 1993, 263)

The German sociologist, Niklas Luhmann, translated this idea into sociology arguing that social systems are also autopoietic (in German, 'Soziale Systems', 1984; in English 'Social Systems', 1995). Luhmann maintains that there are three types of autopoietic systems – living systems, psychic systems (individuals) and social systems. He denies that social systems are living systems, but claims that they are nevertheless autopoietic. Thus he states if

> we abstract from life and define autopoiesis as a general form of system–building using self-referential closure, we would have to admit that there are non-living autopoietic systems, different modes of autopoietic reproduction and that there are general principles of autopoietic organization that materializes as life, but also in other modes of circularity and self-reproduction. (Luhmann 1990, 2)

A system is defined by a distinction from its environment. For Luhmann, a system creates a distinction between 'this' and 'that' and then enforces a selection. This distinction and selection restricts (and thereby stabilizes) all observations and communications made by the system concerned. It is, therefore, a way of reducing complexity for the system, a way of achieving a certain order from complexity and helps the system to orient itself. Once a system comes into being as one entity, the difference between the system and environment is repeated within the system itself. In society, this yields functionally differentiated sub-systems each with their own autopoietic observation and communication processes (law, science, economy, politics, etc.). Luhmann argues that the 'mode of autopoiesis' for social systems is 'communications' meaning that it is through communications that social systems reproduce themselves. Each functional system uses its own distinction in all observations and communications. This distinction is used so often that it emerges as a binary code for that system. For instance, the code truth/untruth is fundamental to observations and communications made by the science sub-system, the law sub-system uses the code legal/illegal, the economy sub-system uses payment/non-payment, political system uses power/no power and so on (Luhmann 1995; Seidl and Becker 2006).

An autopoietic social system is interactively open, though organizationally closed to its environment. What this means is that the system may interact with its environment to absorb or discharge matter, information or symbols, but this interaction is fundamentally based upon the maintenance of its own identity, its distinctive mode of operation. In evolution theory, the environment is often the cause of change, as the organism structurally adapts towards a best fit for survival. For an autopoietic system, however, the environment is reduced to a source for perturbations or triggers. The organism chooses whether to respond or not and in what manner, solely with respect to itself. The environment thus cannot 'determine', in the strict sense of the term if there might be a change, and cannot specify the type of changes that may come about (Kickert 1993; Mingers 1995; Kay 2001).

Maturana and Varela's concepts of 'observation' and the 'observer' are also important as they lay the epistemological foundations of the theory. There is an explicit denial of epistemological access to 'objective reality' in Luhmann's theory, as no observer can make a definitive statement, i.e. every statement made will use distinctions that are processed through the functional system that is specific to the observer. As Maturana says, 'everything said is said by someone' (1992, 135). The act of observation and thereby the problem of observation is foregrounded. 'Reality, then may be an illusion, but the illusion itself is real' (Luhmann 2000, 37).

The above summarizes what autopoietic systems and sub-systems are, the emergence of binary codes, the idea of organizational closure and the primacy of observation. A summary of the two secondary case studies are provided next. These are then subsequently re-analysed using the specific concept of 'interacting systems' from Luhmann's theory.

Secondary case study summaries of public participation in planning

The two case studies describe different experiences in face-to-face public participation, and how it aids/hinders planning. Face-to-face public participation is extensively researched within planning and often is discussed normatively or through thick empirical sense-making reflections (Healey 1992; Cooke and Kothari 2001). This section moves away from both in order to provide an insight into the systemic mechanisms involved drawing upon Luhmann's (1995) arguments. In doing so it provides a systemic explanation of how face-to-face interactions systems contribute to society.

Both the articles chosen relate to field experiences. The cases are from both ends of a spectrum of effectiveness in the use of face-to-face public participation in planning. This stark difference in experience helps highlight the general systemic nature of Luhmann's theory in that we still identify the same systemic elements operating in both the effective and non-effective interactions. The discussion after this section will highlight the contribution made by this article by drawing insights from the case studies that are different from the insights of the original authors. Both case studies were published a while ago and therefore the empirical situations themselves could have changed by now. The case studies are summarized below.

The article by Tewdwr-Jones and Thomas (1998) discusses community planning exercises undertaken in Brecon Beacons National Park (BBNP), a rural local planning authority in mid-Wales. The analytical framework provided by Healey (1992, 1996), is used to define components of communicative planning and analyse field work. The case study is described as an innovative attempt to involve the public from the start in the preparation of the development plan, and the objective is stated as 'to assess the perceptions of planners to the participation process and to evaluate this in the context of communicative planning' (129).

The core of the park authority's public participation exercise was two rounds of meetings with local communities. The first consisted of 34 evening meetings, wherein discussion of the local plan process was encouraged by the local planners. Fieldwork for the research was undertaken after this first stage. The description of this stage is presumably then from secondary sources or interviews with planners involved. According to the description, in the first meeting, after an initial talk from officers outlining the purpose and organization of the meeting, ideas from the public were encouraged using posters as prompts depicting both topics and questions. The public were then

allowed to develop questions, choose land uses for sites and mark them by inserting coloured pins into a base map. An officer highlighted topics and provided coordination. Discussions were unrestricted and covered a range of social, economic and environmental concerns. Once topics were identified and after some amount of discussion, assessment questionnaires were distributed to allow individuals to record their preferences more fully, thus including the less vocal. Though meetings were aimed at contributing to the local plan, information beyond its scope was also recorded on action sheets by officers. These were handed over to appropriate organizations the day after. The community development officer of the authority also used the meetings to gauge the level of local interest in community development initiatives of various sorts. A de-briefing session was undertaken by officers the following morning where issues raised were highlighted, and attempts were made to relate them to land-use planning policies and solutions. Achievements in the meeting and further scope for improvement were discussed. Work in the summer and autumn of 1993 led to a draft park-wide local plan by May 1994. The second round of meetings then commenced with a more orthodox format. The researchers attended these meetings, but little descriptive account is provided, other than that the agenda was determined by the contents of the draft plan and local plan timetable. The planners consequently stated the definition, format and content of the statutory plan in greater depth in these meetings and explained what the plan could and could not do. The authors present the perspective of planners involved in the exercise gauged through interviews conducted in September 1994. The interview concerns are listed and summarized under headings drawn from their analytical framework. These are summarized below:

Planning regulation – The planners found it very hard to explain to the public, institutional and legal barriers that prohibited the planning process dealing with certain types of issues like affordable housing, which was of great popular concern. When the plan was sent to the central government department for comments, the aspirations that emerged from the consultation meetings were considerably amended. The attention of the park authority itself was drawn to design matters which had elicited interest.

Role of politicians – The overall picture was of low political member attendance from the park authority, but more support from community councils, including some attendance from the district council. The authors' report of the planners being annoyed by the way some politicians challenged them in the meeting rather than acting in association with them. In the case of district council members, the planners thought that the politicians spoke from a viewpoint that reflected the district authority perspective, which in their opinion should not have been the case.

Knowledge gained through community interaction – The planners enjoyed the first round of consultation, thinking it worthwhile because detailed knowledge of how a community 'ticks' was gained allowing officers to 'bear this in mind when determining planning applications' (134). This was also reflected in the more humanized language used in the planning committee, as well as the planning report. Besides forward planning officers, the development control officers also benefited for they realized how little the public actually knew about how the planning system worked. This subsequently resulted in a series of public meetings with community councils and a proposal for the production of informative leaflets. Further, the planners thought that the people too benefited. One planner is quoted as saying 'for the public it was a widening process. For planning, one of narrowing on to local communities' (134).

Importance of a corporate approach – The initiative taken by the community development officer led to the meetings being modified, so that information of relevance to community work would emerge. The authors also report 'the most worrying concern to the community development officer was the expectations that would be raised within communities that the park authority would be expected to ameliorate problems or implement their suggestions within a short timescale' (135).

A worthwhile exercise? – A general feeling that the BBNP process of public involvement in local plan making was worthwhile and that the public had been supportive is reported. However, concerns

are reported about the second round of meetings. More was at stake at the deposit stage since the planners had made commitments on paper by then. One of the planners reported public cynicism at the second stage, but the authors observe that the number of objections were still relatively few.

In the case study, the authors argue 'the planning officers were feeling their way towards a communicative or collaborative approach close to Healey's "planning through debate"'(127). They examine the case study by way of questions raised by Healey. The results from applying this framework are summarized below:

The arena of the discussion – The authors attribute this initiative to individual planner's motivation, supported by higher authorities. Meetings were organized with the cooperation of local community councils, who publicized the event. They were conducted in village halls in decentred locations. This, the authors argue, encouraged an 'inclusionary ethic'.

Style of discussion – Around 25 people on average attended the meeting, which according to the planners made it difficult to police. Initiation of the discussion was most problematic as people were reluctant to 'commit' themselves, unless one of the planners introduced a debate agenda. After the first discussion, the planners paused and summarized each person's input and attempted to enthuse discussion among those who had not yet participated. Once people started to speak, planners withdrew, leaving the floor open to develop its own dynamics, which could turn confrontational. The planners intervened when discussions got side-tracked. They were concerned about how views from those who had not attended could be included. Additional notices inviting people to comment by written communication were posted throughout each village, including the village shops, post office and local school. The authors report that 'the planners were consequently confident that at least they were attempting to generate a high response rate within each community' (139).

Sorting issues and arguments – One tool used to sort issues was 'planning for real'. It allowed participants to observe and comment upon each other's preferences. However, summarizing and sorting out issues actually took place only the following day in the planners' debriefing meetings. Almost 50% of those participants who had attended the second round had not attended the first.

Translating strategies into new discourses – In the second round of meetings, there were significant constraints on what could be discussed. Matters like the very idea of a national park conducting the participation exercise and the statutory requirements of what a local plan could and could not do for instance were non-negotiable items. Many issues that came up in the first round consequently were lost from the document discussed in the second round. The implications were that no significant new discourses came up.

Subjecting the strategy to agreement and critique – The authors point to the commitment expressed by BBNP officers to continue working with the community by organizing structured community consultations as a sign that opportunities for reflection on the land-use planning strategies to help relate the residents to a changing context would be available. The authors also suggest that it would be interesting to know what impact it had on the statutorily required review some years after.

The case study provides an overview of a near 'successful' form of participation and consultation (at least in the first round), within a system that is perceived as fairly prescriptive in terms of circumscribing the possibilities available. The officers are reported to be motivated and were successful to the extent within the constraints. The community is also reported as being enthusiastic and participating in the exercise, though not in the second round when planners had to reveal their constraints resulting in a certain amount of cynicism in the community. The participation exercise that worked in the first instance, therefore, did not in the second. That being the case, we will now look at the second case study where another scenario is reported.

The case study is reported by Campbell and Marshall (2000) and is situated in the Bay Area of California, where the authors report 'public awareness to articulate views and the associated mechanisms to foster such an activity are a much more taken-for-granted part of local government practice than is usually the case in Britain' (321). The objective of the paper is 'to explore the rationales for public involvement in planning and to examine the potentiality for the realization of these goals by investigating what happens when people participate' (322).

In the first part of the paper, the authors search the literature for a review of rationales of participation. By combining Thornley's (1977) threefold classification with Stoker's (1997) framework of rationales, they propose five rationales for participation. Instrumental participation and communitarian participation are identified at two ends between which, following Stoker (1997), the authors identify three variants. These are first, the 'politics of the consumer' (326); 'politics of presence' (326) and 'deliberative democracy' (327).

After presenting the framework, the authors discuss the case study. As a preamble, they, following Wolman (1995) and Sharpe (1973), suggest that democracy in US is founded on people who, it is expected, will provide checks and balances on actions of government. A tradition of individual participation, pluralism, representative democracy and efficiency exists. The City of Berkeley, the case study area, consists of eight council members, each representing a district of the city plus a separately elected Mayor. The city manager provides the link between the council and professional staff. The council is assisted by 40 commissions and boards, each made up of lay appointees, one each nominated by each member of council. However, the council can ignore decisions taken by the commissions. The general rights of citizens to make representations and scrutinize work of local government are protected by federal and state laws.

The field work consisted of direct observation of a variety of participation arenas, semi-structured interviews with key actors, some of whom were interviewed more than once, and field notes of council meetings which were also supplemented by video footage as these were broadcast alive. Based on interviews, the authors report that though there was widespread support for community involvement, there was no real sense of a shared common problem. Participation was strongly individualistic with a 'palpable sense of individuals feeling they were engaged in a battle, the result of which each party would judge on a win/lose basis' (330). They quote a consultant – 'money, relationships and deals, that's what wins through' (320). The authors also report on there being a tendency in the meetings for the 'community' that came to be defined to be largely home-owners. The capacity for 'the community' to be exclusive is also noted. Thus, 'failure to conform to group norms appeared to have negative consequences for the individuals concerned' (330). Also, there appeared to be 'professional activists' (331) who reappeared in different roles on several bodies. Yet, in spite of high levels of overall participation, the authors report of large sections of society being excluded, difficulties in finding individuals to serve on commissions and advisory boards, even making it tough for these bodies to stay quorate on a regular basis.

The authors report on the perceptions of politicians and professional staff of active participation in meetings. The politicians were confused as to their role and function. Given the degree of citizen empowerment, they were fearful if any decision would antagonize some group or the other. Decisions made were often undone depending on who was present in the room and the principle of 'whoever yells the loudest gets the results' (332). There was evidence of inconsistency, and incompatible resolutions being combined, in the hope of appeasing all interested parties. The authors also point to the lack of formal party politics and the avowed attachment to community-led government, resulting in a lack of guiding principles or a general policy framework. Further, they report on the lack of respect for bureaucrats, resulting in 'frequent verbal assaults on planners by both politicians and members of the community at public meetings' (332). Planners thus tended to be relatively passive, with their professional advice infrequently sought. Planners however perceived themselves as walking a tight rope, representing voices not heard or encouraging consideration of collective concerns.

From observations of meetings, the authors comment that the keenness of the public to exploit opportunities for participation was striking. However, politicians, planners and the public did not share a sense of 'working together'. Certain issues that might be considered problematic are highlighted – 'the focus on process left politicians and professional staff bemused and largely impotent' (333) and also the single issue focus of meetings were problematic as planning typically deals with issues that are inter-related, where win/win solutions may be difficult, if not impossible, to find. This, the authors suggest 'may make politicians wary of grappling with issues of fundamental importance but which are also highly controversial' (334). Also, the lack of representation of disadvantaged groups, causing them to be politically ignored and thus remain socially and economically excluded is highlighted. The authors then state 'encouraging public involvement is not just about providing platforms, it is about developing decision-making environments which have a capacity to make sense of and value the varied knowledge forms with which they are presented' (335). Citing instances of opposition to the inclusion of low-cost housing, and the extension of open spaces because they attract the homeless and drug addicts, the authors concur with Stoker (1997, 24) in his statement regarding greater community involvement, – 'they can be stifling or disabling in reinforcing relationships of subordination and narrow parochialism' (335). Against the view held by proponents of deliberative democracy that individuals must avoid confrontation, the authors raise the question of why individuals with no strong opinion should bother to get involved at all and if constraints are to be placed then who should do it? Even when participation brings in non-expert knowledge, which was found to be true in the case study, the traditional forms of technical knowledge were found to be given higher accord and on several occasions decisions were deferred calling for more analysis or factual information. This was also often used as an excuse for not taking difficult decisions. Commenting on meetings held by the West Oakland Community Advisory Group, which consisted of wholly community members, the authors report that 'focus on process and procedure allowed decision-makers to avoid the more challenging questions of substance' (337) and the ground rules identified were a sort of shadow boxing which 'served … to identify those who have a right to be heard, those who can be ignored and thus whose comments may be dismissed regardless of what they say' (338).

Finally, the authors suggest that though institutional structures designed to facilitate greater openness existed, people still adopted 'relatively fixed positions' (338) and mechanisms for making sense of all the discussions and debates were 'stretched to virtual breaking point' (338). The lack of interpretive frameworks available to decision-makers to help them make sense of this 'noise' is described as 'both striking and disappointing' (338).

> in attempting to value all forms of knowledge, decision makers were left without the means to prioritize one set of views over another. … . The sum of the views expressed by communities mainly replicated conventional status wisdom, warts and all, rather than challenging the status quo. This brought with it a tendency to focus on the short–term and the immediate as well as the neighbourhood and not the city. This presents something of a dilemma for planning as it is framed around the notion that it has a role in facilitating change and not merely recreating what already exists. To simplify planning problems down to a choice between a set of pre-defined options, as often occurs in participation exercises, is to diminish the essence of the activity. Yet once the arena of the meeting is encountered, such may seem the only approach if a clear way forward is to be identified. (338)

Thus, 'both technocratic rationality and deliberative democracy represent ideals that it is impossible for human beings to perfect' (339). The capacity of a rights-based approach to public participation to virtually paralyse the decision process is also, in their opinion, one of the most striking findings that the case study yielded. However, they caution against the 'we know best' type of planner, who 'embody the worst aspects of the planner as bureaucrat, preferring inertia to innovation and reducing planning to little more than administration' (340). They instead advocate that

> the art of the planner must be the informed appreciation of how little they know, awareness of when and where to seek out additional information, and the capacity to develop interpretive frameworks which enable connections to be made and appropriate judgements taken. (340)

Citing Merrifield (1997) they advocate that 'you have to have an understanding of universal values before you can determine the importance of the particular' (341). Thus planning is not about 'mirroring the results of social and economic processes', but is rather about 'finding ways to do something about what is perceived to be unsatisfactory', which is then argued as being fundamentally a matter of values.

Each case study yields different sets of concerns which are partly a result of the setting and the participation exercises themselves. The focus on participation as a normative ideal for planning is common to them and enables them to be analysed together. A comparison of both brings up interesting questions. First, what and how does public participation events contribute to the wider agenda of planning? Second, what are the limitations inherent to public participation events if seen as an aid to planning? In other words, what cannot we expect through participation, however much we refine the process? Third, what are the institutional implications of this wider understanding? I search for what Luhmann might have to say for answers and introduce one concept from the theory.

Interactions systems within autopoietic systems

In this section, 'interaction systems' (Luhmann 1995) is introduced. This particular concept has been chosen as (1) it deals with interactions between individuals and is therefore directly relevant to the subject matter of participation discussed here and (2) Luhmann has discussed interaction systems and their place in social autopoiesis in some depth enabling us to apply the same fairly rigorously to empirical situations.

Luhmann differentiates between interactions systems, organizations and societal systems (Seidl and Becker 2006). They are conceived as three different social systems not congruent to each other. In this context, we will focus on the first and the last of these systems as they are directly relevant to the questions posed towards the end of the previous section. Interactions embody 'communications', the autopoietic element in society and are therefore indispensable to society. For Luhmann interactions need social boundaries and 'they conceive of themselves as face-to-face interactions and use the presence of persons as boundary-defining device' (Luhmann 1987, 114). They provide venues for societal experimentation through which contributions to societal change can be initiated. The distinctiveness of the relationship between interactions and society is captured by the term 'episode' (406). Episodes allow societies to make use of interactions sequentially in its own evolution (Luhmann 1995).

Interactions, for Luhmann, are a forum with constraints where ideas can be tried out as they are relatively more autonomous than societies. From interactions, society makes a selection of what is useful for it. Understanding interaction as different from society increases both dependence and independence because each system can follow more fully its own laws (1995). Writing and printing make it possible to withdraw from interaction systems and communicate with far-reaching societal consequences. Larger audiences can be reached within shorter time spans, but the withdrawal forces compensation by the use of a 'standardized, disciplined use of language and to clarify through language much that would otherwise have been evident in the situation' (1995, 428). It is also useful to note that for Luhmann 'everything that happens, happens *now*' (Luhmann, 2004, 131, original italics). The theory is explicating the mechanisms involved in the present rather than presenting a historic view.

Luhmann maintains the importance of 'presence' in interactions. 'Presence' grants significance to 'perception processes'. Perception is the 'psychic acquisition of information' (1995, 412). It has certain advantages over communication which include it (i) being able to absorb information that is not communicated, though with limited analytic precision; (ii) can process information simultaneously and rapidly, while communication depends on a sequential mode of processing; (iii) has slight accountability and thus less chance of being negated; (iv) can qualify communication by parallel processing, either weakening, strengthening or modifying it through indirect communication. Perception is not exhausted in the process of communication but complements it. Thus one cannot, not

communicate in an interactive system, as even silence becomes communicative. Perception serves to discipline interactions but also makes it susceptible to disruptions.

Within an interaction the presence of persons, provides an environment to pursue, feed or correct communication. What might be pursued in a given interaction are shaped by perception and a need for keeping communication going. They are constituted temporally, i.e. they take cognizance of the expectations prior to and after the episode; socially, i.e. they take into account the other roles of those present in an interaction; and factually, i.e. they take account of the themes that are chosen for interaction. By being bounded by temporal, social and factual dimensions, communication acquires an orientation and selected interdependencies emerge. The interdependencies that do not emerge become redundant, with the possibility for being selected (Luhmann 1995, 415). Besides, Luhmann highlights the role of society in orienting interactions for only society can finally have negation or rejection at its disposal.

Formation of interaction nexuses must share an encompassing ethos, if it is to work. Luhmann sees this improbable in today's complex society and hence is pessimistic of the primacy of interaction systems.

> less and less can one count on solving societally relevant problems by interaction; for example, by using people's physical presence to gain a consensus or to prevent uncontrollable activities. To imagine one could solve or even attenuate problems in the inter coordination of different societal function systems … … by bringing the participants into discussion with each other would be pure illusion. Thus a gap emerges between the interaction sequences individuals live through, which are accessible and understandable to them, and the complexity of the societal systems, which they cannot grasp, and whose consequences cannot be influenced, let alone controlled. (Luhmann 1995, 426)

Luhmann's concludes that society's complexity has made it inaccessible to interactions, even though society is largely dependent on interactions. As a consequence, however highly placed the participants may be, no interaction can claim to be representative of society. They can only be functional or regionally delimited perspectives. I now return back to the case studies to see how it can help identify issues or concerns of importance to planning.

Interaction systems and planning

In this section, both case studies jointly are analysed simultaneously. How interaction systems, pick on issues of concern which directs, attention to certain kinds of intervention is shown. Interactions from the viewpoint of how they might contribute to society and therefore how governance/planning as a professional activity might order the relationship between interactions and society are then discussed.

Autopoiesis discusses interactions within society. It tells us that society makes use of interaction systems in ordering its evolution. The planners, in designing one type of interaction systems, face-to-face participation arenas (participation spaces, participation processes, participation dynamics, etc.) are *engaged in second-order ordering – the ordering of ordering*. The immediate implications of this are, first, to reaffirm the planning discipline in relation to a wider agenda with respect to *society* as opposed to governance; second, to view the participation process itself in relation to a wider agenda for *society* rather than as a tool for planners; and third, to focus attention on interactions as episodes circumscribed by *society*, rather than pre-determined agendas. In short, to put planning, the processes of planning and the role of planner in its place and foreground society (see Chettiparamb 2007a for an example in planning practice). I first examine the significance of the temporal aspect of the two episodes.

The first case study is a one-off exercise which planners used to help make decisions regarding ways in which to order society within a particular territorial area through the medium of local plans and the possibilities that this allowed. In the second case study, on the other hand, the interactions observed were neither unique nor limited to one episode and were not led by planners. They were part of routine consultation processes that took place in the course of local governance. This

draws attention to the first point of interest – the dependence of interactions on prior communications and communications that follow. In the first case study, a well-defined expectation from the planner's side was communicated to those present. Since this was not part of any routine exercise, but was, conceived as a one-off experiment, no 'tradition' had developed with an opportunity to be stabilized over a series of routine interactions. Thus, the novelty of the episode was in itself a context for subsequent behaviour. The experimental nature, the absence of 'knowing what to expect', the general optimism that the planners could generate, and the leadership provided, allowed planners to be fairly in command of framing the micro-dynamics of the consultation. The participants also had a 'free hand' with freedom to raise any issue they wanted without being restricted by the planners. They were told that the discussions were to eventually lead to the local plan, the land-use dimension of which was also a topic of engagement. The interaction process thus used the potential of the future during the interaction itself. In Luhmann's terms, the 'present future' was optimistic.

In the second case study, the presence of considerable tradition is reported, with occasion for certain dynamics to be stabilized over time leading to almost predictable patterns of participation, as well as ways of conducting meetings including ways of 'shadow boxing', decision delaying, ways of responding to difficult interrogations and avoidance of crucial issues. This, along with other factors, provided a context for the dynamics observed. The participants, politicians and bureaucrats all seemed to know what to expect, expectations (or non-expectations) had developed. Besides the interactions were embedded within a system of governance, were firmly institutionalized and extolled for their own worth on normative grounds, whatever the practice in itself developed into. Planners were just one of the numerous actors caught up in governance routines, with the interactions themselves being one among many governance related routines. The 'present future' here was pessimistic as far as handling of crucial issues and the making of firm decisions were concerned, quite different from the previous case.

The two case studies thus differed on their temporal relationship to society: in its episodic aspect – (unique vs intermittent); in its temporal position in the dynamics of governance (formative vs stabilized); and also with respect to the way it related to the future (optimistic vs resigned). One is a unique episode in the formative stage, optimistic about the future, while the other, is an intermittent activity, in a fairly regularized and stabilized state, with a fair amount of resignation regarding the future. The first question, that autopoiesis then draws attention to is the way in which interaction processes must relate to society. *How can participation processes fulfil their purpose of being a temporal differentiation of society, as the theory claims they must be, if they are to fulfil their function in relation to society?* Luhmann (1995) suggests three dimensions of temporality of interaction systems: the episodic aspect, temporal position in governance dynamics and the relation to the future (the present future).

For interactions to be useful to society, the formation of 'orientation is important. This orientation in turn is formed by constraints in the selection of communications within the interaction. The process of selection is mediated by perception. In the second case study, this is demonstrated through the perceived role of a local native American group

> for them this process was about forming networks so they became 'insiders'. … If they were successfully to promote the interests of native Americans they needed to become insiders, that is, people city managers or mayors automatically thought of and invited to be present at key meetings. … . It was clear that for this group (the native American group) like many others, presence was seen as the only way of furthering their interests and perhaps not surprisingly they were little concerned about the interests of others or the collective group. (Campbell and Marshall 2000, 330)

So, presence here is seen as the only way of furthering particular interests. This individual rights-based approach is identified by the original case study authors as a problematic ethic. Quoting a planning commissioner, they point that there was no real sense of 'everyone working together on the same problem … it's us and you' (Campbell and Marshall 2000, 330). There is evidence however of formation of stable *patterns of participation* and the interests it favours –'whoever yells the loudest

gets the results' (Campbell and Marshall 2000, 332) and 'whoever is most persistent – they will get the outcome, they desire … but that's not what's the best. Money, relationships and deals, that's what wins through' (Campbell and Marshall 2000, 330). These patterns of behaviour were not entirely spontaneous, they were managed. The authors report that even in a committee consisting entirely of members from the community

> the membership showed a positive desire to adopt the trappings of public sector organizations and establish order through similar procedural devices. The ground rules set out in these procedures were crucial in establishing who could speak and when, who could sit where, when a motion could be made and by whom and whose comments were recorded and in what form. The ritualistic qualities of the discussions about such matters and their regular reinforcement during the course of a meeting are inherent to the shadow boxing which goes on within any group of personalities. (Campbell and Marshall 2000, 337)

The case study reports a pattern of behaviour, based on physical presence that enabled the voicing of opinion from a rights-based perspective which was nevertheless managed. In normative terms what we do not have is the formation of interdependencies that are based on perceptive processes in the present shaped by constraints that evolve through the interaction. What then prevents this?

In the theory of social autopoiesis, the formation of selected interdependencies is by constraints in the temporal, social and factual dimensions. The temporal dimension corresponds to the past that precede the interaction and expectations of results of the interaction, both of which constrain processes within interaction. Connective action – in the sense of an ongoing temporal evolution – was missing in the case study as the authors report

> decisions made at one meeting, were often undone at the next. There was considerable evidence of inconsistency, with incommensurable sentiments being combined in resolutions in the vain hope of ameliorating all the interested parties. (Campbell and Marshall 2000, 332)

Most meetings, therefore, ended with no decision. Since connective actions were missing, expectations were also missing or vice versa and the formation of an orientation in the temporal dimension was forestalled.

In the social dimension, interactions take into account the social roles outside the interactive system of those present. Luhmann (1995, 419) points out, 'these external commitments, if they are transparent within the interaction, lead to the self-control of individual participants, for each is expected to maintain role consistency'. The case study reports the use of the term 'professional activists' referring to individuals 'reappearing in different roles on several bodies' (Campbell and Marshall 2000, 331). The membership of the committees was nominated by the councillors and organized at city level and there were 40 of them. The social constraint that members would bring with them as part of their other social roles is then limited forestalling the formation of orientation in the social dimension.

In the factual dimension, the themes place constraints, but only when they are chosen contingently from a host of other possibilities. In the case study, the meetings are reported as largely single-issue meetings, lacking scope for 'other possibilities'. The authors point out that single issue meetings are inadequate in dealing with the complex issues that confront planning. In terms of autopoiesis, they lacked the requisite variety within themselves to make the connections and trade-offs necessary. The constraints on themes for interaction systems were thus structurally built-in. This inhibited a complex process of structural evolution within the interaction system.

We have now an interaction process with (1) the connective action that enables orientation missing, (2) information of the societal roles of participants not being available within the interaction, and (3) themes for discussion narrowly constrained outside the interaction process. The set of micro-factors that autopoiesis draws attention to are thus different from that offered by normative theories of communicative planning. Attention is drawn to the *organizational factors that must be managed to effectively embed participation processes*. To quote Luhmann 'interactions guided by motives then must either be standardised, for example, by organization, or be left to reflexive negotiation, agreement, and the negotiation of identities' (1995, 426). The theory, in drawing attention to

the factors that needs to be standardized or reflexively negotiated, provides an explanation of mechanisms that are different from the micro-dynamics based on normative individual action more popular in present explanations of participation processes.

Interactions are however important to society because they provide a venue for experimentation, an opportunity for ideas to be tested out without commitment. It is thus *only* an experimental house. In the first round of meetings in the first case study, experimentation did happen as participants were voicing concerns and reacting to ideas of others. In the second round, however, the interactions were no longer experimental with the result that one planner is reported as having being dissatisfied because she felt that there was a tendency to 'talk *at* the public' (original italics). The authors suggest that the tendency for constraints increased as the participation progressed down the plan preparation process. The question then is, *when can public participation contribute and how can different types of interactions be oriented to different types of experimentation* within a plan preparation process, so that they can be used sequentially by society.

Luhmann tells us that interactions cannot entirely rely on itself. It needs society to provide abstractions towards which it can orient itself because only society can have the power for final rejection. Autopoiesis tells us that interaction systems *can*, therefore, serve to reinforce societal prejudices when they are powerful and that this comes to be so through the negation applied by society. Interaction system can only ever remain a part of society. Thus, while in the short term an interaction system may develop an orientation to 'expectations' (according to Luhmann 1995, such expectations are social structures); it is 'norms' that provide the orientation in the longer term. In other words, norms provide long term orientation to the evolution of participatory processes, while 'expectations' provide short term orientation to the unfolding process of participation. It is useful to distinguish between the two for this also signals the possibilities and limitations of participatory processes in achieving wider change regardless of the progress within particular participatory events. The negation of outcomes of interaction systems by society is always a possibility if societal norms are in variance.

Conclusions

The argument made here is that Luhmann's theory of social autopoiesis directs attention to a level of concern in parallel to the level of abstraction in which it exists in the social sciences. Luhmann's theory is a theory of social systems and as such, it exists at a higher level of abstraction.[2] The insights it provides for a practical activity of planning is to highlight the domain of *planning of planning*, the way the activity of planning itself might be organized. The analysis of the two secondary cases was undertaken partly to illustrate how empirical situations when analysed from a systems theory perspective can provide insights that are different from the insights obtained when analysed.

An autopoietic perspective views society as being organized in a way that helps it to deal with its own complexity and attempts to explain how. An emancipatory/normative perspective is missing here. When planning engages with the theory it gets answers that inform the 'how' dimension of planning which as opposed to the 'why' question is, I would argue, one of the least explored sides of planning. Questions on 'how to' achieve an ordering of society can nevertheless be combined with normative ideas to suggest normative actions or research agendas.

Autopoiesis also explicitly tells us that interactions cannot substitute for society, though it can be used by society. Society eventually holds the powers of negation through norms in the long term and by imposing constraints in the short term in three dimensions within interaction process. The argument then shifts from a focus on the removal of constraints for participation within the participation process to one of *how and what type of conditioning must be explicitly imposed to not only enable the participation process to realize itself but also realize it in ways that are useful for the ordering of society.* Hence a participatory process acquires purpose and power not in the absence of constraints and the power operating through the constraints, but because of it. Autopoiesis gives us knowledge of

mechanisms and relations that connect individuals to interactions and interactions to society to guide this level of intervention.

Notes

1. For a sample of more on the above see Chettiparamb (2007a, 2007b, 2018), Assche and Verschraegen (2008), Jacobs (2014) and Assche et al. (2011).
2. See Chettiparamb (2014, 2019) for more on the abstraction of systems theories.

Disclosure statement

No potential conflict of interest was reported by the author.

ORCID

Angelique Chettiparamb   http://orcid.org/0000-0001-7134-5725

References

Assche, K. V., M. Duineveld, R. Beunen, and P. Teampau. 2011. "Delineating Locals: Transformations of Knowledge/ Power and the Governance of the Danube Delta." *Journal of Environmental Planning and Management* 13 (1): 1–21.
Assche, K. V., and G. Verschraegen. 2008. "The Limits of Planning: Niklas Luhmann's Systems Theory and the Analysis of Planning and Planning Ambitions." *Planning Theory* 7 (3): 263–283.
Brans, M., and S. Rossbach. 1997. "The Autopoiesis of Administrative Systems; Niklas Luhmann on Public Administration and Public Policy." *Public Administration* 75: 417–439.
Campbell, H., and R. Marshall. 2000. "Public Involvement and Planning: Looking Beyond the One to the Many." *International Planning Studies* 5 (3): 321–344.
Chettiparamb, A. 2006. "Metaphors in Complexity Theory and Planning, Planning Theory." *Planning Theory* 5 (1): 71–91.
Chettiparamb, A. 2007a. "Dealing with Complexity – an Autopoietic View of the People's Planning Campaign, Kerala." *Planning Theory and Practice* 8 (4): 489–508.
Chettiparamb, A. 2007b. "Re-conceptualising Public Participation in Spatial Planning – a View Through Autopoiesis." *Planning Theory* 6 (3): 263–281.
Chettiparamb, A. 2014. "Complexity Theory and Planning: Examining 'Fractals' for Organising Policy Domains in Planning Practice." *Planning Theory* 13 (1): 5–25.
Chettiparamb, A. 2018. "Meta-Operations, Autopoiesis and Neo-Systems Thinking: What Significance for Spatial Planners?" *Planning Theory* 17 (4): 628–643.
Chettiparamb, A. 2019. "Responding to a Complex World: Explorations in Spatial Planning." *Planning Theory.* Advance online publication. doi:10.1177/1473095218820554.
Cooke, B., and U. Kothari, eds. 2001. *Participation: The New Tyranny?* London: Zed Books.
Healey, P. 1992. "Planning Through Debate: The Communicative Turn in Planning Theory." *Town Planning Review* 63 (2): 143–162.
Healey, P. 1996. "The Communicative Turn in Planning Theory and Its Implications for Spatial Strategy Formation." *Environment and Planning B. Planning and Design* 23: 217–234.
Jacobs, J. 2014. "Spatial Planning in Cross-Border Regions: A Systems-Theoretical Perspective." *Planning Theory* 15 (1): 68–90.
Kay, R. 2001. "Are Organizations Autopoietic? A Call for New Debate." *Systems Research and Behavioural Science* 18: 461–477.
Kickert, W. J. M. 1993. "Autopoiesis and The Science of (Public) Administration: Essence, Sense and Nonsense." *Organization Studies* 14 (2): 261–278.
Luhman, N. 1984. *Soziale Systeme.* Frankfurt: Suhrkamp.
Luhmann, N. 1987. "The Evolutionary Differentiation Between Society and Interaction." In *The Micro-Macro Link*, edited by J. C. Alexander, B. Giesen, R. Munch, and N. J. Smelser, 112–131. Berkeley: University of California Press.
Luhmann, N. 1990. *Essays on Self-Reference.* New York: Colombia University Press.
Luhmann, N. 1995. *Social Systems.* Translated and edited by J. Bednarz with D. Baecker. California: Stanford University Press.
Luhmann, N. 2000. "Why Does Society Describe Itself as Post Modern?" In *Observing Complexity – Systems Theory and Postmodernity*, edited by W. Rasch and C. Wolfe, 35–50. London: University of Minnesota Press.

Luhmann, N. 2004. *Law as a Social System*. Translated and edited by K. A. Ziegert. Oxford: Oxford University Press.

Maturna, H. R. 1992. "Cognition and Autopoiesis: A Brief Reflection on the Consequences of Their Understanding." In *State, Law and Economy as Autopoietic Systems – Regulation and Autonomy in a New Perspective*, edited by G. Teubner and A. Febbrajo, 125–142. Milan: Dott. A. Giuffre Editore.

Merrifield, A. 1997. "Social Justice and Communities of Difference: A Snapshot from Liverpool." In *The Urbanization of Injustice*, edited by A. Merrifield and E. Swyngedouw, 200–222. New York: New York University Press.

Mingers, J. 1995. *Self-Producing Systems – implications and Applications of Autopoiesis*. London: Plenum Press.

Seidl, D., and K. H. Becker. 2006. "Organizations as Distinction Generating and Processing Systems: Niklas Luhmann's Contribution to Organization Studies." *Organization* 13 (1): 9–35.

Sharpe, J. 1973. "'American Democracy Reconsidered, Parts I and II." *British Journal of Political Science* 3 (1–2): 129–167.

Stoker, G. 1997. "Local Political Participation." In *New Perspectives on Local Governance: Reviewing the Research Evidence*, edited by H. Davies, M. Skelchner, M. Clark, M. Taylor, K. Young, N. Rao, and G. Stoker, 157–196. York: Joseph Rowntree Trust.

Tewdwr-Jones, M., and H. Thomas. 1998. "Collaborative Action in Local Plan-Making: Planner's Perceptions of 'Planning through Debate'." *Environment and Planning B: Planning and Design* 25: 127–144.

Thornley, A. 1977. "Theoretical Perspectives on Planning Participation." *Progress in Planning* 7 (1): 1–57.

Varela, F. G., H. R. Maturana, and R. Uribe. 1974. "Autopoiesis: The Organization of Living Systems, Its Characterization and a Model." *Biosystems* 5: 187–196.

Wolman, H. 1995. "Local Government Institutions and Democratic Governance." In *Theories of Urban Politics*, edited by D. Judge, G. Stoker, and H. Wolman, 135–159. London: Sage.