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Rethinking Planning and Design Maps: The Potential of Discourse Analysis

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Abstract: This paper rethinks the nature of spatial planning and design policy maps and develops a comprehensive analytical framework to help in their analysis. Current research on planning/design maps tends to focus on Western democratic states and also still deals with planning maps as technical tools, or as fixed bearers of a political message. However, planning maps are at once fixed representations, but are also increasingly regarded as being performed and deployed in multiple and often contested ways. The research presented here suggests that studying them as discourse might allow this dual aspect to be apprehended. This conceptual framework understands maps from both planners' and consumers' perspectives, taking into consideration four dimensions of discourse analysis: text, context, construction and critique. Thus a comprehensive tool is designed to guide the analysis of planning/design maps, dividing it into eight interrelated approaches. This methodology is compatible with a post-structural understanding of maps, and suggests that using discourse analysis can also be an effective analytical tool in the preparation of a plan. It also provides a solid base that planners may depend on, to explore public understanding of plans, assess their reactions and build an understanding of the nature of planning.

Keywords: Planning Maps, Urban Design, Cartography, Discourse Analysis, Spatial Planning

1. Introduction

Researching planning and design maps as visual representations of verbal or written planning policies has recently been given more attention. Questions such as "how do they look?" and "why do they look like this?" have played a central role in this sort of planning and cartographic research [1, 2]. Other researchers [3] paid attention to potential conflicts caused by planning maps and conducted research to understand the nature of these conflicts. So researchers seem to be interested in the best way policies might be visualized, so as to smoothly transmit a vision or objectives, and are also concerned about the ability of the audience, and more recently lay people, to understand complex spatial policies in a visual way [4]. A broader approach to mapping is needed that rethinks the potential of the medium, an approach that moves beyond aesthetic or functional concerns with design and which moves beyond purely focusing on conflicts.

In our study of planning and design policy maps in the Middle East in Syria and the UAE we were faced with completely different contexts from the European background reported in most studies. Questions and methodologies deployed by these European based studies were inappropriate for our work. Maps were read differently by the various stakeholders, deployed in different and multiple ways by the planners, and used differently by politicians: their visual appearance did not necessarily reflect the planning systems or the role of the map as in the European case [2], and in practice they had different social, political and physical effects. They were affected by the social and political context, the local meaning of planning, law, authority and science and in practice the published visualization of policies, as planning maps reflected very complex local factors. A thorough and detailed study was needed to understand their meanings. The main questions were obvious: What were planning and design maps in the studied area? And what meanings did they take on in these contexts? But framing detailed questions was more challenging. Should we question the map or the policy content? Should we question the wider or more immediate context of plans? Should the focus be on specific maps, or the wider project of mapping and planning in the case area? Should we focus on the planners, designers, and cartographers as

map-makers, or the people who read these policy maps which affected their everyday life?

The ways in which maps were constructed raised complex, and significant questions that demanded a rethinking of such maps. What we needed was a practical study based on sound concepts. This paper it is a theoretical contribution addressing what might affect planning practice. We aim to develop a flexible framework capable of accommodating potential research questions about planning and planning maps. This organizes possible approaches into a broad discursive structure, which researchers can use according to their objectives. This paper explains and explores the potential of this novel approach.

The cultural and linguistic turn of the 1970s encouraged different approaches to social phenomena. As early as 1958 the linguistic philosopher Winch had suggested that language is much more than simply a reflection of reality, but offers instead an active way of constructing it. He argued that the dominant research question of 'how things work' had to be replaced by 'what things mean'. Social scientific concerns increasingly focused on these meanings in the last twenty years of the last century and also on how and why the social world comes to have these meanings [5]. Planning research that follows this post-structural approach is still arguably limited. While some planning researchers understand planning maps as cultural products that accept multiple readings [6, 7], the literature still lacks a comprehensive analytical tool that clarifies how these cultural products work, and how they came to have multiple readings. In addition, current planning research still regards the map as having a secure and largely unquestioned ontology, as something with an intrinsic meaning representing the world. This secured ontology, we argue, has restricted researchers from questioning the roles of mapping in planning discourse and practice, and has limited the extent to which planning maps have been seen as cultural products. We argue that post-structural approaches can be compatible with discursive readings, and present a conceptual framework that delivers a more comprehensive, higher level way of understanding how these tools of policy representation are developed and are being used. The argument starts with an historical review of changing approaches to mapping, and then discusses the more specific subject of planning maps. It introduces the potential of discourse analysis as an affective methodology that can underpin map analysis and outlines a practical tool that can usefully guide critical analysis of planning maps.

The suggested methodology, we argue, is an attempt to bridge the gap between theory and practice. It deploys theory to generate and organize practical questions. It is important for both planners and researchers. For researchers it can help direct research about the planning product, assist them in selecting appropriate questions, and can clarify the nature of results. It can also be a sensible methodology to deploy when exploring the context of planning in complex or rarely studied regions. On the other hand, it may represent a necessary tool that planners themselves can deploy to understand the social, political and historical context of an area, and how this context may affect a plan. For the purpose of public participation, this discursive approach may be extremely helpful as an aid to interpret public positions vis a vis policies and thus facilitate evaluation of participation. In addition, it may give deeper understanding of how different cultures are likely to react to policy initiatives, and thus offer supporting data for trans-border initiatives.

2. Theories About Maps and Planning

Understanding maps has frequently generated debate among researchers. They have been described as portrayals [8] representations [9], power-knowledge [10], complex texts [11], or even as convincing instruments of lying [12]. Only few of these debates focus on the context of spatial planning maps specifically [13, 14, 2]. Historically, maps have frequently been understood as scientific tools that communicate specific messages [15]. These messages were predesigned by the maker and the role of the map was to communicate them to users. Cartographers constructed the map and added their messages; consumers received the messages and acted accordingly. In this view spatial planning maps were read as objective tools, which reflected the plan, and which might only be usefully be questioned in aesthetic or technical terms. This view of maps as purely scientific objects was heavily attacked by constructivist researchers, and in particular by the historical geographer Brian Harley who found maps to be value-laden tools [10]. According to his view, maps should not be seen as innocent devices. They can be used to manipulate an audience, hide aspects of the world, underestimating some, whilst emphasizing others.

At the same time, the discipline and practice of spatial planning has also been critiqued by social constructivists who suggested planning represented ideologies and interpreted the world, instead of offering a neutral, positivist view [16, 17]. It was, according to them, no longer scientific, but was embedded with politics. Planning had to be questioned. Conducting discourse analysis as a means of questioning and developing planning theory is by no means a new approach [18-20]. However, while some researchers have explored the effects of broad discourses on spatial planning, and especially in Europe, we suggest that these studies in the main approach discourse as being somehow fixed and delivering a structural influence on policies. Secondly, these studies were mainly concerned with wide and explicitly declared policy discourses, or with global discourse (such as globalization, post-modernism or climate change), rather than the powerful, fine-grained, social and cultural discourses which affect peoples' day to day practice. Recently, spatial planning has increasingly come to be regarded as being performed as "everyday place making [...] which is done by living people and not just by institutions, procedures, regulations, instruments or systems" [21]. In practice of course planning products do not have universal meanings, and the local and often banal ways in which ideas are made make a big difference. *How* discourses were created and made and *how* policies were consumed differently by different actors and

even lay people has rarely been studied. Even the argumentative turn [19], with its focus on how different perspectives were constructed, was concerned with the deconstruction of discourses to reveal hidden values, but without an explicitly codified way of analyzing discourse [22]. So critical planning research to date still lacks a well-defined and comprehensive methodological framework.

Building on Harley's ground-breaking ideas other more explicitly post-structural approaches have suggested mapping is always carried out relative to discourse, context and audience [14, 23]. So mapping becomes a partial claim to knowledge instead of a truth-seeking process. More recent approaches to mapping by researchers go as far as suggesting that maps have no essence in themselves, but instead are performed and emerge according to the context in which they are deployed [24]. They argue that any map starts to be shaped every time one looks at it, and so there can never be an immutable message, nor a static map. This focus shifts understanding of maps from a focus on ontology, to a processual and ontogenetic way of doing, instead of being. So if maps are powerful and they really shape the world, as Pickles [11] argues, they only do this because of consumers' multiple readings and the at-a-distance interplay with designers who crafted the product. This post constructivist understanding shifts attention to the specific sites where mapping is made and deployed, and is also compatible with a post constructivist approach to planning.

Spatial planning maps have to date only rarely been understood and analyzed according to these novel approaches, which has been deployed with other map genres. They are still mostly understood as either scientific tools, or as value-laden texts. Planning maps are still analyzed as taken for granted *maps* with a secure ontology. They are analyzed according to their content, shape, scale, colors and level of complexity [2, 25] to understand their *real* messages or the structure of the planning system. This paper does not approach planning maps in this way. We see spatial planning maps as always emerging. We agree with Edney [26] in his call for non-progressive history of cartography, and that maps of today are not necessarily any better or worse than maps of yesterday, but are rather different. We also support Pickles' [11] argument that maps are historical products, which operate within a certain horizon of possibilities. The map is "a co-constitutive production between inscription, individual and the world" [24]. So if there is any truth that the map represents it will be the temporary truth, which each person creates for his or her own practice and interest, according to specific contexts and histories. To understand a visualization people connect what they see to what they know, and what they know is of course imbedded in their cultural context. It is important to know how both planners and consumers understand planning and maps in a specific social and historical milieu.

Visual culture has also concentrated on examining the *effect* of the visualization; this means *how* the map impacted in a society. Thus what maps do and did, and how they have been interpreted by different audiences are of a central concern. Intertextuality is important here [27]. The meaning of any policy map does not depend on the map itself only, but also on the meaning carried by other maps, texts, images, statements, events and experience. So we argue that it is not how spatial planning maps look that is important, but rather what they *do* according to people's interpretation of them. These interpretations will vary according to the historical context that the map is operating in. What is important is how map-makers construct the map, how people read them, how these readings are historically constructed and the effects that emerge from these readings in a specific context. So, we argue that maps do not operate alone; they do not have any individual power, or a pre-designed message. They are an integrated part of the socially constructed environment. They can only operate as part of peoples' knowledge and ways of reasoning as part of culture. So the best way of approaching planning maps is to understand the broader historical and cultural context that surrounds them.

3. The Dilemma of Spatial Planning Maps

However, we need to understand that maps published as development plans have a special feature that makes them somewhat different from other types of maps such as tourist or other locator maps. It can be argued that a development plan map is explicitly designed to call into being possible alternative futures [13]. So a pre-designed message stemming from the planner is clarified and supported with a clear textual document. The shift to mutable interactive GI-based mapping has not altered this requirement for fixed certainty. Planning maps include explicit proposals, aims, objectives, aspirations, possibly a scale, colors and a particular level of complexity. A planning map allocates developments; it may have a complex scientific appearance suitable for experts such as planners, but perhaps inappropriate for lay people; it may be very detailed if it is part of a strict planning system. All of these descriptions are from the map-makers' perspective, and reflect their context and their understanding of space and planning. This does not contradict our understanding of maps as socially constructed and never-finished products. Although planning maps have an intended and designed message, this message should not be understood as 'taken for granted' by the reader. In other words, planners may have aims and proposals when they structured the map, but this does not mean that consumers will receive this message. It is the discourse, culture and context that determine how a planning map is constructed and how it will be read.

So we have two phases in the life of a planning map (Figure 1). The first phase is of the planners' context when they create the map and add their perspective to the plan. This is where planners claim that their maps mean something. Planning discourses have had a strong effect on the production of planning maps. For example, *The Future of Development Plans* report by the Planning Advisory Group in 1965 [28] represented a paradigm shift in the understanding of planning in the UK. It concluded that the style of the old planning, set up under the 1947 Act, with its emphasis on detailed statements and maps of future land-use proposals did not suit

the changing situation of the 1960s [29]. Instead, the report introduced *Structure Plans* with their guidelines and broad policy proposals. Space was divided into different scales and plans corresponded to this, ranging from the large scales of the Area Action Plans, to the small scale of Regional Planning (Figure 2). This of course changed the structure of the planning system. Planning representations came to adopt more abstract concerns. Similarly, changing concepts of space and place, and discursive shifts from a concern with "proximity" to an emphasis on "connectivity", encouraged the creation of new types of maps. These novel maps such as Shrinking Europe map [30] sometimes understood space as topological, instead of adopting a Cartesian logic [2]. The strategic planning approach encouraged planners to utilize more innovative approaches for the representation of space, such as Roger Brunet's *choremes* [31, 32], which conveyed a feeling of dynamic spaces. In addition to all of these technical discourses, the effect of the political context over planners, especially in the non-democratic state context, can have a critical role in affecting planners' perception of planning as a discipline [14]. So the first phase in the life of a planning map is fixed even whist its form changes over time and across cultures. It is mutable, historicized and local, but freezes future possibilities into a static form.

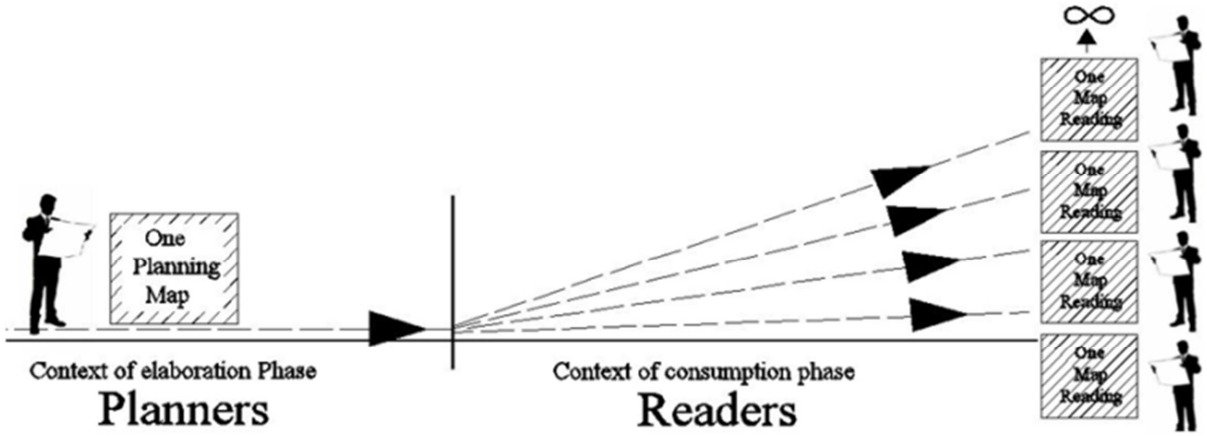

Figure 1. *Planners' claims and consumers' readings: two phases in the life of a planning map. Source.*

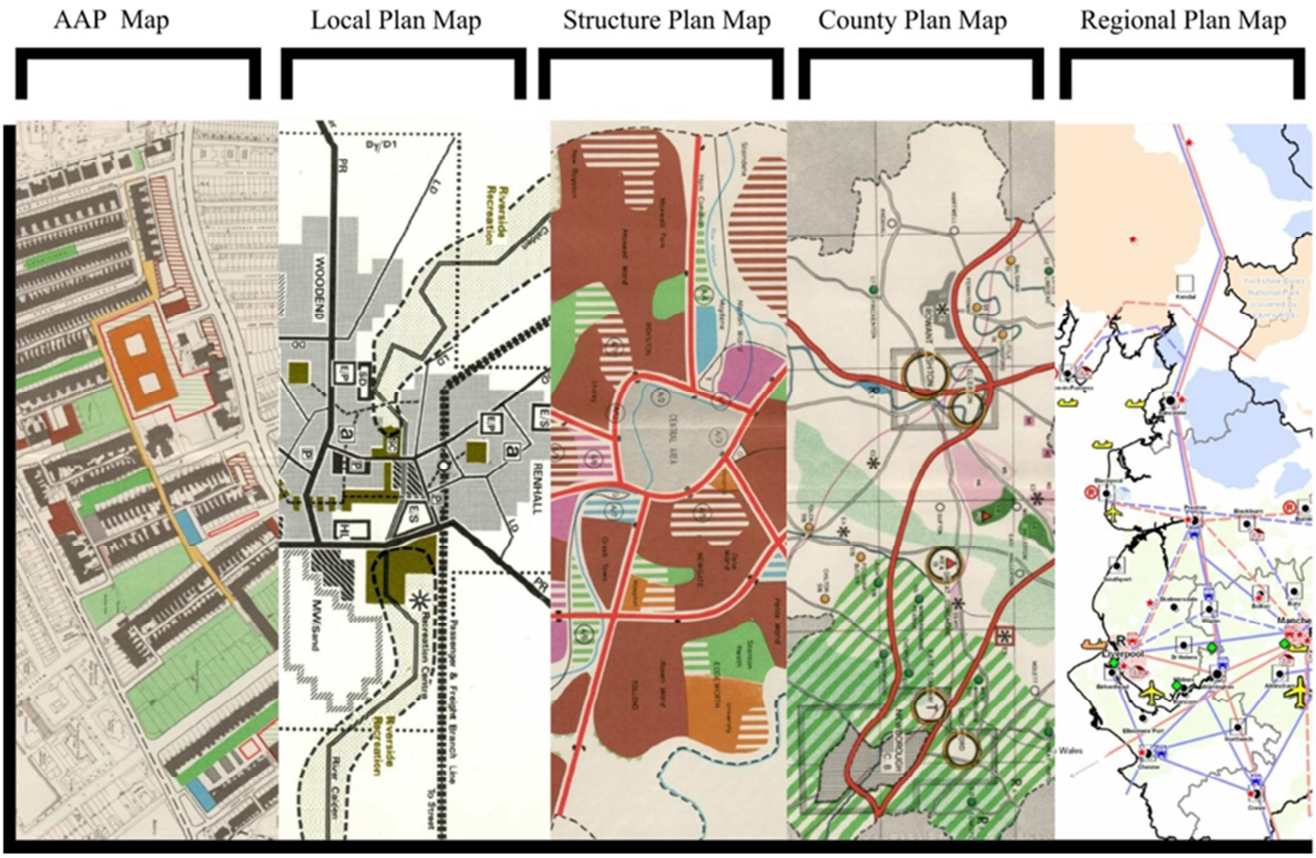

Figure 2. *Multiple levels of new planning map discourse -Sourced from Planning Advisory Group, 1965; Government Office For North West, 2008; Ministry of Housing and Local Government, 1970 [28, 56].*

A second phase in the deployment of planning maps concerns their consumption, when the consumer reads the map as part of a particular cultural, political and historical context. There is never likely to be a simple reading of the planner's claimed message. Consumers' readings of the map are historically determined by their social and political environment. Of course people reading maps in a democratic state will read them in a different way to people in non-democratic ones; consumers in state socialist contexts will read the image in different ways from people in states enacting more neo-liberal policies. A wide variety of difference stemming from institutional, legal, social, cultural, behavioral and other contextual factors will inevitably lead to different interpretations. Consumers' experience with planning, and other plans, their knowledge and the nature of local planning law, the local status of property and land, the nature of the authority that conducts planning will all affect their reading of the map. When the planner's context is far away from affected people's context, a reading "gap" may be created. This gap can result in "detached" audiences, maps that are distrusted, counter-productive plans and social and political conflict [33]. For this reason, above all others, an organized and comprehensive methodology for understanding planning maps is essential for planners.

4. The Appropriate Method to Analyze Policy Maps

A number of approaches have been deployed to analyze different kinds of visual representations. These visual methodologies [27] have been deployed by researchers from disciplines with very different assumptions about the world and the objects under consideration.

Content analysis might at first sight be an appropriate approach to unpack the meaning of a planning map. A content-analytical approach is interested in analyzing the content of the map itself, using quantitative and qualitative methods. It claims that the analyst can study a map or a group of maps and find patterns in what the maps show and how they show things. By counting the details on the surface of the map we can learn what the map is about. This approach has been frequently deployed as a necessary starting point for cartographic criticism [35, 2].

Semiotic Analysis is concerned with the study of signs and in contrast to the empiricism of content analysis suggests that a structural reading of mapping is necessary. It is based on the idea that "human culture is made of signs, each which stand for something other than itself " [36], and that culture depends upon making sense of these signs. So a semiotic approach to mapping describes how signs in the map, and the map as a sign in itself, make sense of the world by 'laying bare the prejudices beneath the smooth surface of the beautiful' [37]. Semiological approaches study maps so to reveal their ideological status, instead of regarding them as neutral vehicles. The classic research applying this technique to mapping is Wood and Fels [38] analysis of the North Carolina State Highway map, which offers a Barthean semiotic reading of the design. This concept behind semiotic analysis, however, is also incompatible with post-constructivist understandings of maps. Like Harley it seeks to reveal truths underneath maps to reveal 'real' messages, instead of highlighting the potential that might emerge from different map making and deployment.

So research needs to think about analytical methods beyond these commonly deployed visual methodologies. A methodology that would allow the researcher to investigate the role and practices of social construction in map reading, as well as the construction of the map and the map itself. Whether the selected method is quantitative, or qualitative and ethnographic, the essential issue is for an approach that works in multiple and different contexts. We suggest that a discursive perspective can still be useful here and that spatial planning maps can usefully be seen as a kind of discourse. We also suggest, this methodology not only offers an appropriate approach for the analysis of spatial planning maps, but that it also may give a deeper understanding of the nature of mapping. Gergen [39] notes that it is important to understand that discourse analysis is not only a method, but also a methodology that embodies a social constructivist perspective of the world. So it is more than just a set of techniques that can be applied such as qualitative analysis of texts. It includes a set of concepts regarding the structural effect of language. However Discourse Analysis is a complex concept, which consists of variety of approaches, and an appropriate approach needs to be 'customized' to fit the research. We suggest that deploying Phillips and Hardy [5] and Phillips & Ravasi [40] use of the methodology may be productive in the context of planning maps.

5. Discourse Analysis as a Methodology

Woodilla [41] defines discourse as the actual practice of talking and writing. Phillips and Hardy [5] give it a more specific definition, understanding it as an interrelated set of texts and the practices wrapped up in their production, spread and reception that bring an object into being. Rose [27] gives a simple definition suggesting that 'discourse refers to groups of statements which structure the way a thing is thought about and the way we act on the basis of that thinking.' In other words, discourse is a particular knowledge about the world, which shapes how the world is understood and how things are done in it. Social reality is structured and produced by discourse, and social interactions cannot be understood or analyzed without understanding the discourse that produced them. It has its own rules, language, acts, ways of reasoning and institutions.

Discourse analysis focuses attention on the processes whereby the social world is constructed and maintained. Although discourses are embedded in a variety of texts, these exist beyond the literal texts that include them. Texts represent a part of the discourse, a discursive unity and a material

representation of it and can take the shape of images, advertisements, movies, spoken words, written words, arts, and many other practices that surround us. Phillips and Hardy [5] acknowledge that these texts are not meaningful individually. It is the interconnection between them, the nature of their production, the spread and consumption that make them meaningful. The goal of discourse analysis is to explore how texts are made meaningful through these practical processes, and how they contribute to the construction of the social life by creating meanings.

So, Fairclough & Wodak [42] emphasize that if we are to understand discourses and their effects we must understand the *context* in which they arise. They state that "discourse is not produced without context and cannot be understood without taking context into consideration……discourse is always connected to other discourses which were produced earlier, as well as those which are produced synchronically and subsequently" [42]. From this statement it is clear that text, discourse and the historical context must be connected if researchers are to understand social phenomena. Phillips and Hardy [5] call this the three dimensional approach to discourse analysis. They see that researchers cannot focus simply on an individual text, such as a published planning map, and instead argue they have to refer to the 'bodies' of texts, because "it is this connection between discourses and the social reality that they constitute that make discourse analysis a powerful method for studying social phenomena." [5].

Discourse analysis also assumes that truth is constructed and not objective. Hall [43], claims that constructivist discourse analysis does not deny that things can have a real, material existence in the world, but that nothing has any meaning outside discourse. Anything that does *"make sense",* including "saying" and "doing", needs to be described in discourse [44]. Foucault [45] argues that since we can only have knowledge of things if they have a meaning, then it is discourse, not the things or the subjects themselves, which produce knowledge. He argues that things mean something and are true only within a specific historical context.

Discourse is also strongly connected with its physical effects. No ontological distinction can be made between cultural and material practices. So changes in the understanding of what it means to be human and in human rights as subjects caused a change in the architectural design of the prison as a building [46]. The development of medicine and the emergence of the clinic involved machines, clothes, systems, ethics, authority, and techniques of dealing with bodies and architecture, along with changing discourse [47]. Indeed, Wetherell [48] acknowledges that 'one of the most exciting development in discourse studies has been this emerging focus on what has been called the practical or material efficacy of discourse. She adds that geographers interested in meaning-making should study how discourse literally *shapes landscape*. These two concepts of truth and effects are central for our framework. The former rests on a social constructivist understanding of mapping, in which maps are deployed and emerge to work in particular contexts. The latter sees maps as practices, with an affect beyond their literal communicative abilities.

So discourse analysis seeks to understand *how* the social ideas and acts came into being in the first place, and how they became taken for granted and maintained over time [5]. It focuses on understanding how language *constructs* social reality. For example, a semiotic analysis, of a map, would usually study the signs which are embedded in the map, but would usually be little concerned with how these signs got their meanings in the first place. Content analysis will usually focus on the meaning of the map content for the consumers, and also pays little attention to how these meanings came into being. Ethnographers aim to understand the meaning of the social reality for participants, but they are usually not interested about how these meanings came into being. In contrast a discursive approach allows the emergent and mutable aspect of mapping as a process to be approached. To illustrate these differences and clarify these concepts we can work through how different methods might analyze planning maps.

An empirical and quantitative study of spatial planning maps focusing on content analysis might include collecting data about the use of these maps among different countries, comparing the number of textual spatial plans with the number of visualized plans. It might focus on the percentage of themes presented on the map and relate them to the number of themes in the textual plan, to see how comprehensive a map is. It might compare the number of colored maps with the number of monochrome maps. On the other hand, a qualitative approach to planning maps might select maps and try to evaluate the ability of lay people to understand them. It might undertake semi-structured interviews with these people to try to evaluate their perceptions of the maps' roles in decision-making. It also might include structured interviews to connect between the complexity of map design and the ability of lay people to understand it. One could use conversation analysis to study planners in different traditions talking about their experiences with planning maps. Ethnography might involve a researcher attending regular formal or informal meetings with planners to see how they discuss planning maps, and why conflicts or consensus emerge.

In contrast, discourse analysis starts from the question of *how the concept of map* came about in a specific culture, and why it has particular meanings at the moment of the research. We could explore, for example, how the discourse about map meaning draws from and influences other discourses such as those relating to public participation, democracy, planning regulations, the law, corruption and inequality. Discourse analysis is also interested in how the map discourse is constructed through a diversity of texts, ranging from simple local cultural traditions, to local planning regulations, passing through daily newspaper articles and advertisements, up the political hierarchy to encompass presidential decrees and statements. We might then study how this discourse gives meaning to other activities such as respecting planning regulations, trust in the planning authority, or the broader political context. We might also study how particular actors draw on the discourse to regulate their positions and actions, such as reacting to people illegally developing informal

settlements, or taking action against non-payers of council taxes. Discourse makes certain practices possible or impossible. By exploring the different texts that have relations with planning maps and relating them to the broader urban, social and political context researchers will be able to draw conclusions about policy actions which depend upon the map as a never-completed interaction of discourses, texts, and practices that together constitute local historical contexts.

A clear conceptual and philosophical distinction can be drawn between commonly adopted quantitative and qualitative approaches and discourse analysis. The tools deployed may be the same: semi-structured interviews, ethnography, focus groups and other qualitative tools can be used effectively in discourse analysis to understand how the discourse is structured and enacted in a specific practice. It is the use of the method that makes a research technique discursive, not the method itself.

6. The Main Approaches to Discourse Analysis

In their meta study of empirical discourse analysis research Phillips and Ravasi [40] suggest that discourse analysis approaches can be categorized into two theoretical dimensions (Figure 3). The first concerns the relative importance of text and context in the study. The second concerns the level to which the study focuses on social processes (social constructivist studies), as against studies that focus on power dynamics (critical studies). Combining the two dimensions generates four spaces that structure the main perspectives in discourse analysis. Social Linguistic Analysis (SLA), Interpretive Structuralism (IS), Critical Discourse Analysis (CDA) and Critical Linguistic Analysis (CLA).

Phillips and Hardy [5] use these theoretical perspectives to categorize their empirical studies about organizations. The vertical axis shows a differentiation between text and context. Although Fairclough [49] acknowledges that text, context and discourse cannot be separated theoretically, they explain that this categorization will help in defining research data that need to be collected. The researcher needs to determine whether the local or the broader context is more relevant in the research.

Thus, some studies conduct a broader investigation of discursive elements, whilst others undertake a micro-analytical study of particular texts. However, Phillips and Hardy emphasize that this separation is not a dichotomy and some researches combine both ways of doing.

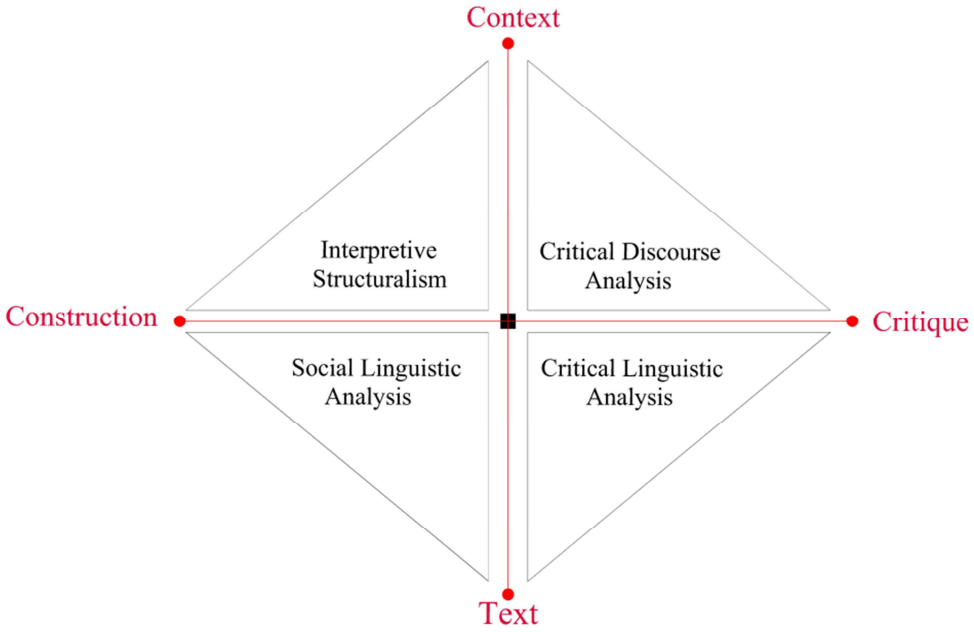

Figure 3. *Approaches to discourse analysis. Sourced from: Phillips and Hardy [5].*

The horizontal axis of Figure 3 contrasts constructivist and more critical approaches. Critical Discourse Analysis (CDA) has different orientations. Foucauldian-based research usually seeks to uncover the dominance and privileges of particular discourses in order to reveal its consequent effects. Its concern has often been with how power is distributed within a discourse. Some researchers have studied how the social construction shaped by discourses can empower and weaken particular actors. Others have focused on how particular actors deploy discursive power to leverage outcomes. In contrast constructivist approaches are more concerned with the mechanism by which discourse ensures that certain phenomena are made and become taken for granted to structure social worlds. While critical analysis can help in exploring the social and political nature of relationships within societies, constructivist approaches can give an understanding about *how* these relationships came into being and identify the process of construction that held them in place.

7. Drawing It Together

The above review suggests that discourse analysis might be

categorized into four different approaches. Each demands its own types of data and subject of study. The first method is the *Interpretive Structuralist* approach. This approach focuses on how the meaning of planning maps is constructed, how maps used to be understood in the past, and how they are understood now. From a *planners'* perspective the results of this analysis will give the planners' and the planning system's view of the planning map. From the *consumers'* perspective, the approach is clearly discursive, and identifying the immediate and relevant context becomes the main issue. To understand this, researchers need to start collecting historical information about the political and social environment of local case evidence, but also to held meetings and initiate interviews to understand how people see the planning maps in general, and explain how this understanding came into being by connecting it with the historical events. This gives us a deeper understanding of how people approach maps. After understanding this, research will need to focus on how these views impact the world and cultural practices in which they are enrolled.

In our UAE case study, for example, the historical condition had a critical contribution in structuring the nature of planning maps for planners and consumers alike. Planning maps, while looked as if they depicted rigid land use, were flexible in practice. The extremely rapid economic and demographic growth and ideas of Dubai as a global city encouraged a much more flexible approach to planning maps, because future is hard to predict in this context. The tribal social structure, in addition to Dubai ruler's discourse of "excellence in development", made it much more acceptable for unconditional intervention in planning by the ruler to take place, which frequently overrode mapped policies. This also affected the UAE people's reading of planning maps. A majority of the population never questioned the map and public participation in planning and governance was limited. Historical conditions in the UAE had, arguably, contributed to successful consensus building in planning and governance.

A significant contrast however emerged when the approach was tested in Syria. Syrian planners were strongly influenced by political discourses relating to "modernism and development", "the social market economy" and "socialism and control" [33]. These in turn strongly affected planning and planning maps. However, in Syria planning maps were regarded with distrust by a considerable portion of the population, who focused on trustlessness, sectarianism, legal corruption and the use planning as a weapon in their everyday reactions to mapping. So a considerable gap emerged between the meaning of planning maps claimed by planners, and the meaning of planning maps constructed by consumers. The Syrian participants were unconcerned about design qualities of mapping because of the overarching significance of power in Syrian governance. These considerable differences in the "frame of references" [50] between planners and consumers led us to suggest a participatory planning approach of managing conflicts might be more appropriate, rather than a consensus building approach which the Syrian government tried to accomplish in the last 40 years.

A second approach is *Social Linguistic Analysis.* It can be used to study individual maps to appreciate a specific map context. The object of study becomes a particular planning map, such as a map that represents a critical issue or a moment of change. This can give an understanding of one map case, but largely ignores broader contexts, and should be linked in subsequent analysis to broader contextual understandings. This approach was used in both the UAE and Syria contexts to show how the proximate context of specific maps was related to the broader social and historical context.

Critical Discourse Analysis is the third strand and is likely to be most useful whenever inequality becomes significant. It invites questions relating to unequal power dynamics and how these affect understanding, in addition to directing archival research. In this approach, any inequality needs to be related to the context, and not just to an individual map. Being critical means not ignoring inequalities for the sake of objective description. This approach was particularly useful when studying Syrian planning maps where politics, law and science were seen by participants as being deployed to marginalize people. Conducting a *Critical Discourse Analysis* was essential to explain *how* the political discourses were used to achieve this end. Thus this approach provided an explanation of the people's rejection of plans and policies and clarified how the "trustless map" image was created in their minds.

The fourth approach, the *critical linguistic* method, may have limitations in the study of planning maps if used independently, but can offer an approach to investigate material examples. Relating power dynamics to the local context of individual maps alone is likely to underplay the bigger pictures, and criticizing individual planning maps may not facilitate progressive change, since power is usually deployed outside the frame of an individual map. For this reason Critical Linguistic Analysis as a critical approach may not be useful to understand the dynamics of power that are inherited in planning maps, but it can give better understanding of power dynamics when using it to clarify examples. This approach used in the Syrian case to explore how participants read specific plans and how their readings were related to the broader critical. It also showed how some individual planning maps contributed to the wider meaning construction of planning in the country.

Of course selecting an approach to use depends upon contexts, and the aspects to explore depend on priorities set by the researcher, so additional categorization may make the framework more organized. Figure 1 emphasizes that two different sets of actors matter in the world of planning maps: the planners and the map readers. Figure 3 suggests that different insights flow from four different kinds of discourse analysis. Combining these heuristic devices allows us to envisage a tool that might usefully draw attention to priorities for research in this field.

We can suggest 2 dominant factors – firstly the '*planners'* site' where meanings in the map become fixed. Researchers can decide whether they are interested in studying how planners construct planning maps within a broad context or tradition. Or they can explore how planners constructed a specific map without considering the broader context. One might even investigate critically how a specific map was constructed. Critical studies in these cases may investigate

what Söderström [14] calls the 'internal efficacy' of the map i.e. the translation from the complex reality of the place, into its simplified representation on the map, where the power of politicians and decision makers as against cartographers and planners becomes clear and dominant.

Secondly we have the '*consumers'* site' where the map emerges and morphs. Researchers can decide whether they are interested in studying how consumers read maps by referring their readings to broader contexts. Or they can investigate how consumers construct their understanding of a specific map case without giving any references to the broader context. Another variant focuses on critical analysis of the map as a text and the importance of critical contextual study.

By deploying this conceptual tool a broader more contextual interpretation becomes possible, one that takes peoples' readings of these images into account, and compares it with planners' readings. This kind of approach might usefully start with exploring the wider context of planning map readings, together with the discursive activities and events from the planner's perspectives. Hence attention might start with articulating ones interest in the study of maps. Then researchers can usefully move to understand how planners construct specific maps. A logical subsequent step is to understand how consumers construct their readings of maps in general and specific contexts. The critical perspective of the map as a text and as part of a contextual study will help in building a balanced understanding. Any "gaps" revealed by the critical approach are likely to explain how consumers' understandings of broader contexts affect their textual readings of specific maps. This might in turn begin to explain the relation between the consumers' broad context and their readings of the planner's specific texts (Figure 4).

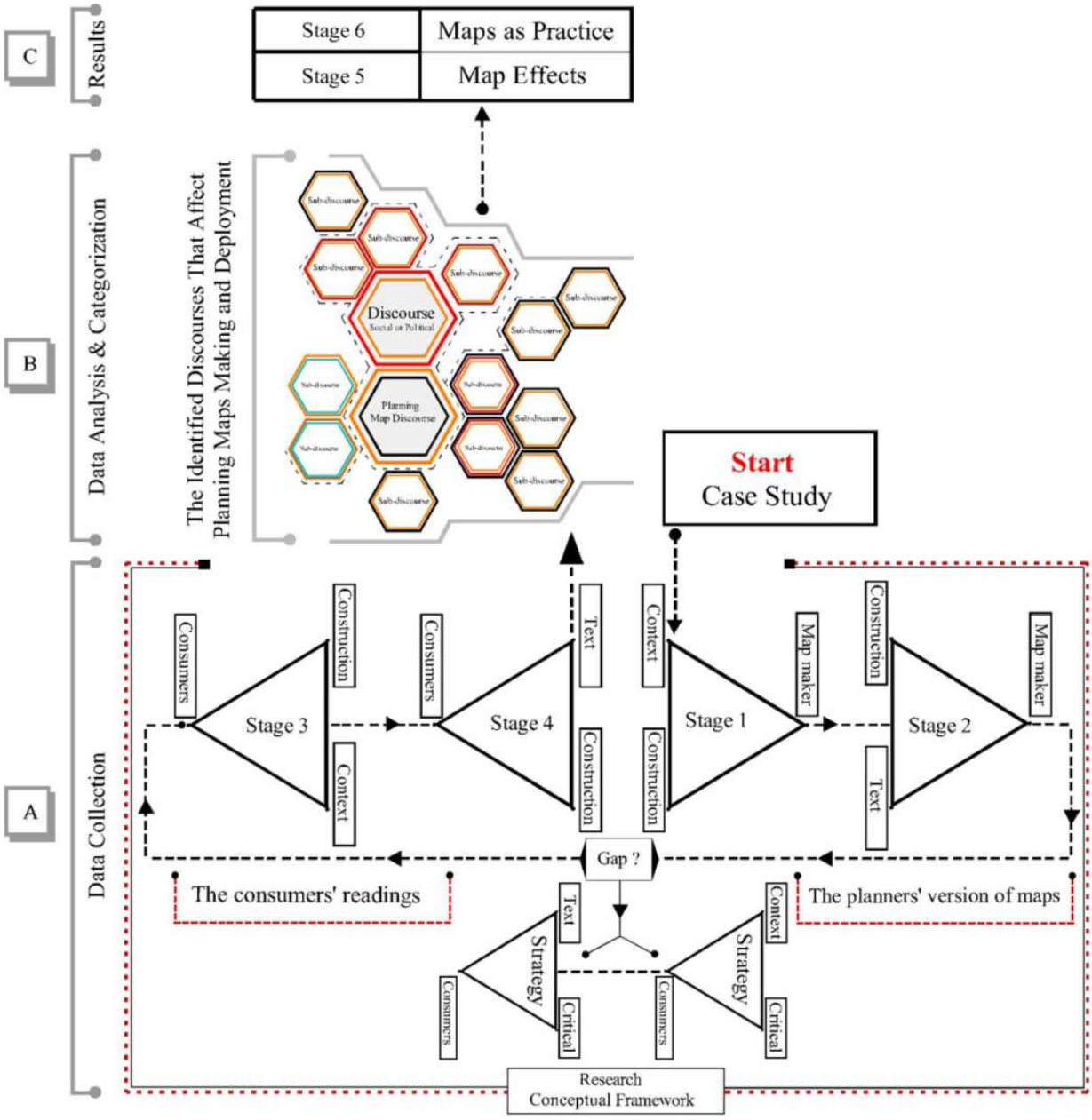

Figure 4. *The conceptual framework and research stages.*

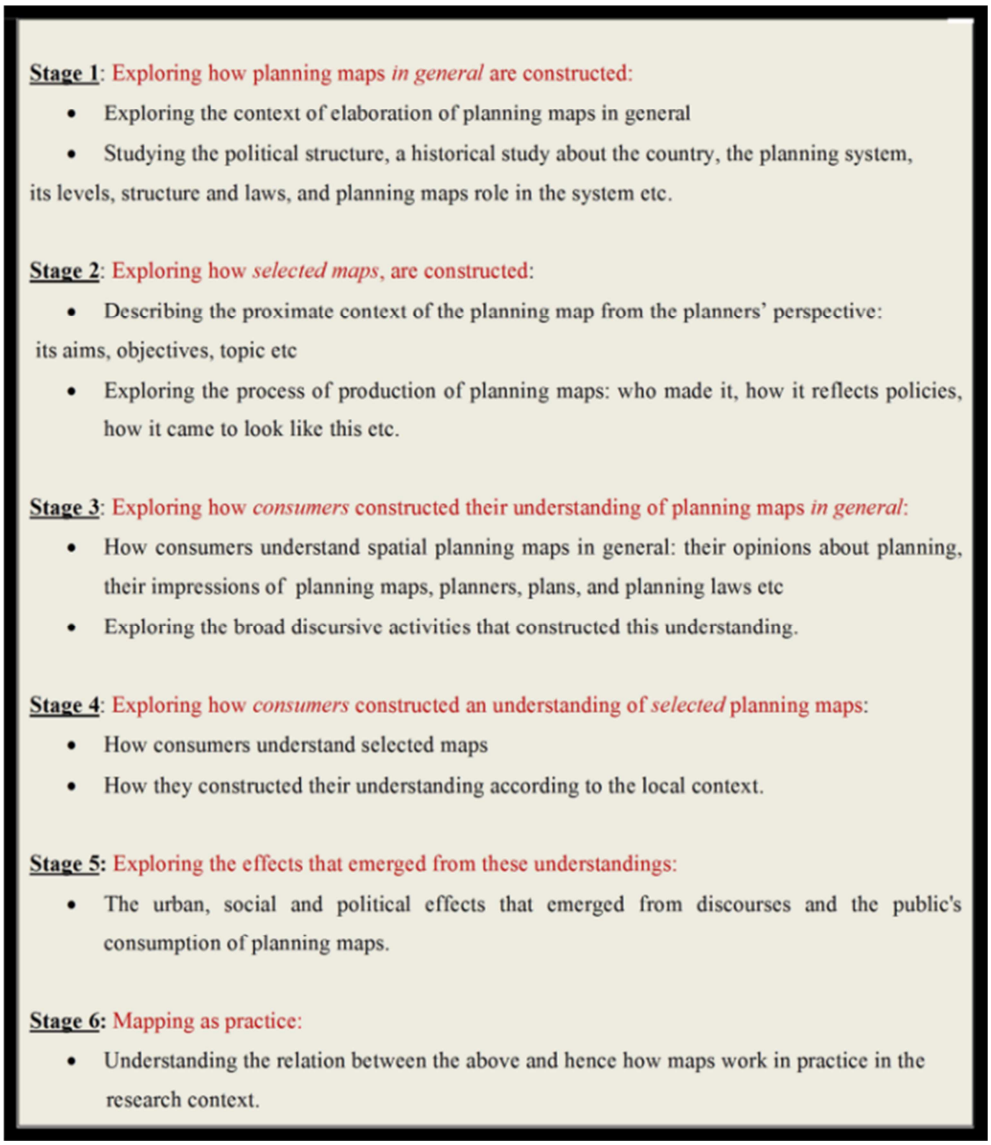

Figure 5. *Six stages for understanding planning maps as cultural products.*

Accordingly, a research sequence about planning maps might follow the stages in Figure 5. There are important implications that emerge from this study. The first highlights the messy nature of research [51], highlighting the ways in which knowledge is progressively constructed, in a process, where insight feeds off earlier action, and where actors are enrolled into discourse. The second is that the researcher is clearly wrapped up in the research field co-constructing knowledge. Positionality is a crucial influence in post-constructivist, and critical discursive research with maps. It is important to know that the discourse analyst is both a constructor and constructed by the discourse. Thus the researcher's positionality must be recognized and taken into consideration [52]. Rose [53] explains that reflexivity "is advocated as a strategy for situating knowledge: that is a means of avoiding the false neutrality and universality of so much academic knowledge". Mattingly and Al-Hindi [54] suggest that it is essential to reveal the researcher's and to limit the research conclusions rather than making them universal.

8. Conclusion

Much current research about planning maps is still restricted as it secures the map ontology and studies it as "a map". This kind of technical and empirical approach, does not offer a comprehensive methodology to understand planning and its maps in different cultures. The conceptual framework suggested in this paper represents a flexible methodology to analyse spatial planning maps as discourse, which moves beyond taking the map for granted, and which recognises the emergent possibilities of mapping. It represents a powerful and comprehensive tool to study and compare planning maps from different cultural contexts. Researchers may select an appropriate face to study from the diamond shaped tool, however, a more comprehensive understanding of any particular planning and mapping context needs to follow all six stages discussed above. Political and social discourses work together to complexly construct the context of making and

reading planning maps (Figure 6), and the power of these discourses create the effect of the map as practice. These discourses represent a frame (see Lakoff, 2004) that consumers look through to read the map. The map is at once constructed by, but also constitutes, the discourses that frame it.

This methodology is applied is strongly compatible with Edney's [26] and Crampton's [55] call of "*non-progressive history of cartography",* where maps have no inevitable or universal meaning, and are deployed and read according to a particular momentary local context. It also complies with Pickles' [11] argument of maps as practice, and we suggest that it highlights the critical co-productive role played by planning maps as active agents in the making of territory. The differentiation between makers' and consumers' readings of the pre-designed messages highlighted in our approach fits in well with Kitchin & Dodge's [24] argument about the emergent qualities of mapping. Indeed we suggest that the ontogenetic aspect of mapping that they highlight is particularly open to discourse analysis. The method adds to explanations of *how* the map emerges in the case of spatial planning. It comes out of the discourses that politicians, planners, and consumers frame [57] and becomes part of the taken for granted concepts underpinning reasoning [58]. Conducting studies to understand how the social and political discourses work in practice in relation to planning is, we would argue, essential for understanding the nature of planning as a medium, but also for understanding its tools and products.

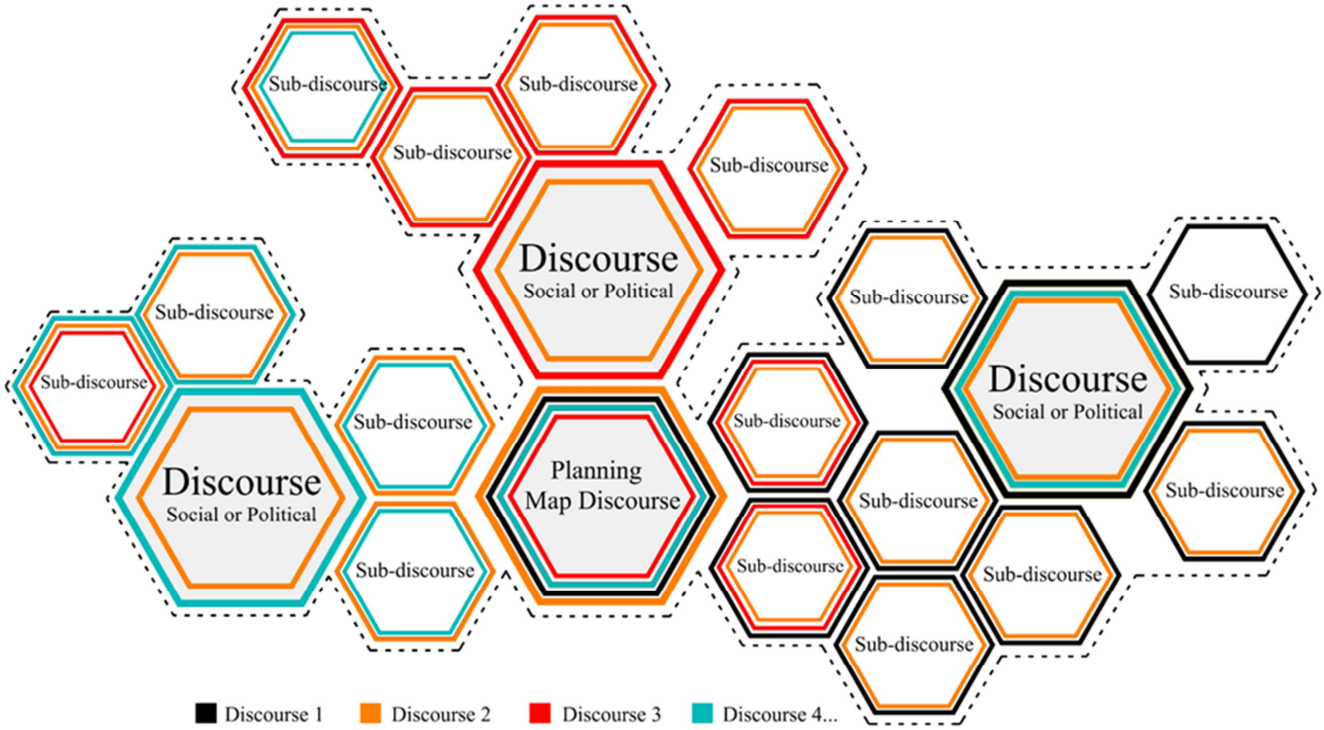

Figure 6. *The complex structure of interrelated discourses which together frame planning maps. The colours of the outer hexagons represent the main discourse, whereas the colours of the inner hexagons show how discourses interrelate to one another.*

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