

De Roo's '9 cells approach'

to capture a situational understanding of planning practice and theory

1. Introduction

Nine cells to describe a planning issue. No more, no less. Together these nine cells can generate a comprehensive understanding of each and every situation a planner might encounter in practice. And each of the nine cells encapsulates somehow theoretical knowledge, which should further enhance the understanding of the situation the planner is confronted with. Nine cells only.

2. Science

Traditionally science likes to focus on one particular object, entity or phenomenon. Isolated from its context this object or entity is subject to measurement. An iron ball for example that behaves according to the laws of gravity. A biological cell that splits in two equal halves. An individual behaving in line with economic principles. This kind of science however comes with various assumptions. To comply with the laws of gravity the metal ball falling down has to be studied in a vacuum environment. The splitting in half of a biological cell is carefully being researched by looking at the behaviour of the various parts out of which the cell exists. The individual's economic activity is considered to be fully rational and fully informed, in the sense that it's behaviour is predictable and logic. The examples show us scientific behaviour that appreciates measuring in isolation, observation of the parts and a rational behaviour which can be described objectively, preferably in quantitative terms. If measurements done produce the same results over and over again the results are scientifically valid. And conclusions drawn from these measurements are considered 'evidence based'.

We are talking here about a kind of science that is strongly object oriented, exact and absolute. Undeniably, this kind of science has been extremely successful. It has been so successful that scientists began to believe its approach should be applied to all empirical sciences, including the social, managerial and psychological sciences. However it is an approach that has its limits, in particular if the human species is involved. People breathe, they need air, which means they have a difficulty in vacuum environments. Studying the parts of the body will not lead to an advanced understanding of human behaviour. And to say that humans are rational beings per se, is also rather doubtful. The study of humans and the environment they live in might therefore need another approach than the approach that has been successful for the exact sciences.

Instead of solely having an objective orientation, subjective (the perspective of the individual) and intersubjective (the collective and exchangeable ideas, thoughts and motives of a group) perspectives could be informative as well. In that case rationality is more than behaviour that complies with universal laws and with objectivity. Rationality would then refer to a kind of behaviour that is the result of an interdependency between empirical

experience, logic and reason, and intersubjective interaction. Even then it cannot be ignored that humans are also emotional beings and behave intuitively as well.

Human behaviour is by and large a response to information that comes in through the senses. Partially this is through object observation, partially this is by sharing meanings, thoughts, visions and opinions. Human behaviour is to be seen as a product of humans interacting with their environment. With regard to human behaviour it doesn't make much sense to analyse the parts of the whole. Instead of such a reductionist approach, also a holistic approach (the whole is understood through its parts as well as from interactions with its environment) and an expansionistic approach (the whole gets meaning within a contextual environment) can generate insights that are a contribution to knowledge (De Roo, 2003: 131). This is a kind of science that has a 'contextual' outlook. This kind of science does not want to and cannot be framed by exactness, as this is merely impossible. Instead it is taking the characteristics of the human kind seriously.

How to see this humanized, social kind of science? What will its contribution be to our understanding of the world we are part of? How to be scientific in a world that is full of subjective beings within environments which depend highly on unique circumstances? Cities are such environments...

Every spatial planner knows the city is an incredibly exciting laboratory to research in. Far more exciting than the physical labs, where the context is excluded and researchers are challenged to do the same tests over and over again, to find certainty in a result that is the same over and over again. The exciting laboratory the city is will not be the place to find full certainty. The city incorporates loads of uncertainties, and the planner knows we better live with them. They are not to be ignored. The planner knows as well the city lab is not a place where one can make use of buttons to vary one item only among the various variables that are relevant in a particular situation, to measure its consequences and to identify the dependency of that particular variable with all others. It's not an option for various reasons. The people making use of the city would not appreciate to be seen as mere objects in a testing lab. But the city is as well a place of high complexity, within which the various variables are unlikely to be kept stable to do repetitive measuring to convincingly result in an evidence-based outcome.

Here we propose an alternative frame of reference that takes in mind the above conversation, and structures empirical observations in a way that is supportive to informative statements while accepting humans as they are, and is acknowledging the uniqueness of each and every situation. Still this alternative frame of reference has to result in a generic understanding of human behaviour within space and place.

3. The 'material' environment

The exact sciences have had such an impact on all of us we're indoctrinated with a desire to be 'exact' about objects within physical space. Consequently planners had for a long time 'functionality' as their understanding for environmental quality. 'What to build where?' would be a legitimate question. And the answer would be in terms of functionality and accessibility: 'How is this function connected to and assessable with its environment?'. An industrial site would be allocated near the ring road or the highway. It would be irrelevant if

that particular site would have cultural, historical or ecological qualities. Neighbourhood renewal would be framed by the costs to either demolish or renovate houses. The ideas or desires of local residents would not matter much, as they are just subjects and not at all planning experts with knowledge about the urban and its renewal projects. The notion that residents have a sense of place, and are likely part of a social network which probably is related to that particular neighbourhood is not within the planner's scope of vision. The traditional planner is framed by a technical rationale, is object oriented and has a reductionist attitude. Within that frame the planner is the expert.

This perspective is no longer valid as the only reality. The city might have a physical representation, it is above all a social project. The city is a place where people live. The neighbourhood is a place where people relate to. A house is a place where people are supposed to feel at home. People matter, and they have strong local knowledge. Local knowledge might perhaps not represent generic knowledge, it does present a local perspective of how people see their daily environment, and the needs and desires that comes with it. And while planners might have to incorporate a wider range of interests than the desires at the local, they should be aware the planner is not there for himself and to boast his ego with the idea of being the expert. Most of the times the planner's first interest is the public. In other words, the site planners look at is not just physical and functional. It is a place which is meant for people to live in, work, travel through or leisure. Every site represents therefore an interdependency between the physical and the social. The situation that is being produced is neither called physical nor social but 'material'. Aside from the site it is the situation that has to be considered. A site cannot be seen in isolation, but is to be understood relative to its environment, and dependent on people's appreciation. A planner would not be interested only in facts, but is aware of 'the fact' that values matter too.

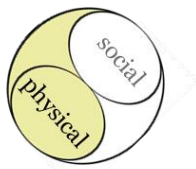


Figure 1: the 'material' situation is central to the planner's observation

The first of the nine cells stands for the site and the situation that has the planner's interest. Whatever it is that has led to the planner's attention – likely change is coming or is very much needed – the situation at hand represents both the physical and the social. A combination of the build environment and the social community that is living, working or leisuring there. Planning is about facts and values!

4. Three cells

Such a situation can be everything, perhaps a neighbourhood in decline, segregation and gentrification of residents, a traffic jam, or nature under threat. You name it. But the cell that stands for each and every situation that needs the planner's attention, has to be seen in conjunction with two additional cells. One cell represents the institutional world, the other the organisational. Institutions "are the rules of the game in society" (North, 1990: 3). Mobility of humans does not only depend on the possibilities of the physical environment or

on what is considered socially acceptable. Space and place are conditioned by rules and conventions to which humans respond. And institutions represent these rules and conventions. An agreement made between two persons is in fact already institutional. Formal and informal rules are supportive to human interaction. These are the rules we live by. Institutions guide social actions (Droege and Johnson, 2007). They produce instructions to which people relate to when interacting with others and which make human actions work, including actions we can see as purposeful interventions by planners. The planner will make reference to a whole set of formal institutions, such as the law and the governmental set up, which is meant to negotiate formal decision making. But it includes as well a wide body of NGO's, interest groups, housing cooperations, real estate agencies, consultancies and engineering firms.

In the case of a neighbourhood in decline the institutional environment is likely to exist of the municipality working together with housing associations and construction firms, and most likely also with representatives of local residents. In case of a traffic jam, which remains persistently there day after day, the road and infrastructure authorities will negotiate with the local authorities and with agencies responsible of public transport facilities about the possibilities to lift the traffic constraining conditions. In case of nature under threat it is likely that nature reserve associations are willing to act while being under pressure by interest groups and their observation that something is going terribly wrong, by parties with a desire to utilize the environment for economic purposes, and by the authorities who are very much aware of the fact they can spend their tax income only once. In all these situations the decision game is played by certain rules. And these rules are the outcome of systematically proposing, using and evaluating decision making processes.

This institutional environment is for most outsiders – quite often these are citizens – a tough world to understand, and which keeps them often at (an undesirable) distance. It is also a dynamic world because rules are political, and very much open to change, with an interdependent relationship with the material environment. It is a world the planner has to have substantial knowledge about, to be able to act accordingly and to be able to advice those who are in need for information about how to act. The notion that this institutional world is central to planning theory, will not come as a surprise. Planning theory is above all a debate on rationality framing processes of choice, planning, policy and decision-making.

In between the material and the institutional there is the organizational world. While decisions to purposefully intervene in the material world are being made within the institutional domain, it is the organizational world within which the intervention itself should be prepared, planned, operationalized, executed and evaluated. Meetings have to be arranged, agendas have to be prepared, maps and plans have to be drawn, the site has to be made ready, material has to be bought, people (not just citizens) have to be informed, contracts have to signed and so forth... The organizational world is what some see the place where planning is at its best: “the systematic preparations of policy and its implementing activities, aimed at purposeful interventions within the spatial order and meant to maintain and possibly to enhance the spatial quality” (Voogd, in De Roo, 2013: 12). It is where the whole range of planning procedures, protocols, tools, methods and instruments can be found to pursue, for example, project, process and program management.

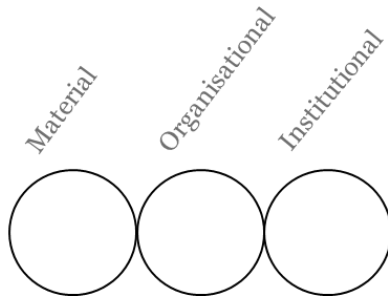


Figure 2: the planning issue defined by interrelated material, organisational and institutional realities

The planning issue is to be seen as the whole of essential aspects relevant to purposefully intervene in a particular situation, and deduced from the material, organisational and institutional worlds and their interdependent relations. The planning situation is located within the material world. The process of decision-making about how to interfere within this situation is central to the institutional world. And the organizational world is where most of the planning action can be found.

5. Multi-level

Yet, we are still not where we want to be. We are not yet in the position to define the planning issue in a way that makes sense. This is due to the fact that planning issues are often not isolated at one particular level of observation. In the case of a neighbourhood in decline there's likely a relationship with the neighbourhood's environment, and its location within the city as a whole. But as well the various households within that neighbourhood will matter, as they might have to leave their house for a while with the renovations taken place. Organisationally the neighbourhood in decline is subject to various stakeholders who most likely will see the renovation in the light of other activities taking place. Such activities will have an impact beyond the neighbourhood. Examples are the implementation of sustainability plans, the enhancement of infrastructure and public transport and the city wide development of digital communication systems. At a very local level the agenda for the renovation of apartment blocks has to be considered carefully, with residents having to leave temporarily to another place, to allow construction companies to get in. Institutionally neighbourhood renewal is probably on the agenda of authorities at a level far beyond the city. Most likely it is addressing a national agenda, and could even include particular legislation. At the local level renovation of neighbourhoods is partially a consequence of the various sites, functions and buildings no longer meeting the (national) standards, norms and criteria under which these sites, functions and buildings are allowed to operate. Lately these criteria often relate to energy reduction and being connected properly to the internet. But also the renovation of sewer systems, the renewal of the local shopping mall and an additional investment in greening the neighbourhood with parks and trees might all be an integrated part in the whole process. In other words, to understand the issue of neighbourhood renewal it is rather relevant to take a wider perspective - this is the macro level - and to incorporate a wide range of local issues - this would be the micro level. These wider and more in-depth perspectives should not be limited to the material world only. Also the organisational and institutional worlds are embedded within lower and higher levels.

And these levels contribute as well to the planning issue at hand. Knowledge about the relevance of these organisational and institutional levels add to the understanding of the planning issue, will improve the planning actions and the support the planner in his interactions with the various stakeholders.

This multilevel perspective results in nine cells - hence the '9 cells approach' (De Roo, 2013: 39). It is fairly easy to see that these nine cells are relevant for various planning issues, not just the neighbourhood in decline. Also the issue of traffic jams. Social issues in the city, such as segregation and gentrification. And the actions needed to counter threats for ecosystems. And very many more issues planning is concerned about. Filling in each of the nine cells for a particular planning issue means the planner is not only able to clearly define this issue, he is as well generating knowledge about possible actions and about constraints that might pop up. And he is well equipped to advice the various parties involved in the do's and don'ts.

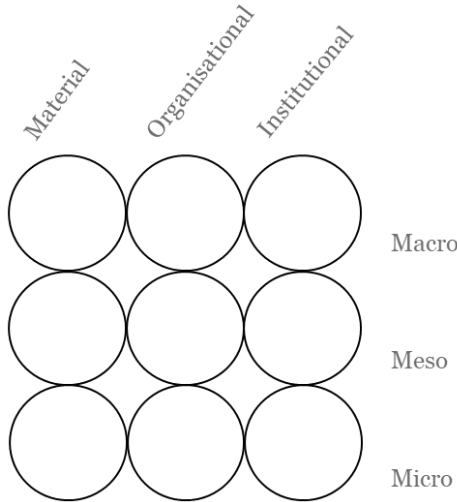


Figure 3: the various 'dimensions' of the '9 cells' (De Roo, 2013)

With this '9 cells approach' it is fair and fairly easy to define each and every planning issue in realistic way. The nine cells can be played with a bit, to widen one's scope or to improve one's perspective even further. For example it can be beneficial to stretching further the multi-level linkages of a planning issue (Figure 4). For example in case of neighbourhood renewal the planner might see the neighbourhood as the meso level, while it might be seen as the macro level for residents within that neighbourhood. Which would mean that the understanding of the planning issue by the residents of the neighbourhood will be somewhat different than the perspective the planner has.

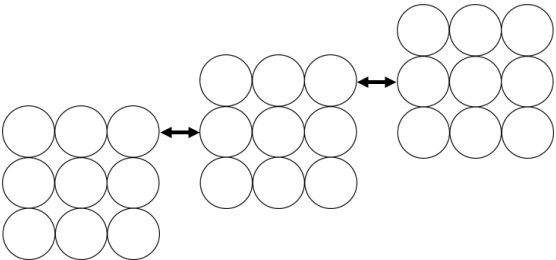


Figure 4: Multilevel as a continuous story

6. About time and becoming situational

Additionally it might help to look back in time, to identify the planning issue's origin, or to see how the planning issue and the nine cells have changed through time. This as well adds information to the situation. It might show how the various people involved have developed a history, which could explain frustrations or power relations. It might as well bring past experiences to the fore. Extrapolation of the various cells into the future might shed light on constraining and enabling factors which could impact the planning issue at some moment in time. Although it has to be said, planners are not future tellers. Planning issues are complex per se, which means they might show a path dependency, but the development trajectory towards the future will definitely include uncertainties. A planner is wise to acknowledge these uncertainties.

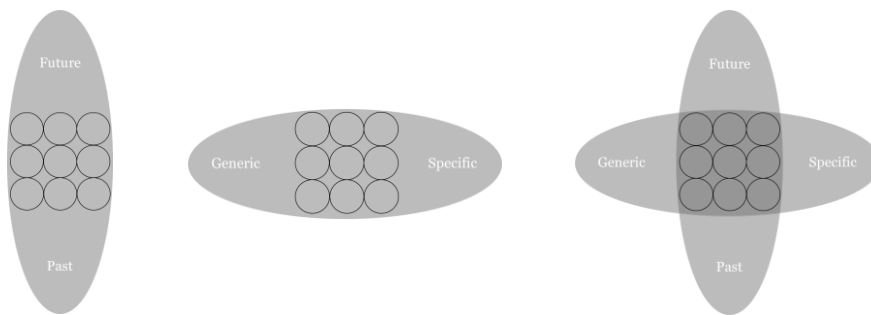


Figure 5: the nine cells approach in time related and situational perspectives

The discipline of planning is not an exact science. And this is good news. Otherwise there would be only one truth, one past, one future, and given the facts here and now the future would be known. That would make life quite boring, a life with no possibilities, no options, no choices and no alternatives. And the planner can go home, because there's not much more to do. Fortunately planning is a complex science, with means there's not only certainty to gain, it also has to be accepted that uncertainty is fundamental. The planner's job is to acknowledge certainty that is around, but to identify uncertainties as well, and to make sure the appropriate approach is embraced which acknowledges the degrees in certainty and uncertainty for the issue at hand.

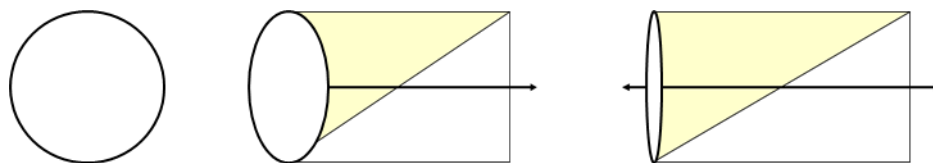
A way of dealing with this difficulty of uncertainty is to differentiate between generic and situation specific understandings. Planning issues which can be expressed almost entirely in generic terms are often issues that are simple, uniform, straight forward and predictable by character. These issues can be implemented by a top down approach following a 'generic' protocol. An example is the traffic light. It is meant to bring order within the flow of traffic. These traffic lights are globally the same, and are understood well by all taking part in traffic. No one has a desire to negotiate about the issue of the traffic light, the colours being used and so forth. It speaks for itself, which is another way of saying that the issue comes with certainties. Neighbourhood renewal has numerous generic issues, such as the parties involved (often the municipality, the housing cooperation, real estate agents and residents),

and the steps to be taken. However every neighbourhood is also unique. This uniqueness can be part of the neighbourhood's identity and could be something to maintain. This than needs specific attention in the plans and renovation programmes. We can be pretty certain there is much in a neighbourhood to be considered as unique, and in need for specific attention. Complex local situations, such as the protection of heritage in the city's down town is hardly to be seen as generic. Taylor made approaches and loads of communication is needed to reach consensus among the parties involved about actions to be taken. Such an approach is undoable through a top down strategy. Instead an area specific strategy is desired. In those cases planning becomes situational.

7. What about Planning Theory?

We started this document with a reflection on science. We've seen that the exact science, despite their successes, do come with assumptions which simply do not work within a social environment. This social environment needs another kind of science, a science that is able to address a world in all its complexities. A proposal to frame this reality is made here, by the nine cells. It is a means to define each and every planning situation. There is more to it, with every cell having its own domain of theories. The cell representing the material world can relate to universal laws (a bridge should not collapse), biological programmes (people should live in a healthy environment) and social conventions (wellbeing and being cooperative adds to the quality of life). The cells representing the organizational and institutional worlds relate to theories produced by – what we could call – the sciences of purposeful interventions. These would be the managerial and organisational sciences, but as well political, policy and governance disciplines with their focus on theories of choice and decision making.

Planning theory relates strongly to the institutional cell. Although it goes too far to explain this in-depth in this document, it is good to be aware that the institutional cell represents a contingency between two rationales: the technical rationale and the communicative rationale. The technical rationale relates strongly to an object-oriented perspective and to the assumptions known from the exact sciences. Technical rationality represents a world which can be understood through direct causal relationships. Within this world isolated and clearly defined entities can be studied. And the contextual environment is either stable, not there or not interfering. The focus will be on the parts of the whole, through which the situation 'as a whole' can be understood. There's certainty all around, and given the facts that are around and measurable, the result of planning interventions are highly predictable. Therefore a technical rationale goes hand in hand with a top down approach and command-and-control governance.



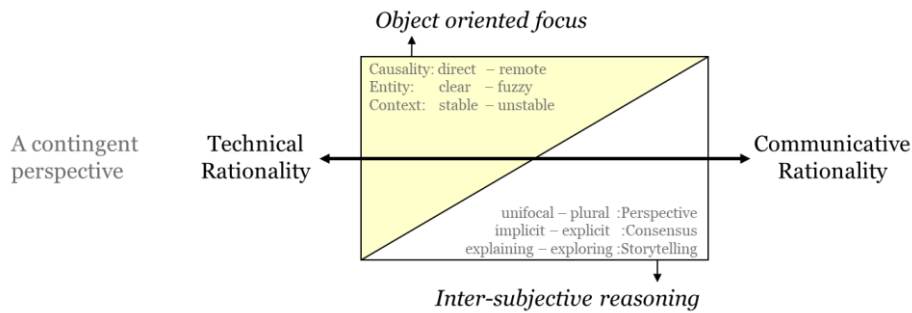


Figure 6: the theoretical story behind the cell

This technical rationale attitude is very much traditional within planning. Once upon a time this was the only approach within planning. Not for long though, as uncertainty could not be ignored and had to be acknowledged. For some time this uncertainty was considered to be a consequence of an inferior kind of science which still had to catch up with the exact sciences. We have seen it is not inferiority, but the complexity and the fundamental uncertainty that is around which begs for a different kind of science. A science that accepts uncertainty as well as an intersubjective kind of reasoning. This is a reasoning that strongly relates to meanings, opinions, ideas and values. Which people share with each other to understand situations and environments. And it is acknowledging that people cannot live by facts alone. Facts remain meaningless if no values are added and are not accompanied by stories and narratives. This is the world of the communicative rationale, and the existence of discourse. A discourse can be stronger than a bunch of facts.

All in all we could state that the more uncertain a situation becomes the less useful facts are (if around at all). The desire to interact with each other and to share intersubjective reasoning increases. The communicative rationale has been introduced to planning theory as a means to empower people, stakeholders and citizens. Which indeed is the case. But from a scientific perspective it is also the approach which allows us to cope with uncertainty. Through intersubjective reasoning people come to agreements and consensus about how to act together. Instead of a factual reality a new kind of certainty is being aimed for: this is an agreed reality.

The consequence of this reasoning is that in between technical rationale environment of certainties and communicative rationality in a world full of uncertainty, there is a contingency representing very many situations which differ in degrees of certainty and uncertainty. This world in between the technical and the communicative rationale can be represented by a spectrum (Figures 6 and 7; De Roo, 2003: 141). This is what we like to call the 'holy spectrum of planning' (De Roo, 2017). The 'holy spectrum of planning' embraces more or less the traditional and the contemporary debates on planning theory. This is a debate that is already on going for more than sixty years.

The planning discipline is extremely advanced in identifying for each and every situation the most useful tools, instruments, strategies and plans (De Roo, 2003: 128). Instead of one true world as would be the consequence of the exact sciences the planning discipline considers the world out there in various shades in between certainty and uncertainty. This understanding is just one step away from accepting planning to be a discipline with a differentiated view on the world. This differentiated view of planning leads to various categories or contingencies which in their own specific way relate with specific situations out

there for which specific actions and behaviour (and tools, strategies and such) is desirable, and which leads to consequences which to some extent can be thought through a priori by the planner. This then allows the planner to follow a 'what if then' kind of reasoning. It is a reasoning which connects situations, issues, actions and consequences, to be shared with all parties involved, and to reason about what action is the most appreciated one.

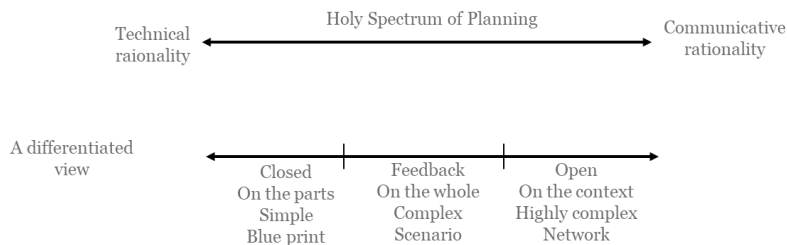


Figure 7: the 'holy spectrum of planning' differentiated in categories of planning issues

Whatever situation the planner encounters within the empirical world, it can be defined through the nine cells approach. And each cell comes with theory, which should be informative about how to act. The 'holy spectrum of planning' is the scientific base for the institutional cell within the '9 cells approach'. The most appreciated approach for a particular situation relates to a position on the 'holy spectrum of planning', which is meant to motivate the decision about how intervene. The most appreciated position on the 'holy spectrum' to tackle a planning situation relates as well with the other cells: the material and the organisational ones. This means that there is much to say about the various cells and how these relate or should relate with each other, and with theory and practice. The '9 cells approach' is therefore a very important step in understanding what planning issues are about. Nine cells ...

Gert de Roo, 18-1-2018, Groningen University

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