Transferability: Reflections on planning and knowledge organization
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Transferability: Reflections on planning and knowledge organization

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Mit Beiträgen von:

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Lewis D. Hopkins, Cinzia Colapinto,
Bert George, Thorsten Kodalle
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Hans Lenk • Wolfgang L. Schneider
Enrico Daga, Andrea Scharnhorst,
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Preface

This 2022 edition of the Science Studies Yearbook is the first in this series to be published entirely in English and based not on a conference but on a series of discussions organized and conducted in virtual, Internet-based settings, some of which have been transcribed and reprinted here.

The two editors and their respective contributions to this yearbook represent very different fields in the context of science studies. Andrea Scharnhorst discusses with colleagues the perennial topic of knowledge organization, which is currently approached by computer sciences and information sciences in almost decoupled discourses. Harald Mieg introduces contributions from an innovative approach to heritage studies, relating the EU OpenHeritage project (2018–2022, www.openheritage.eu) and the academic field of planning studies. The resulting discussions are each framed by current challenges to (digital) humanities, cultural heritage fields, and planning. This yearbook adds a reflexive layer to new projects in this area, informed by science studies and the philosophy of science.

The title of the yearbook on transferability matches the main perspective chosen for our science studies discussion in 2022: Reflections on planning and knowledge organization. It is timely, since further differentiation of research – together with a need for interdisciplinarity collaboration – challenges the ways in which we as scholars are able to 'transfer' knowledge between different epistemic domains, institutional settings, and personal journeys. Consequently, there is greater need than ever for reflection on these issues from the perspective of science studies. This yearbook was inspired, first and foremost, by the OpenHeritage project.[1] As the funding body, the European Commission requested the creation of a 'Transferability Matrix' tool to map out both the challenges of knowledge transfer and means/ways of its implementation. This concrete project gave rise to reflections on

1 OpenHeritage received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 776766.

knowledge transfer in particular and planning in general. Around more specific projects at the crossroads between computer sciences and musicology – such as *Polifonia* (https://polifonia-project.eu) and *Digging into the Knowledge Graph* (https://diggingintodata.org /awards/2016/project/digging-knowledge-graph) – we discussed how to learn from both the knowledge organization community and current ontology engineering approaches by the semantic web community.

We thank the Royal Netherlands Academy of Arts and Sciences (KNAW), the institute Data Archiving and Networked Services (DANS), and Polifonia (Playing the soundtrack of our history; EC Grant ID: 101004746) for their financial support in the preparation of this yearbook.

Harald A. Mieg, Berlin
Andrea Scharnhorst, Amsterdam
October 2023

HARALD A. MIEG

Introduction

This yearbook addresses issues surrounding the transfer of knowledge for the purposes of planning. The circumstances occasioning this task were quite concrete and political, namely the European Union-funded OpenHeritage project (www.openheritage.eu). The project aimed at the exchange of practices for dealing with heritage sites in Europe, be they old buildings, squares, paths, or gravesites – historical places that have become significant to local people. One obvious mechanism might involve conservation laws; however, these differ greatly between EU Member States. The EU was interested instead in identifying local good practices beyond conservation law, and sharing these across Europe. Since this book represents a philosophy of science approach, our foremost question has been: What about a philosophy of science of planning? This leads to the follow-up question: What does such a philosophy tell us about the issue of transfer?

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After World War II, decision theory[1] offered itself as a general approach to planning in all areas of life – from politics, to business, medicine, and beyond. If we understand planning as making decisions about possible future decisions,[2] then planning has to do with the future. The quality of planning thus also depends on the possibility of predicting future developments, for if everything turns out quite differently than expected then hardly any meaningful predictions or corresponding plans may be made. Only if empirically ascertainable probabilities are also relevant for the future can decision theory be applied well.

The oil crises of the 1970s could not have been predicted by the usual methods. Approaches to planning by the state and private sector had to be thrown overboard. This also undermined the reputation of decision theory. Equally unforeseen was the dissolution of the Soviet Union 1988-1991. At that point, decision theory had long since been abandoned as a generally applicable theory of planning.[3] The financial crisis of 2008 further diminished confidence in predictive theories. Thus, planning has suffered from a theoretical deficit for about fifty years, at least in terms of its forecasting function.

However, the European Commission is greatly concerned with the question of transferability: Can successful policies or planning approaches developed and applied in one place or context be transferred and applied elsewhere? This is not a purely theoretical question: It concerns governance and requires a coherent governance system. The issue of knowledge transfer, which at first concerns questions of knowledge, thus also shows a practical and political side.

Consequently, this yearbook is structured into two parts. The first is titled "General Views," and reflects on the knowledge question around

1 I refer here only cursorily to decision theory. The basis was the work Theory of games and economic behavior by John von Neumann and Oskar Morgenstern (Princeton University Press, 1944) and the expected utility theory. There were extensions via "bounded rationality" (H. A. Simon) and the works around the Nobel Prize winners Kahneman and Tversky

2 cf. Luhmann, N. (1971). *Politische Planung* [political planning]. Opladen: Westdeutscher Verlag.

3 Mintzberg, H. (1994). *The rise and fall of strategic planning*. New York: Prentice-Hall.

planning. The second part focuses on questions of transferability experienced in the context of OpenHeritage.

Part 1: General Views - from the quest for a general theory to practical ontology engineering

We can by no means do without the practice of planning, even if we lack a sufficient theoretical basis. Companies, cities, and states all need to plan – precisely because the future is uncertain. Practice must proceed, even if theory lags. Planning has now become largely professionalized. One branch is urban planning as it emerged in the Western world during the 20th century. Another is corporate planning, which – especially during the 1990s – developed a wide range of new methods in the context of knowledge management that are used to decide. And one should not overlook military planning, which has featured throughout human history.

The part on "general views" begins with an interdisciplinary discussion involving four experts representing different domains of planning: Lew Hopkins (town planning), Cinzia Colapinto (entrepreneurial decision making), Bert George (strategic planning in politics and companies), and Thorsten Kodalle (military planning). The discussion opens with the question: What is a plan? Is a plan mainly a document, or might it better be understood as set of data containing information about decisions, as Hopkins argues? He points to the example of New Orleans in the wake of Hurricane Katrina, where there were many uncoordinated plans but yet communication by means of plans helped to restore order – people could refer to each other. That this has an area-specific validity, precisely in urban planning, becomes understandable if we look at an entirely different area, namely planning in warfare. Moltke, a 19th century Prussian general, is credited with observing that "no plan survives contact with the enemy". It becomes clear that the domains of planning are characterized by different degrees of competitiveness: lowest in town planning, greater in entrepreneurial planning, and highest in military contexts. The subsequent discussion focused on whether a common language supports more transfer, or if this ultimately rests on a higher degree of formalization, e.g. to clarify the problem definition. My impression was: here

professionals discussed, it resulted in a nice, partly inspiring discussion, in particular where it allowed a projection into one's own domain.

A completely different understanding of planning underpins the philosophical contribution of Hans Lenk, "Towards a pragmatic philosophy of planning," written essentially in the 1960s, before the oil crises. The text treats planning as a cognitive activity that could – with appropriate adaptations – underlie all practical professional planning activities. The need for theory in planning is presupposed, for it forms the starting point for philosophical intervention. Lenk sees philosophy as having a censor function in three ways:

1) Philosophy provides normative guidance for planning issues. Planning must take into account valuations and values of all kinds. Analysis and orientation in moral questions are core competences of philosophy.

2) Philosophy provides methodological guidance. Planning must be based on data and empirical evidence. Assessing the reliability of data is another core competency of philosophy.

3) Philosophy can moderate interdisciplinarity in the planning process. This is because planning – according to Lenk – requires interdisciplinary collaboration.

These three assumptions or demands have been realized to varying degrees over the past 50 years. Normative guidance has indeed taken place. As one example, consider Habermas and his analysis of communicative action, which has been translated into a consensus-based approach to planning.[4] Other philosophers could also be mentioned, especially French thinkers such as Gilles Deleuze or Henri Lefebvre, whose works have found resonance in planning. On the other hand, philosophy has not established methodological guidance for planning; rather, methodological standards are adopted from other disciplines – such as from test theory with regard to data reliability. Nor is there any philosophical moderation of interdisciplinary collaboration. Spatial, practical planning interfaces with many other disciplines. Here, interprofessional, case-oriented collaboration has been established.

4 cf., e.g., Healey, P. (2003). Collaborative planning in perspective. *Planning Theory*, *2*(2), 101–123.

The "general views" conclude with a discussion among three experts, Enrico Daga, Andrea Scharnhorst, and Richard Smiraglia, on the state of knowledge organization as a distinct discipline, rooted in library and information science on the one hand and the philosophy of science on the other. The task of organizing and structuring knowledge may be as mundane as organizing the shelving in a supermarket, but becomes challenging when involving large information spaces such as libraries, or virtual ones such as Wikipedia. Asking how best to order knowledge immediately invokes the question: "For which purpose?" For knowledge transfer, the question is how to align and connect different systems in order to organize knowledge. Ontology engineering is the key term today, which, in simpler terms, is all about creating knowledge organization for expert systems that can answer complex questions, mining data from large factual information spaces. From a science studies perspective, we can ask about the purpose of a classification, or what might be the basic structure of the domain in question, since each scientific domain represents a specific section of the world from its own perspective. Ultimately, the question is: Can we overcome the dependence on language, and create a phenomena-based ontology? Or do we have to live (maybe even if we overcome the language problem) with a plurality of ontologies? If not for the very practical concern of ontology engineering – that information spaces (if now implemented as databases or datagraphs) must be structured, and thus also the transfer of knowledge is made possible – one might think that this discussion concerned metaphysics. But there is much planning within ontology engineering, that is, determining future decisions. It is infrastructure development for knowledge transfer.

Part 2: The OpenHeritage Planning Context – The role of professionalization

The second part of the yearbook reflects on OpenHeritage, a large European project that addressed the transfer of planning-related knowledge in a very specific planning field: adaptive heritage reuse (AHR). The OpenHeritage project was a four-year European project that brought together stakeholders with diverse academic backgrounds, and practitioners with different roles in

heritage, planning, and adaptive reuse from eleven countries. The project identified and tested challenging and pioneering AHR practices in socially or geographically marginal contexts across Europe. It also examined best practices in policy, governance, funding, and management for adaptive reuse of cultural heritage in Europe and presented lessons learned, focusing on socially and financially sustainable models of heritage management.[5]

The chapters in part two examine the OpenHeritage project from different perspectives on knowledge transfer. As an introduction, John Pendlebury summarizes the long road that conservation took in the UK. I myself report on the creation of a Transferability Matrix as part of the OpenHeritage project mandate. This is followed by a discussion among the project initiators, Hanna Szemző and Levente Polyák, about knowledge transfer in OpenHeritage. In another chapter, Volodymyr Kulikov and Dora Merai describe lessons on transfer gained from teaching case studies on AHR. Katarzyna Sadowy describes experiences on transfer from translating the Transferability Matrix into Polish.

The first conclusion is: language matters. Even if English has established itself as a global scientific language, the problem arises – especially in the field of planning –of translating findings into forms that are comprehensible to their intended audiences. This is the only way to achieve local implementation. Using the example of the Transferability Matrix, Sadowy shows that neither the word "transferability" nor concepts of open heritage are easily translated into the Polish language or context. This makes it difficult to achieve a shared understanding of the problem, which – as the interdisciplinary planning discussion in Part 1 already showed – is a prerequisite for good planning.

One solution – and the second conclusion – is to use professionals to achieve knowledge transfer. Many planning professionals were active in the environment of the OpenHeritage project, not least architects such as Katarzyna Sadowy and Levente Polyák, who mediated between the cultural

5 cf. Oevermann, H., Polyák, L., Szemző, H., & Mieg, H. A. (Eds.). (2023). *Open Heritage: Community-driven adaptive reuse in Europe: best practice.* Basel: Birkhäuser, p. 8.

worlds with their nationally shaped planning systems, and translated experiences from other European countries into the local political context. There were also professional academics, such as Kulikov and Merai, who transferred the findings from OpenHeritage into an academic teaching program. Professionals are therefore vectors for transfer, especially in fields that are still far from ontological engineering.

One more comment on the question of formalization: New formalization can mean innovation – but with no certainty of its adoption in practice. As Szemző and Polyák note in their discussion: An unanticipated disappointment in OpenHeritage was how reluctantly all offers of digitization were taken up by the so-called Cooperative Heritage Labs from the field. In contrast, the offer to introduce business plans – an established formal tool – was happily received by the Labs, even if it required intensive support from professionals. Again, professionals served as a means of knowledge transfer. Often, it is not yet possible to achieve greater formalization, even where this would be desirable to ensure theory formation and transferability of knowledge.

The last conclusion concerns interdisciplinarity. Planning is notoriously interdisciplinary: As a philosopher, Lenk recognized this well. Already in practice, interdisciplinary exchange invariably takes place via interprofessional cooperation and does not require theory. Some exchanges are formally (even legally) regulated through the planning process, while local exchanges take place (as has been well researched) through "trading zones" or on the basis of "boundary objects". The Transferability Matrix emphasizes the importance of models, such as those representing different forms of ownership (e.g., a cooperative, a commons regime, a philanthropic owner, etc.). Besides professional interactions, models are the other important means of transfer in planning.

To conclude: A philosophy of science of planning appears more distant than ever. However, this should not hinder either planning research or practice.

1. General Views

Overview

This part concerns issues of planning in a very broad sense, including professional urban planning, knowledge organization as a discipline, and historical experiences of planned economies.

1 Lewis D. Hopkins, Cinzia Colapinto, Bert George, Thorsten Kodalle and Harald A. Mieg (What is planning? – An inter-domain discussion) take part in an interdisciplinary discussion: Firstly on the question of what is a plan, secondly on issues of transferring knowledge and formalization, and thirdly on the role of time in planning.

2 Angelique Chettiparamb's chapter (Metaphors in complexity theory and planning) is a reprint of her contribution to the journal Planning Theory. The paper discusses using a theory of metaphors for evaluating theory transfer, and draws out suggestions for engaging in theory transfer using the metaphorical route.

3 Hans Lenk (Towards a pragmatic philosophy of planning) drafts a framework for a philosophy of planning. He claims that philosophy has a censor function in many planning issues, ranging from normative to methodological questions. His contribution is based on the translation of papers that date back to the late 1960s.

4 Wolfgang L. Schneider (Planning and control optimism as triggers for the evolution of unplanned structures. The example of central economic planning in the GDR) reports on the unique historical experiment of a veritable planned economy in the former German Democratic Republic (1949–1990).

5 Enrico Daga, Andrea Scharnhorst, and Richard P. Smiraglia (Ordering the world, ordering our thinking, ordering interdisciplinary collaboration – On knowledge organization and ontology engineering) discuss the foundations and prospects of knowledge organization as a growing transdisciplinary topic.

LEWIS D. HOPKINS, CINZIA COLAPINTO, BERT GEORGE, THORSTEN KODALLE AND HARALD A. MIEG

What is planning? - an inter-domain discussion

Abstract

What is planning? Should we think of plans as data sets rather than documents? What about strategic planning or the role of formalization in planning? These questions were discussed at a meeting that brought together experts from a variety of fields - spatial planning, business planning, political planning, and military planning. There was some consensus that, in general, more time should be devoted to the preparation of planning, especially for a better understanding of the underlying problems.

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The discussion was held online on 25 July 2023.

Mieg: Plans have been important throughout the ages. Think of Haussmann's plan to transform Paris in the second half of the 19th century. Or the so-called Marshall Plan to rebuild Europe after World War II. Cities, countries, and even businesses all need to plan in one way or another. We will discuss three questions about planning: First, what is a plan? Second, what about knowledge transfer in planning? And third, what is the role of time in planning? This discussion brings together experts from a variety of fields - spatial planning, business planning, political planning, and military planning. Let's start with the first question: What is a plan? I'm going to turn the question over to our panel and ask each of you to introduce yourself briefly.

1. What is a plan? from a plan as a document to a plan as a set of data that drives a "game"

Hopkins: I am a retired planning, as we tend to call it in the US, faculty member. And the simple line of my research is, when people ask me what my research focuses on: I say plans. And the odd thing is that's almost unique. I want to do two quick things. One is from the field that I come from. There's a very conventional and sort of overwhelming concept of what a plan is, and that's a document that sets out spatial physical expectations and intentions for a particular unit of government. In my field, underlying almost every discussion is this notion of what a plan is. Whether it's true or not, it's there. And then, more recently, there's been a backlash over the last 20 to 50 years, where most of the focus, at least academically, is on a process of collaborative, collective decision making. So much of what's discussed in planning theory, within the discipline I'm in, is really about governance, collective decision making, or collaborative decision making. This largely ignores any notion of what a plan as a specific phenomenon actually is, and often suggests that we shouldn't talk about it because it's irrelevant. So, my most abstract notion of a plan is: it's the consideration of a second decision before acting on a first decision. That's the most basic concept. There have to be at least two elements of decision making (and we could talk about decisions versus actions and all that), but for a plan to be useful, I would say that *a plan is information*

about decisions - it's not decisions. In other words, I have a plan that says something about two or more related decisions. Given that plan, I make decisions.

Mieg: Okay, thank you very much. Who wants to be next?

Kodalle: I'm Lieutenant Colonel Thorsten Kodalle, Head of the Innovation Laboratory at the German Armed Forces Staff College. Planning is our daily business, and my specific area of expertise is educational wargaming at the strategic level. I would like to give you a military perspective on this. Let me begin by quoting General Eisenhower, who said that *the plan is nothing, but planning is everything*. So there is the plan, and there is the planning process. Within military thinking we have the military decision cycle, and there is a point in the cycle where you have to make a decision. The most famous military decision cycle in the English-speaking world is called the OODA loop, developed by John Boyd, which is: observe - orient - decide - act. And the plan is created between decide and before act. The plan is, of course, a kind of document that allocates forces in space and time. So, from a military planning perspective, the most important domains for planning and for a plan are space and time, and there are other important domains such as information, which is a domain in itself. In addition, we have to distinguish several dimensions, including the virtual dimension; and, of course, different levels of planning: the political level, the strategic level, the operational level, and the tactical level. Each of these different levels produces documents, so they receive as input a plan from the higher level. This is then evaluated and transformed into plans for the appropriate level and pushed down one level.

Mieg: Okay, thanks. Cinzia?

Colapinto: My name is Cinzia Colapinto. I'm Associate Professor of Management and Entrepreneurship at Ca' Foscari University in Venice in Italy and I have a dual appointment with IPAG Business School in France. From my point of view, a management point of view, with the term plan I really refer to *work, means and objectives*. Because when we talk about plans, I think it's always important to understand that a plan is done in a formalized procedure

that relies on means that - for me, us and especially companies, managers - they need to be identified and defined to achieve a specific goal. So this is something that goes with time, as in military planning, and space. Because we have to understand where we are going to operate. We need to actually identify what the resources are, the different resources that we can use, and we need to allocate those resources to try to achieve a specific goal. And the second aspect that I think will be relevant is that we have multiple stakeholders, multiple actors that are involved. And as a result, we have to try to find some kind of consensus, some kind of common ground; I think one of the main challenges in defining a plan is trying to reduce the distance between the different frames in order to have a plan. The first step is to define the problem we want to solve or the goal we want to achieve, and to do that, we have to speak a common language. We have to try to find a consensus and use the same frames to understand this challenge or this problem.

Mieg: Thank you. Bert?

George: My name is Bert George, I'm an applied economist and currently an associate professor at the City University of Hong Kong, Department of Public and International Affairs. Let me add to what has been said. First, in many public organizations, *strategic plans* in particular are meaningless. They are often imposed on public organizations. They have to write one and it ends up in a drawer gathering dust. Nobody knows about it, and it's just sitting there waiting for an auditor to come in and see, oh, yeah, it's there, and I can check my books, so to speak. So that's what I often see in practice. So when I talk to strategists in governments. I tend to say to them, you know, that's a missed opportunity. If that's what your plan is - nothing more than a document used for a legislative, mandatory purpose. So what I try to tell them - and again, this is something we see in the literature - is that any strategic plan should try to fit at least three specific purposes, the first being a purpose of accountability. A strategic plan in the public sector should be a document that shows that you as a government are accountable. The second aspect - accountability is more managerial - this is more of a bridge, and it ties in a bit with what the colleagues have put forward, is the notion of a strategic plan

as what John Bryson calls a *boundary object*. So a strategic plan can have the ability to link stakeholders together to demonstrate to your network of partners what you want to do, again, why and how. The third aspect, and this is perhaps more of an economic aspect, is that strategic plans have a *branding purpose*. You see this especially in many cities, but also in other governments, where their strategic plan becomes a way to legitimize themselves to investors, to people who want to move to the city, but also to higher authorities who are investing in a particular public organization.

Mieg: Thank you for your concise statements. Allow me to give a brief summary. Each of you presented a movement in understanding what a plan is. Lew Hopkins talked about moving from understanding the plan as a document to understanding the plan as a set of information for decision making. Thorsten Kodalle, in the context of military planning, shifted the focus from what is a plan to planning in domains, dimensions and at different levels. Cinzia Collopinto, with regard to corporate decision making, talked about moving from pure means-end planning to planning that has to start from a common understanding of the problem. Bert George talked about strategic plans, which are a formality in many public organizations, but where there is wasted potential, for example in branding. This brings us from the topic of what is a plan to the topic of planning. Who has comments or questions?

Kodalle: Can I ask Bert George a question? I once read the book: *Good strategy, bad strategy*.[1] The main difference between a good strategy and a bad strategy pointed out in the book is that a good strategy also in a way talks about ends and means and allocates resources how to get to the intended end. And bad strategy is basically just vision: we want to be carbon neutral in 2030, and nothing else. What do you think is the difference between a strategic plan and a good strategy?

George: Okay, I think this is a very interesting question. I think often the best strategies are not the ones that are in the plan. I think the best strategies tend

1 Rumelt, R. (2011). *Good strategy/bad strategy: The difference and why it matters*. New York: Random House / Crown Business.

to be the ones that emerge over time, they may be informed by the plan, they may use the plan or the strategies in the plan as a framework, but during the actual implementation, when people get to doing the strategy stuff, they may find other ways to do it, other ways to approach it, and that's what we typically call typical learning - the feedback loops. Not all strategic plans will capture all the best strategies, because a lot of good strategies tend to emerge over time.

Kodalle: I'm also a certified *Scrum Master*. What you said sounds a little bit like agile project management, where you have this iterative process of learning from your previous cycle and implementing what you learned before. That's basically a huge difference from the old waterfall planning process where you basically just plan through and don't really learn during the execution phase. That's what the military has been learning for the last 100 years, since von Moltke, a 19th century Prussian general, said, no plan survives contact with the enemy.

Hopkins: Well, I think the nature of this discussion is that we're talking about different things, mostly about the use of plans. And so the process of making a plan is also at the same time a process of using a plan, because you can use it to communicate, to collaborate, whatever, while you're making it. And once it's made, which it never is, we should think of a plan in an *input-output framework*. Every output is an input to something else, which is consistent with what I think people are saying. There's another way of thinking about plans that people are starting to use, which is the means-ends notion. We're then talking about two different things: We're talking about identifying ends-means relationships versus talking about relationships between different actions or different decisions or different organizations or different decision makers or different expertise or whatever.

Colapinto: What I think is really important today is that a plan actually has to be flexible and based on *iteration*. So it comes to bringing in what was mentioned before in terms of a goals, we can distinguish between deliberate and emergent goals and also different side goals. And if we bring in this iteration,

then you have this cycle where you can learn from what you have done before and you can modify your plan. So you try to negotiate and find the good compromise that you want to pursue. Another issue is that we live in an unstable environment, and so we need to have plans that maybe have to be seen in a different way, much more flexible, and iterative, we might bring in a different perspective and talk about collaborative project management. Why is *Design Thinking* such a popular tool today? Because it brings this: a way of being divergent, open to find all the different possible solutions, and then uses convergent thinking to select some possible actions or sequence of actions that may bring the solution to the problem that we need to define in the first stage.

Hopkins: One of the things we've been working on is trying to represent plans as datasets. In other words, instead of thinking of a plan as a document as an output, think of it as *a set of relationships*. Thinking of this in a military training context, when you have a military game, it's running on a database of relationships that are given, and I assume relationships that are created by the players. We could think of an urban development plan or an organizational strategic plan as the dataset that would drive the real world game that is being played. In what we've been able to do so far, we've developed the dataset from the point of view of a player. But it has to include the other players. The dataset should be the most useful information that we want to have access to in real time for iterative learning and acting in the environment that we're trying to support. We have to be careful about this notion of focusing on whether plans are good or bad. For example, in the recovery of New Orleans, which was one of the earlier major disasters of the last couple of decades, there were actually a lot of plans, and they were conflicting. Some of them were implemented, some of them weren't. But they were all information. And they were information that was useful, whether they were good, whether they had stakeholder support, whatever, because they were useful to people who were playing the game.

Kodalle: A plan is a set of data, of course, but it is also a kind of *model* of the world, with all the relationships that you are assuming. You need data to

actually run your model. A model exposed to time would be a simulation. Therefore, a kind of planning into the future is anticipating that something should happen in a certain causal relationship. Of course, as some statisticians put it, any model is wrong, but it can still be helpful; and the map is not the territory. So a plan should probably be understood as not being the perfect and all-encompassing solution to whatever you are trying to accomplish. But it's a kind of model for a particular problem, a solution idea, something like that.

Mieg: I would like to conclude by summarizing and commenting the issues that have been raised. First of all, a plan is not necessarily a world model, but it can be based on it or imply a model, for example, a city development plan is based on some kind of city model. A murder plan rarely has a world model. But if we take plans as information, then secondly, as in the case of New Orleans, the interplay of different, even contradictory plans may well result in something like a model of the state of the city. Third, this exchange of information about plans is so important because we live in an unstable environment.

2. Transfer of knowledge, formalization

Mieg: So let's move on to the next question: From your planning perspective, what are the criteria for appropriate transfer of planning knowledge? How do you know in your domain when it makes sense to adopt terms and knowledge from other domains, such as military or corporate planning?

George: It's an interesting question and my interpretation was a little bit different. I was thinking more about knowledge transfer in the sense of also training future planners and kind of finding a way for people to think, act, and learn more strategically through planning, so one of the biggest concerns that I have right now, both practically and academically, is the stereotypical thinking around strategic planning. For example, in management, which is a huge field, very few people write about strategic planning. I mean, part of

that is, of course, Minzberg's notion that strategic planning has failed.[2] I think we really need to try to find ways to break through stereotypical thinking. One could be that a plan is not necessarily a document, and this was raised by colleagues earlier, and often it's not. One could be that planning isn't just about formulating, but there's implementation in there as well. So breaking through those stereotypes and finding ways to understand when strategic planning can be useful in a particular setting. I think that's a very important role that we have to make sure that knowledge is transferred, especially into practice.

Colapinto: I was thinking about education, including the teaching of strategic planning. What is very difficult is to try to transfer something that is very complex, because it is very challenging when you have this multi-level process of educational transfer of knowledge, you always have to try to understand how explicit you can make the procedures or the concepts that you want to transfer, the more is implicit, the more you will struggle to transfer it from one individual to another. And usually, as strategic planning has to be used in a specific organization, that individual has to transfer along his or her team, and that would be another, second challenge.

Kodalle: In the military domain, decision making under uncertainty is one of the key elements of military decision making. You're always in a kind of VUCA environment, which is an American acronym for volatility, uncertainty, complexity and ambiguity. And that is usually the case right now, almost everywhere. The new normal. You live in a VUCA world, and a lot of things are just uncertain. And for the military leader they are very, very uncertain. This is a very typical German military approach to solving these kinds of problems: we provide a decision framework in which the military leader is able to assess the situation he is facing and, based on the latest data he receives in that situation, he is able to deviate from the plan. There is always a kind of a "commander's intent". Then there is the order that describes how a plan should be executed. But as a military leader at a lower level, you will

2 Mintzberg, H. (1994). *The rise and fall of strategic planning*. New York: Prentice-Hall.

probably sometimes realize that it is not possible to turn right because there is an immovable obstacle. Within that framework, you have the ability to turn left. If this is still within the *intention* of the commander. If the overall goal of the plan can still be achieved by actions that are not really intended by the plan as such in the operationalization phase of the plan, but you are still within the ends of the plan, then you are allowed to do so. That is a kind of degree of freedom that particularly in the German military, we are more or less famous for, because it gives us a lot of maneuverability and quick decision making.

Hopkins: Ironically, at least some militaries, fairly, mostly Western militaries, have this apparent contradiction between *hierarchy and agility* clearly in mind, perhaps more clearly than some local governments. The notion of what works on the battlefield is a clear recognition that the plan is not a rule, that the plan is a set of information about intentions, your organization, and how things work that gives you the ability to be agile on the battlefield at multiple levels. There's a quote I like about intellectual collaboration that says, "If we agreed on everything, one of us would be superfluous to the conversation. On the other hand, if we disagree about everything or have no common knowledge, we can't communicate." So the way I approach this is to try to learn the language of strategic planning and organizations, operations research, military planning, and so on. I think we could think about teaching a skill, which is learning to find people who have very different knowledge than you do, or context, or background, or disciplinary skills, and learn how to learn their language. So that you can communicate with them.

Mieg: Let me take up this point of common language and discuss the role of *formalization*. Decision theory has provided the basis for tools such as multi-criteria decision support. How important is formalization for any kind of transfer? It's important for teaching in higher education, of course, but what about real-world decisions, facing real problems?

Colapinto: Thank you for this question. Formalization, I think, is a way to actually support the diffusion of knowledge. What we just talked about is

widely used today in goal programming and multi-criteria decision making. We have a lot models that are based on uncertain variables, we have new ways of incorporating the preferences and the changes in the preferences of the decision makers. I refer for example to *fuzzy theory* that is bringing that uncertainty into the formalization.[3] And so this approach is something that allows the decision maker to make a better decision. I think this is a great advance, step in terms of decision making and planning.

Mieg: Thanks. Bert, what do you think about formal models and policy advice?

George: What I find interesting about multi-criteria analysis and other modeling is if you're trying to develop a strategic plan for a public organization that has a political layer to it, I'm thinking of local government with elected officials, ministries, and so on: How can you use models and multi-criteria analysis to try to inform policy making? To illustrate my point, I just wanted to tell a short story: We were consulting for an Eastern European country, an associated member of the European Union, and they were very proud to tell us that they had worked with the OECD and UNICEF to develop this very good, new, operations management-inspired performance dashboard. This was told to us by the Department of Planning and Strategy of the Ministry, and they actually received an award from the European Court of Auditors for developing such an impressive system. So they told us this and then I asked them: You know this is really interesting, so all the information is online. How many people look at it every month? They said 2 people. I said, okay, 2 people, and who are these 2 people? People in the planning and strategy department. So the point I'm trying to make is how do we – in the political-administrative context – make sure that this kind of modeling does not just become an adverse exercise, but *moves on to the policy level*?

3 Aouni, B., Colapinto, C., & La Torre, D. (2014). A fuzzy goal programming model for venture capital investment decision making. *INFOR: Information Systems and Operational Research*, *52*(3), 138-146, DOI: 10.3138/infor.52.3.138

Hopkins: One of the things that is, or should be, a hot topic in the U.S. right now is: how do you create a renewable energy system where all the little things work together in a way that is plausible in the near term. Formalizing the notion of *feasible systems*, not because we think it's going to affect legislation this year or next year or whatever, but somebody has to do some systems thinking in a reasonably formalized way to be able to generate feasible solutions. We have a lot of experience and analytical tools for thinking about formalized systems. So I agree that some kind of formalization at some point in the process is essential. The more formalized you get, the harder it is to be talking about two different things and not realize it, even if you use a whole bunch of words that are different or have multiple meanings.

3. Time in planning

Mieg: I would like to start with the last round. I'm very curious about the role of time. It can be said that planning is something like inventing the future. What is the role of time in planning, a time to plan, planning time horizons, and so on.

Kodalle: In military planning, time is of the essence. Another quote: A good plan executed with vigor is better than a perfect plan executed later. Within the military decision cycle, we are in a competitive environment, and we want *to get into the enemy's decision loop* and just make better decisions faster. So any form of standardization or trying to get to a decision faster is very welcome. In NATO, we have a Modelling and Simulation Center of Excellence. We have standardizations just to speak the same language to be able to make smarter and faster decisions. And if I imagine a future where artificial intelligence uses all this data and relationships and models, that would speed up that decision-making cycle even more. In the old world, if you were at the corps level and you made the decision, 72 hours later a tank at the company level would move right or left or just start moving. If you can shorten that 72-hour cycle significantly, you have an advantage.

Hopkins: So the one thing I would say is that we want to think in terms of *spacetime*. Spacetime is - I don't think I need to elaborate - is somewhat interchangeable. So you think about both at the same time. And it's the obvious things about lead times and sequencing and learning and delaying decisions to learn and so on. Time and space are kind of critical, they're inherent in doing any of this. I think the way we've been discussing all this kind of simultaneous action thinking makes that clear.

George: I want to emphasize two things that I think are often neglected, the first being time. Many of you probably know the strategy change cycle from John Bryson's book, and the first aspect of that cycle is planning the planning process, the *initial agreement*.[4] And I think that's something that's actually often skipped when people do strategic planning. So, deliberately thinking about how much time do we have to do this? How much time do we want to invest in this? I think that's so critical because if you start doing strategic planning, but it's understaffed, underresourced, underplanned. I mean, it often leads to disappointment, right? So we want to avoid that. So that's an aspect of time. I think that is crucial. A second aspect of time, and this is an evolution, and I'm sure many of you have seen this in your field as well, especially the military, is this emergence of the strategic foresight bodies. I'm actually doing some research on that right now. So the European Commission has a strategic foresights body. I know NATO has one. Singapore has one. So many entities are starting to do this, and the whole idea is to embed futures thinking into strategic planning, so we're trying to avoid just planning for one potential future, what we're taking into account, different scenarios, different potential futures, different key indicators, and how they might evolve. And in my conversations with executives and managers who are doing strategic planning, policymakers and politicians tend to respond much more positively to strategic foresight than to strategic planning. So connecting those two more and maybe using some scenarios to convince people to act and have these strategies could be a potential interesting area.

4 Bryson, J. M. (2005). The strategy change cycle: An effective strategic planning approach for nonprofit organizations. RD Herman, *The Jossey-Bass Handbook of Nonprofit Leadership and Management*, 2nd ed. San Francisco: Jossey-Bass.

Colapinto: As we mentioned before, sometimes time is the real essence because you need to be the first on the market. We know that first mover advantages or that you have enter the market at the right time are really important and crucial. Time is really relevant from an innovation point of view. Another important perspective about time is the role of the past, as sometimes decisions are made mostly based on the information that we have about the past. So we face these path dependencies that will shape our future and also our future decisions, our strategies. This is even more challenging because of these unstable scenarios that we are living in. Thus we could bring into this discussion the role of new technologies. So to bring together the market theory, decision models, and for example, artificial intelligence, or machine learning; we know that these tools will allow people to have future scenarios in 10s. These tools are going to do scenario forecasting in a very short period of time, and this is something that is going to push to make the decision in a very short period of time.

Mieg: Okay, thank you very much. So we are coming to the end of our discussion. It's time for everyone to make one last comment. Is there anything in the discussion that has surprised you? Who would like to start?

Hopkins: We've demonstrated to ourselves what we're talking about. That is, most of us have cross-language ability in at least one or two of the areas. So we've been able to talk to each other and, I think, actually communicate as opposed to just listening to each other. It's been useful for me to see how these areas, some of which I've done a fair amount of work in, some of which I haven't, are now active. I'm retired, so I don't keep up with these areas as much as I used to. So it's been interesting. But one last comment: in some ways not much has changed.

George: I knew these communities existed, but it's fantastic to see them in, well, I was going to say real life, but virtual life. I have a lot of Ph.D. students, and I always tell them that they shouldn't feel marginalized because they're focusing on what seems to be a very niche topic, because planning is

something that's been around for so long, and it touches so many fields. It's just a fact that we're sitting here and talking across communities about this topic of planning that fascinates us all. I think that's the way forward.

Kodalle: I would like to sneak in a quote from Bruce Lee: As long as humans have 2 arms and 2 legs, they are naturally very limited in the amount of movements they can actually do. And similarly in our way of thinking. From my perspective, on a very abstract level, maybe a plan is a description of how to solve a problem. Einstein once said: If I had 1 hour to solve a problem, I would invest 59 minutes in understanding the problem. From my point of view, that is what we really need to put the most effort into: understanding the problem and then trying to solve it. And planning and of course plans are very, very helpful in solving problems. Thank you very much for this very enlightening discussion.

Colapinto: I've been doing multi-decision model research for a long time, and I've recently moved into more qualitative research, and I've noticed that in terms of decision making, what companies and governments struggle with is defining the problems.[5] Top-down policies tend to say, you need funds to buy new technology, because we are going to live in an industry based on this technology in the future, and you need to buy this technology. But they missed the core issue. The main challenge was to identify the real problem, which might actually be something else. This is something that planning needs to take into account: to spend more time defining, understanding, and formalizing the problem; and then you can start "planning". And the other matter is to try to be much more able to plan how to plan. So these are two important points that I will remind myself of more often when I do research projects.

5 Coco, N., Colapinto, C., & Finotto, V. (2024). Fostering digital literacy among small and micro-enterprises: Digital transformation as an open and guided innovation process. *R&D Management*, *54*(1), 118-136. https://doi.org/10.1111/radm.12645

Mieg: Let me summarize: People and managers are very interested in what the future looks like (foresight), but less interested in options (strategic planning), which can be overwhelming for some. In addition, we should allow enough time for planning, and that necessarily starts with trying to understand the problem. But as Lew Hopkins mentions, this is nothing new. Thank you all for a stimulating discussion.

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ANGELIQUE CHETTIPARAMB

Metaphors in complexity theory and planning

Abstract

This article reviews the use of complexity theory in planning theory using the theory of metaphors for theory transfer and theory construction. The introduction to the article presents the author's positioning of planning theory. The first section thereafter provides a general background of the trajectory of development of complexity theory and discusses the rationale of using the theory of metaphors for evaluating the use of complexity theory in planning. The second section introduces the workings of metaphors in general and theory-constructing metaphors in particular, drawing out an understanding of how to proceed with an evaluative approach towards an analysis of the use of complexity theory in planning. The third section presents two case studies – reviews of two articles – to illustrate how the framework might be employed. It then discusses the implications of the evaluation for the question 'can complexity theory contribute to planning?' The concluding section discusses the employment of the 'theory of metaphors' for evaluating theory transfer and draws out normative suggestions for engaging in theory transfer using the metaphorical route.

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1. Introduction

Planning has been viewed by both its practitioners and theoreticians in various ways – as an art, a skill, a way of practice, a discipline engaged with action; as political, economic, bureaucratic, communicative, etc.; and by some as a discipline engaged with values and norms. Reflecting on these diverse viewpoints and building a body of planning theory is not an easy task for those engaged in it (Campbell and Fainstein, 2003). Approaches used have been generally either historical, in which transformations within planning thought are mapped and its connections with philosophy and social thought highlighted (Camhis, 1979; Friedmann, 1987; Taylor, 1998), or thematic, in which various concerns relating to practice are identified with main features drawn out, and different planning streams accordingly assigned (Allmendinger and Tewdwr-Jones, 2002; Campbell and Fainstein, 2003). Within planning, the activity of theory building itself draws on two sources – first, the empirical domain of planning practice and second, theoretical advances in planning-related disciplines. The domain of planning theory interfaces these two sources and is thus a fascinating arena of interesting and insightful development.

If one were to accept this view of the nature of planning theory then writings attempting to contribute to planning thought would be engaged in a twin endeavour, hoping to both inform planning practice as well as contribute to knowledge claims within planning theory and allied disciplines. This article is, however, not aimed at either of these goals. Rather, it is an attempt to be reflexive about certain aspects of the development of planning theory itself – particularly the way in which it engages with concepts imported from other disciplines. The focus here is on the use within planning theory of concepts from complexity theory as can be assessed from the way in which it has been hitherto employed in published articles. In order to enable the evaluation, a framework based on a theory of metaphors is developed and applied to two different types of published papers dealing with complexity theory and planning-related issues. It is also argued that the framework, by alerting us to possible omissions, has the potential to guide future engagement with use of concepts from diverse sources (unfamiliar to the planning community)

within planning thought. The article is targeted at planning theorists – those of us who are engaged in reflections about the nature and scope of planning as an activity as well as planning as a disciplinary concern within a larger body of knowledge. theory of metaphors and develops the framework. The third part applies this framework and illustrates how it might be used by reviewing two different published articles. The relevance of the evaluation results is discussed. The fourth part discusses merits of the framework as a tool that may be fruitfully employed to engage with concepts that might be useful and relevant, yet unfamiliar to audiences within the planning community.

The first part of the article presents a brief background on complexity theory and its general trajectory of development. It then provides the rationale for the choice of metaphor theory for evaluation. The focus is on highlighting the need for developing a framework for evaluation and the reasons for the particular choice of theory used to inform the development. Concepts within complexity theory per se are not discussed as it is beyond the scope of the argument advanced here. The second part focuses on the theory of metaphors and develops the framework. The third part applies this framework and illustrates how it might be used by reviewing two different published articles. The relevance of the evaluation results is discussed. The fourth part discusses merits of the framework as a tool that may be fruitfully employed to engage with concepts that might be useful and relevant, yet unfamiliar to audiences within the planning community.

2. The background of complexity theory

Complexity theory refers to a body of knowledge which assimilates contributions from many disciplines, including the natural sciences (thermo-dynamics, physics, chemistry, biology, computer science, information technology, etc.) and social sciences (economics, political science, management science, etc.). Since publication of some of its concepts in popular science books written by popular science writers (Gleick, 1987; Waldrop, 1992; Gribbin, 2004) as well as, by and large, accessible books written by scientists (Prigogine and Stengers, 1984; Stewart, 1990), complexity theory has found many adherents in various disciplines including those in social science. Discussions of the

theory within social science include philosophical discussions (Cilliers, 2000; King, 2000), discussions of applications (Kiel and Elliot, 1996; Byrne, 1998), discussions of general implications of the theory (Eve et al., 1997; Byrne, 1998; Urry, 2003) and engagements with certain concepts or ideas (Rasch and Wolfe, 2000; Abbott, 2001). Complexity theory has also given rise to profoundly innovative and far-reaching work within sociology such as Luhmann's (1995) voluminous, now classical, work on social autopoiesis, building on work undertaken originally in biology.

In the last few years complexity theory has also made a transition into planning. Discussions have taken place in planning as well as in planning-related disciplines like urban studies, policy science or governance (for instance, Kooiman, 1993; Allen, 1997; Byrne, 2001, 2003; Strand, 2002; Rhodes and MacKechnie, 2003). Specific applications using particular concepts have also been attempted (for instance, Batty and Longley, 1987; Batty and Xie, 1999; Dunsire, 1996; Jessop, 2001a, 2001b). Work that has taken place can be broadly seen as being within two streams – a quantitative stream concerned with modelling-related issues and a non-quantitative stream concerned more with qualitative aspects. Both deal with sometimes similar concerns and concepts related to complexity theory, including the emergence of spontaneous order, robustness, fractals, etc. However, the range of issues that complexity theory is called upon to explicate, together with the admittedly rather 'vague' manner in which it has been employed in some instances, has resulted in a considerable amount of confusion and scepticism about the worth of the theory itself.

Writings for and against the theory have hitherto tended to be based upon either intuitive empathy giving rise to benevolent optimism, or intuitive rejection giving rise to cynical pessimism. Substantive content of the arguments is based upon all or some of the following factors: first, condemnation of the theory as a whole based on what can at best be termed limited reviews of the use of complexity theory (reactions to one or few authors). The second factor is more commonly seen and I shall term it 'informed speculation' on what constitutes the theory, its nature and features. This is to a certain extent inevitable as the theory has its source in many subject domains in all of which no single person can be said to have an authoritative knowledge. Finally,

arguments are also explicitly and implicitly based upon the reviewer's concept of the nature of social science/planning per se. The result is that we have diverse viewpoints that do not easily aid any understanding of the theory or its worth for the advancement or understanding of planning thought. This article argues that for the potential usefulness of the theory to be accepted (Thrift, 1999; Byrne, 2003), or rejected (Horgan, 1995; Stewart, 2001), arguments for or against must be based upon more robust grounds.

The problems highlighted above, it can be argued, are inevitable, as they are to a certain extent inherent in the subject matters involved. How then can one evaluate an application of the theory and conclude whether or not it is a one-off case of an unconvincing translation from the original domain (robust applications will inevitably speak for themselves) or a more fundamental problem of theoretical incompatibility (for planning)? What is required here is a framework that can accommodate the above limitations, yet provide a yardstick rigorous enough to be accepted by those engaged in planning theory and thought. Since the concepts from complexity theory originate from a diverse range of disciplines, a theory of theory transfer and theory construction would address the issue most appropriately. I propose the use of the 'theory of metaphors' as a lens for evaluating the use of complexity theory in planning.

Two reasons justify my choice. First, metaphors are known as vehicles for the transfer of concepts, ideas and notions from one domain to another, though the efficacy of this remains contested. Why then choose a 'vague' vehicle to clarify a vague area of enquiry? The answer, as I argue, is because first, the vagueness of metaphors serves to partly illuminate the reason for the mysticism of complexity and its subsequent, significantly unconvincing, employment within planning. Second, in spite of the vagueness, the theory of metaphors has developed a fairly robust notion of how theory transfer and theory construction take place, which I employ to argue my case.

Before venturing into a discussion of theories of metaphors, a clarification of the use of the word 'scientific' is needed. The word is not used here in a narrow 'scientism' sense but in a much broader one which I explain by borrowing a quote from Byrne (2003). It is meant here as the 'systemic secular knowledge about reality that is somehow validated empirically'

(Gulbenkian Commission on Restructuring the Social Sciences, 1996, quoted in Byrne, 2003: 172).

The word 'scientific' in this article also signifies being 'rational' and 'objective'. The sense in which the terms 'rational' and 'objective' are used here connects to Rorty's (1991) discussion of what it means to be "'rational" and "objective"'. Urging in favour of new meanings for terms, he suggests, 'another meaning for "rational" is, in fact, available. In this sense, the word means something like "sane" or "reasonable" rather than "methodical"' (p. 37). Rorty further argues, 'we fuzzies would like to substitute the idea of "unforced agreement" for that of "objectivity"' (p. 38). By the term 'unforced agreement', Rorty is referring to a desire for solidarity with the community with which we as researchers identify ourselves.

3. 'Theoretical' metaphors, their nature and their use

Etymologically, metaphors mean 'to carry over' or 'to transfer' (Hunt and Menon, 1995). The theory of metaphors introduces us to two basic types, each different in fundamental ways: the 'literary metaphors' and the 'theory-constructive', 'theoretical' or 'scientific' metaphors. Literary metaphors and the mechanisms by which they operate on an audience constitute a much discussed area within language studies. Basic terminologies for the systematic study of metaphors are laid out within this domain (Ortony, 1993; Goatly, 1997). Very briefly, there is a 'source' domain and a 'target' domain, with the metaphor itself being the 'vehicle' (Goatly, 1997). The metaphor operates through a tension between congruence and incongruence, expressed by Hunt and Menon (1995: 82) as being 'denotatively false and connotatively true'. In other words, there are always features of the source domain that the metaphor denotes, which are not necessarily possessed by features in the target domain. However, the metaphor carries associative connotative meanings from the source domain which resonate with the target domain and it is these connotative meanings that lend the metaphor richness (Noveck et al., 2001).

The use of metaphors is very much part of our everyday language, expressing exactly what we mean (Glucksberg and Keysar, 1993). There are many theories that account for the way metaphors work. Prominent among

these are the substitution theory, the comparison theory and the interaction theory (Ricoeur, 1978; Ortony, 1993). Substitution theory advances the idea that metaphors work by substituting a literal sentence or term for a figurative one (Olsen, 1982). Comparison theory states that metaphors act by making comparisons of attributes or beliefs within the domains involved (Tourangeau, 1982; Xu, 2000). Interaction theory is the most recent and generally accepted one (though details are contested). Here metaphors work by interaction between two domains, whereby the hearer is incited to select properties from the source domain and construct a parallel in the target domain, which in turn may induce parallel changes in the source domain (Black, 1993). Theory-construction metaphors basically build on this view (Black, 1962, discussed in Boyd, 1993).

Lakoff (1993: 203) emphasizes that 'the locus of metaphor is not in language at all, but in the way we conceptualize one mental domain in terms of another'. It is thus 'the ontological mappings across conceptual domains', making it a matter of 'thought and reason', where 'language is secondary' (p. 208). The notion of 'structure-mapping' informs us here. It advocates that an analogy works by mapping knowledge from one domain to another in a way that holds together systems of relations (Gentner, 1982; Gentner and Jeziorski, 1993). Thus features in the target and source domains need not resemble each other, yet correspondences can be mapped by virtue of similar roles in relational structures (Gentner and Jeziorski, 1993) as for instance, the structure of the solar system and the atom. It is again this feature of metaphors that forms the basis of theory construction metaphors.

Opposed to this concept of ontological mapping is the argument that metaphors are essentially sensuous or intuitive, especially in the domain of poetics (Hester, 1967) and that their primary purpose is in invoking images that aid cognition. Alvesson and Skoldberg (2000: 89) argue that 'which image we choose depends on the angle of view, the perspective, and is thus subjectively conditioned'. The authors point out however, that there are limits to the choice of images and the 'objective' degrees of freedom for the choice will depend upon the properties of the two phenomena that are compared. It follows that if the properties are not known, or if the limits of choice are transgressed, a 'bad metaphor' is the result.

The properties must not only be known, but must also resemble each other. This provides the reason for metaphoric transfer. As Ricoeur (1978: 46) argues:

> between the figurative sense of the borrowed word and the proper meaning of the absent word, there exists a relationship that can be called the 'reason' (in the sense of rationale or basis) for the transposition. This reason constitutes a paradigm for the substitution of terms. In the case of metaphor, the paradigmatic structure is that of resemblance.

Let us now return to focus on theory construction metaphors per se by asking specific questions. What is distinctive about theory construction metaphors? What is their role in facilitating and contributing to theory transfer and construction? What is the process of transfer?

Theory construction metaphors act in two fundamentally different ways, dependent on the relative state of advancement of the particular area constituting the target domain. Thus there is a role for metaphors in both the pre-theoretical stages as well as in the more mature stages. In pre-theoretical stages, a creative metaphor induces emotive and cognitive tensions by bringing together two disparate domains. Efforts are then made to ease out tensions by further work, which in turn results in further comprehension (Hunt and Menon, 1995). Thus, conceptually viewing one domain in terms of another induces by itself a research agenda for further investigation. This is clearly illustrated by Boyd (1993), who uses the example of the domain of computer science and the way it has informed the setting of research agendas in cognitive psychology – suggestions that motoric processes are 'pre-programmed', suggestions that certain information is 'encoded' or 'indexed' in 'memory store' by 'labelling' and so on. The dominant metaphorical function here is one of *generating 'scientific' or theoretical ideas*.

Metaphors, as discussed above, have certain characteristics. First, initially users may not be able to specify exhaustively the relevant respects of similarity. In fact it is this open-endedness that allows theoretical transfer and later theory-construction in a new domain. However, this does not mean that there is no responsibility on the user of the metaphor. As stated by Boyd (1993: 488):

> it is part of the task of scientific theory construction involving metaphors to offer the best possible explication of the terminology employed [and] it is certainly the routine responsibility of scientists as the sciences in general . . . are self-reflective disciplines, and the explication of theoretical concepts – metaphorical or not – is an essential part of the task of scientific enquiry.

The reference role of metaphors here is a sort of 'non-definitional' reference and the entities referred to can be viewed ontologically; from a realist point of view, as causal structural relations (Boyd, 1993), or from an instrumentalist or pragmatic view, as substantive or cognitive (Kuhn, 1993). Metaphors provide the terminology to conceptualize features of the world in one domain, whose existence or usefulness may seem plausible, through work in another domain. By metaphoric transfer, the features not only get contextualized in the target domain, but may also interactively inform in turn the source domain. One important conclusion that follows is that for usage of metaphors in theory transfer and theory construction, a good understanding of both the source domain and the target domain is essential, as only then can the structural relations be abstracted.

Theory-construction metaphors used in the above manner also undergo a different developmental history from that of literary metaphors. Literary metaphors when used over time lose their dramatic quality and tend to become 'stale' or 'dead' (becoming incorporated into literal usage). Theory-construction metaphors on the other hand, if successful, will be used by many researchers (Boyd, 1993; Hunt and Menon, 1995), heuristically informing new research agendas within disciplines, and thereby undergoing a change or evolution of exact meanings within disciplines over time. This will continue until the research community finally establishes and defines the metaphor within the discipline itself in relation to theories and knowledge within the discipline (Knudsen, 2003). Thus, even though one can imagine metaphors losing their productive quality over time, they never become trite.

There is also a less rigorous, yet nevertheless indispensable role for metaphors in knowledge advancement. This is in performing the social role of persuasion and indoctrination, found mostly in popular science writings and also in 'technical' publications that interface with the public. Knudsen's (2003) study of the use of metaphors in scientific and popular science journals

written by scientists themselves, reports not only on the increased use of metaphors within popular science journals, but also on what she calls a 'democratization' of all metaphors, including theory construction ones, whereby they are transferred into pedagogical metaphors with a merely descriptive or exegetic function. Thus their use changed from hypothesis to explanation, making the same metaphors 'closed' in non-scientific discourse, even when they remained 'open' in the minds of the scientists writing articles for non-scientific audiences.

In mature disciplines metaphors perform yet another important role, that of 'catachresis' – the introduction of theoretical terminology where none existed earlier (Ricoeur, 1978). According to Boyd, catachresis is a process of 'accommodation of language to the causal structure of the world, . . . making possible socially coordinated *epistemic access* to a particular sort of thing or natural phenomenon' (Boyd, 1993: 483, emphasis in original).

Thus metaphors again perform a social role in providing through accepted usage both heuristic and conceptual access to theoretical concepts, hitherto unnamed.

The case for the relevance of metaphors as a vehicle for theoretical transfer and consequent theory construction in a new domain has been stated above. However, this endorsement of metaphors in a theory-transfer and theory-construction context must be qualified by evidence of several aspects, including: reasonable knowledge of both the source and the target domains, sufficient to enable a pertinent abstraction of key relational characteristics from within each; an effort to draw out and explicate key similarities and analogies; an effort to abstract and elucidate essential relational features, and also an attempt to explore the abstractions with relation to other theoretical work in the target domain. In the absence of the above the use of metaphors may fall short of 'theoretical', even though still employed in 'scientific' work, either as a descriptive medium for pedagogical or persuasive purposes, or as a gap-filling device for inadequacies of language. In both cases the author of such work might then have to ensure that the audience understands both the source domain and any features of the source domain the author wants to convey, otherwise the result might be an 'asymmetrical understanding', that

is, the meaning meant by the author is not grasped by the audience (Goatly, 1997) and could cause considerable confusion.

Having laid a broad framework for evaluation of theory transfer between two domains using the theory of metaphors, I shall now discuss some uses of complexity theory within planning thought. Since the purpose of this discussion is essentially an illustration of the above ideas from the metaphor theory, I restrict my discussion to a review of two articles. Both engage with what their authors regard as insights of complexity theory in a general sense. The articles have been chosen for several reasons: their general level of engagement which offers potential to examine how various ideas or concepts have been discussed; the authors' explicit, sustained and serious engagement with complexity theory, demonstrated by the quantity of their publications, which deal with complexity theory and planning (Byrne, 1997, 1998, 2001, 2003; Innes and Booher, 1999, 2000, 2001) and the difference in scope the articles present in order to demonstrate how the analytical framework could be used to yield different types of insights. It must be emphasized here that my discussion of the articles is limited to a critique of the use of complexity theory as viewed through the lens of the theory of metaphors; the intention being to illustrate the employment of the theory as an evaluative tool for theory transfer. Detailed discussions of the content of the articles are thus regarded as ancillary.

4. Complexity theory within planning: a comparison of two articles

4.1 *Article 1*

Innes, J.E. and Booher, D.E. (1999) 'Consensus Building and Complex Adaptive Systems – A Framework for Evaluating Collaborative Planning', Journal of the American *Planning Association 65*(4): 412–23.

Innes and Booher draw on complexity science, along with other sources such as their own research findings and the Habermasian concept of communicative rationality, to evolve a framework for evaluating consensus-building

processes. Their use of complexity science is as a metaphor. They claim 'Complexity science provides a powerful metaphor to help understand why and in what ways consensus building can work more effectively in today's complex, fragmented policy context' (p. 413).

I begin this review from the authors' concluding frameworks, expressed in terms of 'process criteria' and 'outcome criteria' for evaluation of consensus-building processes (p. 419), and work backwards. Features listed as outcome criteria are almost exclusively based on the authors' own research, rather than being introduced from complexity theory, except in the use of the term 'co-evolution' and 'adaptation' in the third order effects listed. 'Adaptation' has a literal use; the identification with complexity theory being due to the fact that the adapting process is introduced as part of processes associated with complexity theory. The word 'co-evolution' per se is not introduced but within the context the reader can make an informed guess as to the authors' meaning. Among the process criteria, the authors specify that the process of consensus-building must be 'self-organizing', the meaning of which was briefly introduced earlier in this article. Thus in terms of meanings conveyed by the metaphoric use, the authors do communicate successfully with the reader.

If we now consider the 'Principles of Evaluation' (p. 418), the authors advance normative principles, two of which are based on complexity. They maintain 'a complexity perspective suggests that a high quality consensus building process in an uncertain and changing society should be self-organising and evolving, good at gathering information from the environment and effective at making connections among participants' (p. 418) and 'a complex adaptive system depends on each individual being empowered to act autonomously and in an informed way, so that manipulation of any participant or suppression of their own views can only make a system less intelligent' (p. 418).

These are normative inferences which not only use the terminology of complexity science, but also are explicitly grounded in it. How do Innes and Booher reach these normative conclusions? They are based on a perspective that views consensus-building process as a complex adaptive system and also a particular reading of the features of a complex adaptive system. I will

discuss these groundings in detail after first considering whether this is a metaphoric theory transfer at all.

The notion of complex adaptive systems within complexity theory has evolved to become an ontological claim based upon experiments conducted across disciplines ranging from physics to biology to computer science. Any talk of the features of a complex adaptive system is thus based upon an already abstracted set of features and characteristics, which constitute what is known as complexity theory. Thus a source domain here does not exist in the true sense. What is at issue then is whether it is possible to extend the ontological claim of complex adaptive systems to inform the target domain of consensus-building processes, or whether alternatively it is possible to use the concepts metaphorically to inform consensus-building processes. In the case of extension of an ontological claim, the 'vehicles' (as in the theory of metaphorical transfer) used for extension are inevitably the terminology, which denotes ontological relationships in the source theory. However, the terminology remains a metaphor in the target domain until validated, potentially signifying either useful cognitive concepts or causal relationships depending on one's philosophical viewpoint. The process here is that of structure mapping as introduced earlier – the mapping of relational attributes.

This point leads to the question of how to ascertain the validity of a structure mapping. How does one contest the validity of any theoretical application to any domain? I maintain that in the case of metaphoric theory transfer this must be done by a description of the target domain that establishes its position as one at least equivalent to the source domain, in terms of features that compel a comparison, and within which the structural correspondence makes some possible sense. In this case then an unavoidable task for establishing the validity of mapping would be to draw out the correspondence of consensus-building process with that of a complex adaptive system. Taking off from the earlier concern of grounding, I now examine how far this has been done by Innes and Booher.

Features of complex adaptive systems are sketched out in the text. Features of the consensus-building process, based upon findings from the authors' previous research, are sketched out separately. I quote from the text

and underline the words/phrases that establish congruence with complex adaptive systems, as later sketched out (p. 417). The authors maintain:

1) learning and change can be the most far-reaching effects of consensus building (p. 415).
2) they (participants in a consensus building process) may learn how all participants' interests are interconnected (p. 415).
3) consensus-building is not grounded in the authority of law and tradition (p. 415).
4) typically it (consensus-building) is adaptive and evolving often with spin-off working groups and other self-organizing activities (p. 416).
5) consensus-building is mutually interactive with its environment (p. 416).

Though not specifically stated, one can infer that the authors claim that there is validity in applying the insights of complexity theory to consensus-building because these features of consensus-building resemble those of complex adaptive systems.

But what are the insights? From their research, Innes and Booher claim that 'much of what consensus building accomplishes, such as new levels of trust, shared knowledge, alliances, personal networks and working relationships, depends on collaboration and a mutually respectful process' (p. 416).

From a Habermasian perspective, they argue that 'for dialogue to produce emancipatory knowledge, the stakeholders must be equally informed, listened to and respected, and none can be accorded more power than others to speak or make decisions' (p. 418).

I quote from their principles of evaluations once more:

> a complexity perspective suggests that a high quality consensus building process in an uncertain and changing society should be self-organising and evolving, good at gathering information from the environment and effective at making connections among participants. (p. 418)
>
> A complex adaptive system depends on each individual being empowered to act autonomously and in an informed way, so that manipulation of any participant or suppression of their own views can only make a system less intelligent. (p. 418)

The authors thus finally recount features of consensus-building, although actually arrived at by other means, as insights from a complexity theory perspective.

What does complexity theory contribute to the argument? At best it can be said to couch and repackage the authors' findings in terms enabling them to make a circular normative argument. This can have a social role in promoting and favouring certain values that may otherwise be difficult given the scattered nature of the findings. Thus it can serve a gap-filling linguistic and possibly a conceptual function, consolidating findings into a unified theory, which though known individually, is otherwise dispersed through the target domain.

One last point worthy of note is the value dimension of metaphors. The authors opine 'at the edge of chaos – a good analogy to the current period of social transformation – innovation and dramatic shifts in activity patterns can occur, and systems can move to higher levels of performance' (p. 417).

This statement is made without a proper qualification of what is an 'edge of chaos system' (in complexity theory it means a system with certain properties including the presence of a certain order). It therefore has the potential to be interpreted rather arbitrarily and (possibly) dangerously, given the literal meaning of the word 'chaos'. As Hunt and Menon state (1995: 88) 'what an adopting discipline borrows in a metaphoric transfer is not just a positive collection of concepts and theories, but either explicitly or implicitly, a set of norms as well'.

In terms of theory construction then has the use of complexity theory served any function? I would say that the authors have been able to show that reasonable grounds exist for a re-conceptualization of consensus-building as a complex adaptive system – a useful first step no doubt. This will, however, remain a redundant exercise if it yields no insights. If it is to yield anything to the target domain, the re-conceptualization must be taken further to achieve three objectives: to explore the connotative meanings associated with complexity theory as revealed in different source domains from which the theory originates (this is an area where metaphoric theory transfer has its utmost potential); to undertake a fuller and more detailed exploration of the abstracted features so as to yield the relational structure within the abstraction

in finer detail; and to undertake empirical work to detail out how the imported structural mapping plays out in the new target domain, thereby yielding new insights relevant to this domain, while changing and contextualizing the received concepts. This is the final benefit of innovativeness triggered by a re-conceptualization.

4.2 *Article 2*

Byrne, D. (1997) 'Chaotic Places or Complex Places – Cities in a Post Industrial Era', in S. Westwood and J. Williams (eds) *Imagining Cities*, pp. 50–70. London: Routledge.

In this essay, Byrne attempts to use chaos/complexity theory insights to comment on and argue for a viewpoint on the internal processes that he regards as taking place in post-industrial cities in the UK. Byrne uses this viewpoint to reflect – with the aid of chaos/complexity theory – on the larger issue of the role of structure and agency in urban transformation. An explicit ontological claim for the theory runs through the essay as the author attempts to empirically test an hypothesis based not upon the contextualization of a transfer based upon structural mapping, but rather an hypothesis derived directly from the theory itself.

Byrne introduces early in the article the notion of 'chaos', as in chaos theory (p. 51). Sensitivity to initial conditions and the possibility of order emerging from chaos are highlighted as insights gained from chaos theory. Specific terminology is introduced, namely 'strange attractor', 'torus attractor' and 'phase states' all of which are not explicitly expounded, though one might guess that they have something to do with stability (pp. 52, 53). The author proceeds to use these terms to argue for a qualified determinacy, which he contrasts with 'linear determinacy'. This is a central theme of the essay. As far as is made explicit, the justification for the use of chaos theory starts with this felt or sensed correspondence – that of non-linearity in chaotic systems and in the real world.

The word 'torus' comes up again later in describing Graham's account of possibilities of urban transformation. Byrne uses the word in a substitutive sense for the literal meaning 'reconstitution within limits' (p. 54). Though

torus can be said to possess this property it is not the defining property of a torus, for all attractors excluding the point attractor possess it. In addition, later in the text the author defines a 'torus' as 'characterised by self-similarity' (p. 56). This however is not a property of 'torus', as self-similarity is a feature of strange attractors which torus is not (see Gleick, 1987; Stewart, 1993, for a description of phase spaces, different types of attractors including strange attractors). Therefore one must conclude that the choice of the word is a case of a wrong metaphor, although here it makes no difference, as the metaphor is not really introduced to the reader who will probably not be able to understand it. It thus conveys little or no additional insight to readers not well versed in the terminology of complex systems.

Further on Byrne (p. 55) introduces defining features of complex systems, quoting from Reed and Harvey (1992: 359). The defining features are said to be 'governed by an evolutionary dynamic that is of a far from equilibrium state', are 'inherently historical and intensely innovative' and have capacities for 'spontaneous change and long range tendencies towards evolutionary behaviour'. Their 'internal dynamic is said to be ontologically unique' as it is predicated on 'self-replicating, non-linear feedback'. Though literal meanings of terms 'far-from-equilibrium', 'non-linear feedback', and 'long range tendencies towards evolutionary behaviour' are known, their connotative meanings cannot be expected to be known to a planning or social science based audience, at least not in 1997 when the article was published. Hence a serious reader is left with a sense that the writer refers to something more important which has its base in complexity theory but it is difficult for them to guess what. This leaves the reader with a sense of mysticism about complexity theory as such. Effectively the same response results when the author (p. 55) quotes Nicolis and Prigogine (1989: 238, in Reed and Harvey, 1992: 370) and uses the terminology of complexity theory to make the claim that 'perturbations of far-from-equilibrium conditions can originate in the values and actions of humans themselves'. How is a reader to agree or disagree when the full meanings of the terminologies are obscure? As stated earlier, it is the task of the author, when using concepts in one domain in another domain, to explain the meanings he/she attributes. (In the original work by Reed and Harvey, the meanings are explained.)

In introducing the property of 'sensitivity to initial conditions', Byrne makes good his earlier omission and expounds the meanings/properties he attaches to the phrase. However, the same obscuring of meaning happens when the term 'dissipative systems' is used. 'All dissipative systems have to be understood as being characterised by a dominance of information over energy with information representing both order and the origins of disorder' (p. 55). It is impossible to decide whether or not social systems can be dissipative as the meanings of 'energy' and the phrase 'information representing both order and the origins of disorder' are obscure. Thus, any claims made for social systems based on classification as a dissipative system remain unconvincing at best.

The use of the concept of 'fractals' takes another turn. From Casti (1994) the author quotes fractals as:

> Moreover they have exactly the same degree of irregularity at all scales of measurement. If you start looking from a distance (i.e., with a long ruler) then as you get closer and closer (with smaller rulers) small pieces of the curve that looked like formless blobs earlier turn into recognizable objects, the shapes of which are the same as that of the overall object itself. (p. 56)

Byrne wants to argue that expressions of global restructuring can be primarily seen in intra-urban rather than in inter-urban analysis. He maintains that:

> studies which emphasise the distinctiveness of localities, and especially whole city regions, have been using too long a ruler, . . . we need to look within cities, at intra- not inter-urban differentiation, if we are to find the expressed consequences of what is certainly a phase state change. (p. 56)

Several immediate questions arise: why should we consider cities to be fractals and what makes them so? If fractals exhibit self-similarity across all scales and conceding that cities are fractals then how exactly does scale matter for bringing out consequences of global restructuring? Should not the effects the author is searching for be visible across all scales as properties of self-similarity are exhibited across scales? The use of the term fractals here seems to be actually counterproductive to the argument that Byrne wants to make. Further questions include: what is the significance of the metaphor 'phase change' since it is explicitly asserted? How does it add to the argument for

detecting what the author is seeking? What emerges is a deficiency in terms of both joining two domains through an unconvincing metaphor, primarily because the nature of compatibility is not clearly stated, and also improper explication of the meaning of the metaphor, which with the information available seems to be incommensurate and counterproductive to the argument for which it is used. Additionally, the introduction of unfamiliar redundant metaphors serves to distract from, rather than expound, the argument.

The text actually is packed with usage of unfamiliar metaphors not clarified by the author. Thus, we read terms and phrases like 'autopoetic','change from torus form to a butterfly form' and whole sentences which can only be ignored by a reader not well-versed in complexity theory. An example is – 'the conception of a butterfly attractor as descriptive of household/individual possible phase states is profoundly pessimistic for simple talent/energy-based models of individual or household social mobility' (p. 56). This sentence is also puzzling for someone who is passably acquainted with complexity theory, as the sense in which the author uses it is not explicitly made clear. As Goatly (1997: 127) states, 'through misunderstanding, infelicitous uptake can occur with all speech acts, utterances like metaphors which are highly dependent on pragmatic inferencing are particularly risky'.

The empirical part of Byrne's article is based upon a hypothesis of the urban process as a complex system. From a study of selected industrial cities, the hypothesis that Byrne seems to advance is that 'they (industrial cities) have indeed changed from toruses into butterflies. Complex models suggest that we should look for changes in key variables which have increased by about a factor of 3' (p. 62).

Following from this hypothesis, the tasks laid out come to show that cities have changed from toruses into butterflies and that there is an increase by a factor of 3 in key variables. A reader of this article may remain confused as to why cities should be considered as 'toruses' in the first place and second, how they can be considered as 'butterflies'. Neither term is systematically presented or argued in the text. Here also the problem of comprehension extends to those reasonably familiar with complexity theory as it is not known which properties of toruses or butterflies the author is referring to and wants to emphasize.

I contend that the need for linking the empirical work to complex system dynamics and the need for describing it in terms of 'chaotic' or 'complex' places itself remain unclear. Butterfly attractor is not the only strange attractor that a complex system can possess. It is just one among many. In addition, as I understand it, Byrne is looking for bifurcations and an increase in a key parameter by factor 3. In doing this he is assigning the key parameter as equivalent to something called 'Feigenbaum' numbers in complexity theory. He states: 'I don't want to reify Feigenbaum numbers but here we have one and we have the phase form which it suggests would occur' (p. 63).

Neither Feigenbaum numbers, nor the relevance of the number 3 for social systems, are introduced. One must assume that Byrne's intention in claiming a Feigenbaum number in his analysis is to prove that the system is a complex system. (In the natural sciences, this is a method used for proving that a system is a complex.) However, to date, it is nowhere stated or proved that Feigenbaum numbers are accepted, or even necessary, proof for complex social systems. The argument for complexity in social systems normally adopts a line of argument starting from what systems are, what an open system is and what complexity in social systems means (see, for instance, Luhmann, 1995).

Later in his article, Byrne discusses how policy must respond to the empirical analysis presented. He argues that two sorts of policy have created the butterfly form. This argument is separate from complexity theory or the empirical work. It builds on the author's understanding of urban processes. He then reviews the potential for 'complex founded policies' (p. 65). The review is again separate, using general properties of complex systems. Byrne presents three forms of the policy, leading to an argument for a 'creative engagement with complex urban realities, based on a clear Gouldian understanding of the historical process by which we got to where we are now' (p. 67). This for Byrne, 'can be illuminated precisely by a consideration of how the present butterfly form of industrial cities has developed, and of the role of housing and planning policies in its creation' (p. 67).

If the object of the empirical analysis is to prove that cities have come to a butterfly form, it is again not clear what contribution it makes to better comprehension as the connotative significance of the term, in the sense of

what it means in complexity theory, is not introduced. Other arguments in a similar vein are thus quite lost on the reader: 'it could be argued, using the vocabulary of complexity, that policy sought to create an attractor state which did not exist in the range of possible attractors' (p. 68).

The use of complexity theory here thus remains unconvincing both for those readers who are curious about the theory as such and for those whom the author targets when he states: 'the point of this chapter is to try to present a framework for understanding the situation to be dealt with and to assert that the task is actually a do-able one' (p. 69).

To summarize, the article remains unconvincing overall, due to four main reasons. First, it is not based on a careful mapping of concepts, with meaning and relations, from one domain to another. Second, the author starts from a hypothesis derived directly from complexity theory itself (as developed in the natural sciences), without attempting to contextualize or give reasons why the concepts might hold promise for the target domain discussed. Third, the empirical work highlights results that are described using terminology from complexity theory. The empirical work as such does not use the theory, nor are any new insights gained from the re-conceptualization of the results highlighted. The use of complexity theory thus loses its legitimacy and strength. Finally, the numbers chosen to verify the empirical work and the significance attached to them are not explained clearly, causing the claims made to remain unconvincing.

From examination of the two case studies we can conclude that there is some ground for scepticism in the use of complexity theory in planning texts. For instance, there are ontological and epistemological claims that complexity theory makes which need to be mapped into the social domain and contextualized. A realist view would advocate a structural mapping that retains relational features, while a pragmatist or constructivist view would emphasize the cognitive function of the mapping as demonstrated by Morgan (1998). Second, there needs to be greater appreciation for the conditions of metaphoric theory transfer. If these conditions are not met, the result is actually counterproductive rather than innovative or original. Third, metaphoric theory transfer can only be effective if appreciated, as Rorty (1991) says, by 'us' meaning the community with which the writer is communicating. This is

because theory construction metaphors demand that they be explored and contextualized within the target domain. Only then will they give rise to other research agendas, the articulation and exploration of which are best advanced by the effort of a research community.

5. Conclusions

In the initial part of this article I have laid out a framework for evaluation and then discussed the use of complexity theory in planning through a critique of two articles. I now reflect on how far the framework has aided an evaluation of the transfer. First, the framework stipulates adequate knowledge of the target domain and source domain. If there is not enough evidence for this, either because the terms are not explained to the reader or because they are inappropriately used, an unconvincing argument can easily be the result. Second, the framework calls for an explicit explication of key similarities and analogies across domains that justify the transfer. This applies whether the theory is used directly (because in the target domain where it has not been stabilized and accepted, it still acts as a metaphor) or the concepts or properties are used by themselves. An a priori analogical likening can be drawn stressing parallel concepts between ideas or processes, which urge the reader to proceed further as there could be something in the similarity waiting to be drawn out. Third, the framework calls for an attempt to abstract and elucidate essential relational features from the source domain which contribute to establishing a causal claim or a cognitive claim. This is a key step for theory transfer as it is through this process that a reader gets to know the worth of the metaphor, its denotative and connotative meanings. The final point in the evaluative framework requires that there must be an attempt to relate the imported abstraction to other theories and empirical results in the target domain, for only then will the metaphor attain full meaning in the target domain and thus become stabilized.

In examining the use of complexity theory in planning by employing the theory of metaphors, I have also shown how it helps us to understand to a large extent the mysticism or scepticism accorded to complexity theory and its utility. The theory of metaphors also helps us appreciate that there may yet be

possibilities for exploring the application of complexity theory in planning through a more rigorous methodology and equally rigorous articulation. The path that such a research agenda might adopt is sketched out in the framework of evaluation itself, with an illustration of pitfalls that one needs to be careful to avoid. It must be stressed that there is no claim made here for the exclusiveness of the theory of metaphor as a method for theory transfer. It might equally well be possible by 'reach of reason' or inference (Green, 1993), or by substantiation of an ontological claim such as transcendental realism (Martin and Harré, 1982). A full theory transfer, contextualization and construction may ultimately be a mix of all these methods attaining importance at various stages of the theory transfer and development. It should also be stated that unearthing disanalogies need not be seen as totally detrimental. Rather, it is intrinsic to a process of refinement of the theory in the target domain, especially in the initial stages. Transfer of complexity theory into the social science and planning fields is still in its infancy and hence there is a case for examining the metaphorical method of transfer more closely at this stage. I hope that this article serves to shed some light on how this might be more rigorously done. The final verdict on the relevance of metaphors from complexity theory will rest, as Knudsen (2003) points out, with the specific discipline, which will finally determine the value of the metaphor.

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HANS LENK

Towards a Pragmatic Philosophy of Planning

Abstract

This is a translated and revised contribution to the discussion of a philosophy of planning from the perspective of the philosophy of science, originally written around 1970. A main thesis is: Generalists such as philosophers of normative problems and design, moral philosophers and value theorists should definitely be part of the teams of planners and decision-makers. Even if a generally accepted, consistent and comprehensive theory does not yet exist, such generalists can provide critical and systematic methodological input for effective governance in the public interest. In particular, the construction and critical discussion of reliability criteria in planning is a genuine task for the philosophy of science. Similarly, the normative presuppositions of planning concepts and the normative elements of planning decisions have not been sufficiently taken into account, the analysis of normativity being a core issue of philosophy. Therefore, philosophy of science should serve as a "censor" for planning theory and practice. In the first part of this contribution, the argument is developed on the basis of formal considerations of planning; in the second part, the same argument is presented in the form of theses.

The text is based on a translation and updating of the two papers "Prolegomena zur Wissenschaftstheorie der Planung" (first published in 1970) and "Bemerkungen zu einer 'praktischen' Rehabilitierung der praktischen Philosophie aufgrund der Planungsdiskussion", both reprinted in H. Lenk: "Erklärung, Prognose, Planung: Skizzen zu Brennpunktproblemen der Wissenschaftstheorie". Rombach 1972. Some references have been lost in translation; in these cases, please refer to the original texts. The translation was carried out with the help of DeepL (www.deepl.com).

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1. Prolegomena to a Philosophy of Science for Planning

Planning as "the big move of our time", the "*key concept* of our future" in the "age of planning" (cf. Kaiser 1965, 7), or "planning without a planned economy" (Plitzko 1964) - such catchwords of the "ubiquity of planning" (Peterson 1960) would document that a change of attitudes in public opinion has taken place: Whereas in some Western European countries (Western Germany, USA) some decades ago economic planning was considered dubious and incompatible with the principles of a liberal pluralistic society, today the insight prevails that planning does not have to restrict freedom at all, but is actually a necessary prerequisite for the further development of freedom, for the creation and preservation of diverse and humane possibilities for actions and scopes for action. "Whoever has seen the millions lying naked and dying of hunger in the streets of Calcutta knows that there is no more terrible deprivation of freedom than lack of plan" (Anders 1974, 50). Although some important work on planning was done in India already in the sixties (e.g., Dasgupta et al. 1961, Kumar 1962, Bhattacharyya 1963), the very need has not been decisively alleviated. Not only the upper measure of the supply, education, production deficiencies is to blame, but the psychic and social conditions were missing: there was no widespread understanding of rational, systemic planning. It is well known that development policy is still in its beginning and did not pay enough attention to such cultural value-traditional and their institutional preconditions. In general, neither social macro-planning nor economic planning nor technological planning can be socially enforced in abstract isolation without regard to such historical, cultural and social preconditions. In the practice of plan application there are always considerable financial, psychological and social difficulties and obstacles due to rather unpredictable historical developments. However, traditionally formed institutional, legal and other social systemic factors or structures are not only obstacles for brash global planners, but necessary instruments of planning and plan implementation (i.e., plan application and realization). The role of law and legislation in particular has long been disregarded in planning discussions, even since Saint-Simon's "organization plan" for society, that was indeed the first major planning concept. Other difficulties, which increasingly

arise for planning attempts, result from the fact that the extent, speed, systemic interconnectedness of planning are increasing as fast as the number of possibly competing or conflicting planning bodies in the pluralistic society. In the confusion of planning areas and competences, many overlaps, even a chaos of plans would seem to arise, if the coordination and harmonization of the many plans of smaller scopes into systematically integrated planning hierarchies do not succeed. But how can this be done without central total planning, without the state's usurpation of omnipotence in planning?

Theoretically we know: It is possible to "plan for freedom" (Gabor 1969) in the sense that a framework of planning strategies for the present decisions are to be developed from the aimed objective to maximize the decision varieties of the next generation as much as possible, to restrict them as little as possible. Following an idea of Crossman and chess game strategies by Shannon, Gabor gave a mathematical foundation to this planning for maximum flexibility: Using Liouville's theorem from vector field theory, the strategy in decision spaces whose variable context is structured by a linear, time-dependent differential equation system (1) is to be chosen in each case so that the variation volume of the current phase space of the decision vectors (δx_1 , . , δx_n) turns into a maximum of the assigned variation volume of the later phase-space section under linear time transformation $x_{it} = x_{io} + \bar{t}f$. The connection between volume D and local change of the vector field $\mathfrak{F}$ of the free variables is just given by Liouville's theorem (2), which equates the temporal change of the volume logarithm with the divergence of the velocity vector field, so to speak with the variational yield of the local variable change.

(1) $$\frac{dx_i}{dt} = f_i\ (x_1, \ldots, x_n, t)$$

(2) $$\frac{d}{dt} \log D = \operatorname{div} \mathfrak{F}$$

Gabor is clear about the fact that it depends on a compromise between the goal orientation of the present planners and the greatest possible freedom of the very planning of the next generation; that means that the mentioned maximum idea cannot be carried out fully or purely. The framework planning strategy to be derived from this therefore requires further restrictions in terms of content. However, the idea of planning for the greatest possible

future flexibility still makes - sense as a decision guideline even under restrictive secondary conditions - in a society in which lifelong learning and behavioral flexibility - i.e., the ability to adapt to new situations - are becoming increasingly important. Admittedly, such a theoretical analysis does not yet guarantee the practical feasibility of open and flexible planning.

Paradoxically, a large part of planning seems to be just necessary to undo socially harmful consequences of earlier or present planning processes (secondary planning) (Tenbruck 1967): does that mean planning for a therapy from planning? Would this, too, argue in favor of keeping many irreversible additional restrictions of framework planning as small as possible in the sense of flexible planning? Can that also keep open possibilities for variation and reaction as long as possible in terms of time (late "freezing point" of the planning process, Haseloff 1964), especially in competitive situations with opposing planners?

The integration of all extant plans and the secondary planning processes furthermore requires the planning of the planning, the development of meta-plans. Higher-level aspects for unification often enough failed because each structural analysis seems to have its own 'method' of data collection and processing. There is not only a lack of systematicity in the surveys, but also still today a lack of uniform planning techniques. With the development of graph-theoretical network planning techniques, this deficiency can be limited, but these techniques for determining critical time- and cost-saving paths in production graphs are by no means directly transferable to spatial and regional planning, although here, too, in some branches (such as transportation planning)1 graph-theoretical modeling and analysis methods have become indispensable - but there are largely different graphs and point- or line evaluations than in production planning.

The planners' repeated "cry for help for the scientific partner" (Eggeling 1965) always consisted, among other things, of the demand for a scientific foundation of the planning data collection as well as for the natural law explanation or sociological substantiation of cause-effect relationships for the analysis of the planning areas or for the reliable overview of change possibilities and consequences. However, not only should planning be scientifically based, but planning itself should, according to the ideas of some planning

theorists, be scientifically based (ibid.). Jobs for 'scientific planners' have also often been advertised for the organization of and in universities. A general theory of planning was seen by some theoreticians as a magic wand that would automatically solve the many problems of coordination.

By contrast, Schelsky (1966) sharply criticized the planning utopia which understands "planning ... as a universal remedy", as a "new science" for the generation of political stability of society and for the "mastery of the future", for the formation of a "new" (planned) "man" (human being) in the "planned planning paradise". As indeed Schelsky rightly opposed the total exaggeration of ideological planning optimism, he could not deny the indispensability of ever more comprehensive planning in general. As little as planning can completely replace the very real action and decision-making, so hardly can be rejected the necessity of systemically oriented planning in complex systems. Even a brief study of the ecological situation and the dangers in industrial agglomerations, with the ever-accelerating problems of air and groundwater pollution control, waste disposal, erosion etc. does sufficiently demonstrate this. Even continental or even global dangers of radioactivity contamination already arose not only 1945 in Hiroshima and Nagasaki but also more than half a century ago in with, e. g., the so-called experimental blasts of atomic bombs in the Pacific and 1986 after the Chernobyl grand nuclear accident, whereas most of the other problems mentioned so far turned out to be 'only' regional. But regional dangers are no less dangerous - and: they tend to expand.

Back to the general discussion on planning concepts and approaches…If the planner's call for scientific partner were understood as a call for the *one* scientist as a member in the planning staff (the formulations for this are usually ambiguous), such a blanket demand would prove to be too undifferentiated, too simple and one-sided: rather, several if not many scientists and technologists, economists and engineers are almost always necessary to deal with complex societal and political complex problems. Even in the planning of a limited urban or rural region, so many problems of so many different scientific disciplines are interwoven that no single "scientific partner" can overlook the all the necessary analyses, problems, techniques, and possible solutions.

Planning is a highly complex interdisciplinary undertaking; for it can only be accomplished in a team with scientists from numerous disciplines - in a permanent team, if - as usually - consecutive consequence planning, control, goal-adaptive or even goal-changing ("gliding" or "rolling") continuation planning are to be successful.

The planners' call for help from scientific partners is sometimes misunderstood in another respect, too. Some planners seem to assume that "the one scientist" can provide them with *clear recipes*. This is not possible for the reasons mentioned above: The variety of different area-specific analyses and design techniques will generally by no means converge on their own to a harmonious optimal solution. Compromise decisions are the rule - with their notoriously rather low transparency of consequences. - Mostly, one can only search (for cost or other value reasons) for one (some) of several "admissible" (satisfying the plan restrictions) or "good" (satisfying further quality criteria) plan solutions: often only "reasonably good enough" ones are possible ("satisficing" ones after H.A. Simon). All these proposed solutions may be constructed step by step (sometimes by an automaton) by systematic application of heuristic procedures with continuous control. Often the optimal solution is too costly, not achievable, not uniquely defined, or not needed at all. Most often, "the exhaustive algorithms of mathematical optimization are for the large-scale planning problems ... unsuitable": too precise, too presuppositional to be unambiguously applicable to complex framework planning with structures, margins, and preconditions that are not precisely defined.

Despite highly formalized decision theory and game-theoretic strategy research, there are no decision recipes that can be safely applied in individual cases for highly complex interdisciplinary problems with only a few quantifiable variables. How, for example, should ecological factors enter into social utility functions? The variability of strategies and their dependence on given optimality criteria (for which already theoretically an immense number of possibilities exist) have been precisely revealed by the mathematical theory of strategic games and the decision theory founded on it.

Scientific theories cannot take away from the very planner extant decisions about optimality criteria - not even if (s)he can be content to draw up several alternative plans, alternative models and leave the decisions between them to the politicians. Questions of evaluation, normative policy fanning

out, etc. usually do overcharge the purely technological expert planner as well as the politician who is not sufficiently familiar with structural problems, evaluation methods and evaluation criteria.

Even the specialized bilateral permanent communication between planning experts of individual disciplines and the political decision-maker(s) is not sufficient on its own to avoid purely technocratic or "decisionistic" solutions to planning problems. Neither is the ability of the natural scientist, the technician, and the planning technologist or "futurologist", trained in the social sciences and in the "Studium Generale," able to look beyond their narrow disciplinary boundaries to larger eco-socio-technical system contexts. As important as both suggestions are as necessary additions, they alone cannot completely avoid the proverbial blinkered blindness of the experts. Even the more generally educated technical specialist is often too closely bound to his learned techniques and technologies to be able to plan beyond the traditional relatively proven strategies in critical situations of the planned area system. "Specialists for the General or even Universal" seem also to be necessary.

Politicians, however, are by their very nature quasi born "generalists", if not only "partisans" keen on cost-saving, preferably purely administrative solutions that can be implemented as quickly and elegantly as possible (especially in view of the imminent next election). In addition, they are exposed to heavy lobbyist pressure. However, important general interests in particular should have no lobby, as the problems of keeping waterways, drinking water reservoirs, groundwater, soil and air clean have shown ever since. Only rather recently, young rebels of the next generation have successfully taken over the tasks of protesting against the old ways of dealing with the up-coming global and local eco- and climate crises (e. g. "Fridays for Future", Greenpeace etc.).

Still today, even if appropriate laws already exist, large companies frequently find it cheaper to pay two or many lawyers for many years to drag on pending cases with formal complaints than to invest half a million or billion for the necessary filtration plants and waste binding or conversion processes. Immediately effective social, political and legal controls can apparently only be introduced if the larger public can be efficiently mobilized. But this requires rather spectacular subsequent events: the fish kill in the Rhine or Oder used moved public opinion more than the increase of the air's sulfur,

methane and carbon dioxide content by tiny fractions and the overall sum of deaths (most of which could not be clearly explained) caused by excessive smog formation.

If the public's sensitivity for ecological pollution problems etc. can be greatly increased (and considerable progress therein has been in the last decades), it must be made aware through systematic outreach and long-term education. (This can probably only be achieved in concrete packaging - by pointedly painting out foreseeable consequential damage and by pictorial representations which could be widely disseminated via television).

Especially in the case of complex social planning of this kind, it becomes clear: the generalist and the normative, value-oriented, policy-criticizing treatment of planning has for decades been neglected - both in the stage of design and in that of implementation. What Ozbekhan (1969) and Jantsch (1969) somewhat misleadingly call 'normative planning' or the normative level of planning functions, urgently needs further rational elaboration. However, the basic methodology of normative decisions and their criteria reconstruction cannot be done by only scientific partners or the special planners alone.

Generalists such as philosophers of normative problems and designs, moral philosophers and value theorists, anthropologists, sociologists of culture and institutions, humanities scholars, behavioral scientists, and social psychologists should definitely be parts of the teams of planners and decision-makers. Even when (as in the basic methodology of normative decision-making, in the theory of values and norms) no generally accepted and consistent as well as comprehensive theory yet exists, such generalists can contribute critical and systematic methodological correctives placed in broader contexts and, in cooperative interplay, possibly exercise effective control in the general interest. Even real philosophers in the narrower sense could or should contribute – as the self-claimed "specialists for the Universal".

The planners' afore-mentioned cry for help for the scientific partner is therefore to be further interpreted also as an appeal to the basic methodologist, i. e., to *scientific-theoretical* partners in the broadest sense, if one wants to call general basic methodology "scientific-theoretical." *Philosophy of science* proper is itself not a scientific discipline, but rather a *philosophical* one: its tasks are mainly the rational reconstruction of criteria as well as the analysis and critical evaluation of methods. In terms of methodology and subject matter, the afore-mentioned philosophical analysis of methodological foundations

could also be called "philosophy of science" in a broader sense, even if planning is not done in a strictly scientific *sense.* (The expression "*philosophy of planning*" would be a bit misleading, since this could rather be understood as a societal, historical, social or even existential philosophical assessment. "General basic methodological analysis of planning" would probably be the most innocuous term).

The desire of planning scientists for a unified method and for a general theory of planning was partly already to be understood as a request to the scientific theorist "to work out" the logical structures, the prognostic reliability and an eco-socio-economic-lawful (only "quasi-lawful", i. e. using what I have once called 'quasi-laws') of the planning rules and procedures. In fact, there are almost no specially philosophy of science studies on planning concepts and theories so far. The only works to be mentioned here are those which partly use results of scientific theory: for example Rieger's dissertation (*Begriff und Logik der Planung/Concept and Logic of Planning*), in which essentially planning types are differentiated by classification and sociological role-structure-analyses according to how plan designers, plan carriers and plan executors operate and whether there are partial role unions or overlapping of strategic positions.

Depending on whether there is institutionalized permanent planning approach with formalized information channels ("channel interpretation") or not (information stream interpretation with possibly one-time transmission), 158 (194 in the weaker channel interpretation with communicative one-sidedness) or 334 different planning roles respectively could be distinguished, for which Rieger introduced a simple symbol designation system (Figure 1).

The prevailing basic rule for an information flow system that may be run through only once is: at least one arrow must start from the designer and one must end at the executor, and the plan carrier need not be isolated (initiative: T→ or tacit approval: T←). For the permanent channel interpretation, of course, more control arrows are needed. Here, the graph must be a strongly connected one, that means here: each of the points must be both starting and ending point of an arrow.

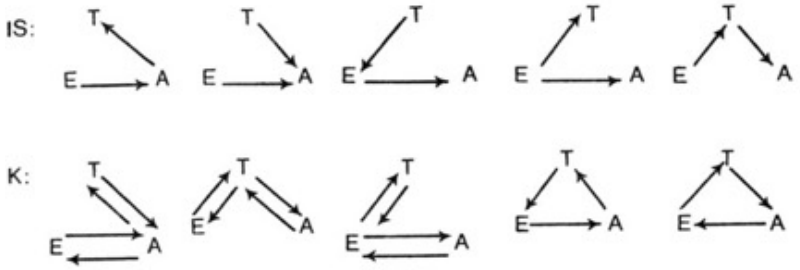

Figure 1: Concept and Logic of Planning (Rieger 1967). IS: information stream interpretation, K: institutionalized channel interpretation (Kanalinterpretation). E: designer (*E*ntwerfer), T: carrier (*T*räger), A: executor (*A*usführer). (Designer is frequently, but not necessarily, an individual; Carriers may be enterprises, corporations, firms, states etc.; Executors are mostly plural, i. e. working groups or teams. Designer and executor roles often coincide.) From each of five minimal basic types of existential information flow systems (information connections possibly used only once) and channel planning systems (institutionalized channels), respectively, all existential planning graphs can be constructed and represented by addition of further arrows.

One can already see from this central part that a basic structural terminological framework has been developed here: The "planning logic" proposed by Rieger is an (incomplete) "language in which planning can be talked about, that would permit a typology of planning situations and provide information about the information networks, organizational structures and hierarchical processes, which must be met in concrete cases of planning".

The attempts at terminological specification of the basic concepts of planning can hardly be placed in philosophy of science, since here the logical level usual in the philosophy of science is by no means reached. Semantic vagueness and incorrect formulations such as: "planning" is "the mental anticipation of future action", "normative planning" consists in "developing rules derived from factual investigations and ... serve as guidelines for action" - such imprecise formulations could at best be forgiven for earlier discussions of planning, but not for analyses oriented toward scientific theory-building.

According to “language games” analyses of the late Wittgenstein (PU §§ 279 ff, 371ff, 251, 90 ff), we see that most apparently empirical statements about

planning (e.g., such as "There is no planning without a planning subject", Rieger 1967, 30), "merely contain something about the grammar of the word *'plan'*, that is, only exemplify the use of this word, but do not constitute empirically substantive propositions (Jensen 1970, 61)." But from his explication of the expression 'planning' as "a design of a scheme for organizing systems of action," he infers theorems that likewise represent only linguistic conventions about (his) use of the word 'planning': That planning, for instance, forms ("represents") "a scheme for controlling (or regulating) the transformation of system states," is "future-oriented social design," and that a theory of planning "turns out"(?) to be "a theory of systems under a certain aspect" (op.cit. 123) which is just based on the fact that (he) would not (or will not) call other schemes also 'plans.'

However, with the knowledge about Wittgenstein's later anti-essentialist philosophy (against any idealist essentialism), one could no longer simply assume that planning is something like a *unified activity* whose 'being' could be identified by a sharp definition. "The *unity of the concept of planning*", however, continues to be invoked by many authors - despite all the plurality of possible characteristic marks. Most planning theories or terminological preliminary considerations indeed start from what-is?-questions ('what is planning?') according to the traditional (but scientifically outdated) pattern. And they try to capture *the essential, the characteristic, the 'nature'* of planning by a more or less (mostly less) precise definition put at the beginning. In the essentialist approach there is still a residue of outdated conceptual realism, a semantic generalization tendency of magical origin: more 'mythodology' (Ozbekhan) rather than methodology. With the term, with the expression and its specification, one thinks to have already 'got a grip' on something denoted by the term. This becomes clear in extreme linguistic purification attempts like: 'The plan is the location of utopia', a *'flexible model of action*' (Kaiser 1965, 1966) 'any hierarchical process (?) in the organism that can control the order of a sequence of operations to be executed' (Miller et al. 1960). The Polish "praxiologist" Kotarbinski called it 'a description of a future possible choice and composition of actions united by a common goal, or a future possible choice and composition of subcomponents of a product of actions thus united'.

Specified map models, spatial arrangements, abstract role structure representations (formal organization plans), number lists, the explanation basis for an order (even a 'divine plan'), mutual assignments of spatial, temporal and abstract elements to each other, target differentiations, gene structures, under circumstances subconscious behavioral structuring, systems of intended actions - at least all these charaterizations are understood by or classified under the expression 'plans'. Do we find here at all common *'essence'(-traits*) of all instances? Instead, there seems to be a Wittgensteinian plurality circumscribed by a comprehensive "family concept" (*Familienbegriff*). The essentialism (the Platonistic, essential-philosophical attitude, as if plans or even plannings were something like so-called ideal objects, which could be sharply conceptualized) is not so clear in all analyses as in that one, which stated: "The plan can be conceived only from the root of the object of the plan, from the 'nature of the thing' (Kaiser op.cit., 25).Yet many authors imagine that plans or planning are simply 'derived' from given goals. Whether logical deduction is meant and how structural schemes can be so 'derived' from concepts or even from objectives usually remains unclear.

Even more confusing and fraught with even more vagueness are the attempted definitions for the term '*planning*' - ranging from the semantically flawed formulation: 'anticipation'", 'thoughtful anticipation of future action' to "planning is the attempt to apply reason and foresight to the ordering of human affairs", "the systematic design of a rational order based on all available relevant knowledge", "rationally oriented coordination(s) of the actions of several (persons) ... with a claim to an outcome that is better in the reasonable judgment of all … of the participants", "rational action","attempt to act with foresight and intelligence", "... governed by conscious expectation," "acting with purpose," "an organized and purposeful way of doing things to achieve better results." One could continue this series almost indefinitely. Not only are structures of order, frameworks of action, and systems of action, probing or decisive mental or social action - jumbled together in descriptive or normative ways of looking at things. Most often, terms appear in the definition of the concept of planning that are even more vague (ambiguous) than the term 'planning' itself: 'order', 'reason' or 'reasonable', 'rationality' or 'rational'. - Criteria of applicability of such abstracts may vary widely: Possible

standards of order and rationality cover a wide spectrum: a specification of the criterion. And the frame of reference is usually not made in the context of defining the concept of planning. "To gain a statement of essence about planning and to put it forward as the valid one would be to blunt out the historical, socio-economic and ideational moments that have a decisive influence on the shaping of planning, or to assume that planning would only appear in a specific manifestation of these moments." (Volk 1970) The search for a comprehensive, ahistorical, problem-independent precise concept of planning must fail.

The essentialist approaches of planning theorists can be traced at best by the frequently assumed view that there is a comprehensive *general theory of planning* which can be conceived in advance by mere interpretations of essence, that may be described completely and uniformly and which applies to all planning phenomena. Starting from the usage of the word 'planning', however, one gets only a very diverse, in itself very heterogeneous and extremely loosely connected Wittgensteinian 'family resemblances'/similarities of terms of everything that is normally called -'planning' or 'planning', without any *single continuous trait* being present in any case and - suitable for an unambiguous characterization of 'the' essence. At the most, exclusions of something that does not fall under the term can be made - and also not completely precisely. Wittgenstein's insights of the "*family resemblances*" especially among abstract generic terms" does also apply to the "*explication*" attempts of the expressions 'plan' and 'planning'. Just as the "language games" (this is Wittgenstein's example) are immense in their variety of manifestations and cannot be characterized by a continuous trait common to all instances, also genetic inheritance patterns, action designs and construction models cannot be sharply characterized by a continuous trait.

Many downstream attempts to classify plans by *features* are also ambiguous and appear quite barren and, in their sweeping definitions, hardly usable for practice and for the development of general (yet applicable) planning methods and methodologies. Classifications and terminological artifices alone form anyway only a necessary (and problem-specific), but by no means a sufficient basis for the development of theories (as the traditional conceptual fetishism in philosophy implied and partly even still believes today - e. g.

by conjuring out of the 'science concept' extensive so-called "*theories*"). Just from conceptual classifications and definitions alone no theories can be derived - and certainly not empirical ones.

What is really gained by Kotarbinski's enumeration that a good plan should be "purpose-oriented", "feasible", "more or less economical", as "easy to use" and "comprehensible" as possible, "more or less operational", "uniform", "continuous", appropriately "precise", "flexible", plan-time optimized, cognitive-scientifically sound? - Apart from this, classification predicates that occupy such a strategic position in the formation of planning theories like the predicate 'strategic' are explicated quite differently by different authors: Stachowiak thought that strategic planning is the planning of the individual planning subject in concert with competing planners and plan sponsors. For Haseloff, planning is 'strategic' if it provides foresighted means for future action in alternative systems. In Ozbekhan, goal setting in the face of various possibilities for action and feasibility alternatives constitutes 'strategic planning'. With Miller-Galanter-Pribram, the term refers to composite ('molar') units of plans and behavior as opposed to tactical ('molecular') units. For Kaiser, a strategic plan is simply a space-temporal plan of action. After Rieger, the same term now denotes "instructions for action that contain variables, most of which depend on environmental constellations." The list could be continued - especially around the decision- and game-theoretical meaning of the term 'strategy' as a complete set of conditional decisions in such a way that for each such "language game" situation exactly one continuation action is determined. In a broader sense, a game is called 'strategic' if the participants can influence the course and outcome of the game by their own actions to be chosen according to the rules of the game. However, the terminological *confusion of terms* for planning classification has become sufficiently clear with this example.

For all the reasons mentioned above, the previous attempts and hopes to arrive at an empirical general theory of planning by analyzing the usual or even the everyday, inconsistent and vague use of the language of planning terms in an abstracting and classifying way or even to gain unambiguous recipes for the practical planner in a purely analytical way from mere definitions of essence appear to be misguided. Philosophy of science cannot take over the constructive work from the planner, although it is able to help him with it. It would

mean to overstrain the philosopher of science, if one hopes for planning recipes or 'the' general comprehensively usable theory of planning.

This must be emphasized all the more, as today philosophy of science has become fashionable. Besides, it has to be emphasized just as clearly that philosophy of science is necessary for the examination of the argumentation and reasoning contexts also in planning-theoretical constructions and analyses. The importance of methodological analyses and critical criterial discussions of planning-theoretical conceptions has been clearly shown by the critical analyses of the methods of some planning theorists outlined above.

However, philosophers of science have thus far hardly addressed planning problems at all, because they hastily relegated such questions to research heuristics and research psychology, because they traditionally dealt too little with the constructive questions of theory formation and research development, and restricted their analyses too much to questions of validity (see Lenk 2017). Probably also because, accustomed to the relatively precise theories of the model sciences of physics and mathematics, they did not want to engage in too uncertain analyses of half- descriptive, half-normative systems of statements, which - strictly speaking - could not even be called 'scientific'. But lack of precision in previous theorizing should not be an obstacle to take up a field, but rather an incentive to delve in. All the more, as these are really urgent problems, on the solution of which could indirectly depend the very reliability of methods also of the forms of planning, such an endeavor seems to be indispensable for the survival of mankind. In the course of the threatening consequences of missing or not socially prepared planning (e.g. in developing countries) and in view of the harmful ecological consequences of the 'planless' (non-integrated) pluralistic planning of not very far-sighted competing planning authorities in highly industrialized agglomerations, a philosopher of science must not be content with snobbishly giving bad marks to the (according to his standards gained from the exact sciences) partly unserious methods, as long as possibilities for improvement exist. Relatively insecure methods, which have been improved step by step and which can be improved, are themselves still better in view of the present growing complexity of organizational problems than none at all. The non-integrated laissez-faire is a method of naiveté that has outlived its usefulness; indeed, it is

dangerous. At least one should be able to determine the relative uncertainty (and thus e contrario the relative reliability) of the relatively successful methods used thus far. If one does not know anything more precise about the low reliability of the methods, one can hardly improve them in a targeted way. But for this aim one needs yardsticks and criteria.

The construction and critical discussion of reliability criteria is indeed a task of philosophy of science. For the rational reconstruction of reliability criteria and the scientific-theoretical analysis of typical planning processes, plus their structures and methods, are indispensable. The analysis of methods is a practically indispensable prerequisite for the targeted improvement of methods, for the generalization of methods and for the development of new methods - and for the systematized and well-founded evaluation of methods. An initial critical comparative in-depth methodological analysis and discussion of planning methods by philosophy of science is still urgent. The cooperation of philosophers of science and methodologists with planning theorists must no longer be postponed.

Of course, this cooperation must not be limited to just general talk. That would be relatively useless. The cooperation must ignite and prove itself on detailed methodological problems - on the critical analysis and discussion of practical planning procedures. Problem orientation is preferable to mere conceptual acrobatics. And this means continuous interdisciplinary working together - at best in interdisciplinary teams doing theoretical ground work and also joint project cooperation.

In order to specify the individual methodological problems, definitions are of course also needed. These can be developed in a more differentiated way and closer to the problem. Definitions are (problem-specific) instruments, not absolute-evident findings.

If methodological problems are precisely formulated on typified planning cases, they can possibly be generalized, traced back to general questions of scientific theory, and perhaps be solved or lead to new questions, problems and bridge principles or at least successful "rules of thumbs".

In this problem-oriented way, cooperation can then also lead to practically applicable theories of area- and problem-specific planning - in the sense of theoretical problem-solving designs and the hypothetical and terminological prerequisites necessary for them. The fields of application and the theoretical generality of such planning theories can then be extended without

losing the practical problem orientation. This must not be misunderstood as a mere inductive random procedure, since it would be theory-guided and theory-impregnated from the outset - already in the stage of problem formulation. This development of problem-specific theories of planning 'from below' is preferable to the overall designs of the general theory of planning 'from above' (from mere conceptual and linguistic analyses) outlined and criticized above.

Up to now, philosophers of science have essentially dealt with the foundations and methods of the natural sciences, mathematics and, to a more limited extent, the historical and social sciences, and even less with the sciences of behavior and action. In contrast, the analytical treatment of problems of philosophical methodology in the technical sciences, the complex eco- socio-techno-economic system sciences - especially the planning sciences thereof - have been almost completely neglected. Especially here, however, there is still a lot of "charlatanerism", if one judges from strict standards of the philosophy of science. Relevant respective research programs would only meet the urgent requirements mentioned above. The organization of research foci would open up suitable possibilities to compose working groups in an *interdisciplinary way* and to realize the really detailed problem-oriented cooperation of the philosopher of science and/or methodologist with the planning theorist and, if necessary, also with the planning practitioner in universities and planning institutes. Jungk's (1964) idea of an international institute for planning research could perhaps be initiated less pretentiously in the form of *interdisciplinary* institutes for planning research. Special attention should be paid to interdisciplinarity and the essential participation of the philosophy of science. The discipline need not be defined too narrowly. It must include the basic analytical methodology of normative evaluations of action: Planning is characterized by a particularly intricate interweaving of descriptive explanations, forecasts, and normative justifications - so much that, in practice, purely exploratory forecasting can hardly be separated from normative preliminary decisions about, for example, objectives, strategic trade-offs among limited resource funds, and social evaluations, norm orientations, and assessments of practicability and feasibility. The extent to which all this

applies specifically to development and research planning is becoming increasingly apparent.

Ozbekhan has rightly pointed out that the normative preconditions and components of planning drafts and decisions have not been sufficiently considered so far, but that they cannot be taken as a basis for planning without analysis, if one does not want to restrict the possibilities of action and plans regarding future systems only as a mere perpetuation and expansion of present structures - in short, as an extended present. Sliding, ever-adapting or rolling-on planning should try to include goal-altering feedbacks and changes in values - for example, when it comes to the long-term planning of complex eco-socio-economic regional systems. The complexity of the problems is undoubtedly increased by this necessary extension. I am not of the opinion, however, that in principle nothing can be predicted about future social guiding norms, values and objectives: yet, from certain functional considerations it is quite possible to predict that certain more restrictive evaluations of generative behavior will (or must?) become widespread, especially as a result of the problems of explosively growing populations; that ecological goals such as the preservation and creation of hygienic external environmental and living conditions (environmental cleanliness, 'ecological equilibrium' in Ozbekhan) and the climate crises will (must) occupy higher places on the social evaluation scales in the future of planning than in the past. Norm- and valuation-flexible target-dynamic planning approaches can certainly already take such changes into consideration and possibly also normatively provide measures for the social spreading of such valuation changes.

It can be seen from Ozbekhan's normative conception of planning that system-functional and cybernetic conceptions of planning (to which the above-mentioned undoubtedly belongs) do not at all have to fall prey to Schelsky's criticism that planning, "conceived as a system function", "no longer opens up any future at all for the system in question", but just perfects its present by - focusing harmonistically only on smooth functioning and falling back on a "machine concept of social and political action", which is anti-historically and rigidly attached to the scheme 'information - analysis - design - decision' and seeks to replace it by a deterministic unambiguous draft of actions. Ozbekhan's conception of planning is quite flexible with respect to

norms and goals, not necessarily bound to perfectionist rationality (i. e., it is very well compatible with more detailed models of limited rationality) and not necessarily blind to history. Ozbekhan sets his conception precisely as a system-functional 'human action' model apart from mechanistic planning models. Even system changes and planned change of institutions due to policy changes and changed value attitudes are envisaged by his conception planning. The approach can accommodate not only the constraining and the socially transformative role of institutions, traditions, cultural norms and values, and laws, but also deliberate, planned, institutional change. Instead, Schelsky's institutional concept of planning, which confines rational planning to operating *within* existing institutions, seems only suited to conservatively perpetuate the present. Should the change of institutions themselves necessarily be beyond the reach of any rational planning? Should the basic social structures and systems of norms themselves be withdrawn from rational judgment? Lack of planning in these areas could have fatal consequences. The example of the starving people in Calcutta mentioned at the beginning of this article shows this clearly.

Planning does not have to be, indeed cannot be, perfectionist total rationalization per se, as some planning optimists think, who have inflated a total "plannability ideology" to a planning utopia. (The utopian overstretching, however, was rightly criticized by Schelsky.) 'Rationality" does not necessarily mean total rationalization under deterministic or functionalistic perfectionism - nor even descriptivism in the conception of planning. Admittedly, the role of the normative factors and components as well as their interaction with the explanatory-descriptive ones will have to be analyzed in more detail in the future. The mere usual distinctions between indicative and imperative planning (both are normative, by the way) or between exploratory prediction and "normative planning" are by no means sufficient for this philosophically-methodologically very difficult problem complex. Rationality criteria and evaluation standards must first be precisely (re)constructed or evaluated in their role for and in planning in terms of scientific theory.

For the criteria of goal-directed behavior and more specifically of goal-directed (better: goal- intending) action as well as for the theory of decisions under certainty, risk, or uncertainty, interesting scientific theoretical

approaches have been made - as well as for functional analysis, the theory of self-regulators, and teleological explanations (see, e.g., Stegmüller 1969 and Lenk 1972). Why should this not be possible for planning concepts? Especially since all the mentioned problem complexes play a decisive role in planning.

It looks more difficult with an analytical theory of norms and values and the differentiated analysis of their influences in planning processes. The role of image formation, 'believed' values and possibly of the ideological appeal to such values which cognitively legitimize evaluations on the basis of beliefs. This would have to be more precisely understood. Philosophers and philosophers of science often tend to underestimate the social and political efficacy of corresponding value attitudes and of appeals to them. This is quite compatible with the usual overestimation in their circles of the problem-solving power of verbal terminological manipulations in discussions.

The problem-oriented cooperation and discussion of the planning experts with the methodological generalists must not, of course, consist in the participants benevolently - confirming each other's achievements in harmony or in settling problems by majority votes without discussing them. Agreement on the basis of 'commonplaces' is unfruitful in the long run and more risky than channeled conflict in advisory committees and planning staffs.

The variety of results and approaches of different disciplines and methods can only result in new solutions to problems if competing alternative proposals are regulated as sharply as possible and systematically criticized with respect to weaknesses, errors, contradictions, conflicts of goals, incompatibilities, failed claims of feasibility, etc. For this purpose, philosophy of science provides particularly sharpened instruments and paradigms - especially in the interpretation of so-called critical rationalism following Popper, Albert, Feyerabend, Lakatos and others. They all took methodological and rational criticism as their central objective and perspective. Controlled attempts, as far as possible, to bring a theory to failure - be it by experience in the light of a better (more information-rich) theory, be it by logical-methodological criticism or philosophical discussion of criticism - this methodological idea can also be applied to planning concepts in their various stages of development. The more often the case occurs that results of different

scientific disciplines cannot be compared directly, although they concern overlapping planning areas, the more frequently conflicts of norms and values occur, the more often they cannot be eliminated by unambiguous analysis of socially established orders of preference, and the more relevant the epistemological critique of methods becomes.

Philosophy of science cannot develop planning methods on i ts own, but i t can act - as an important critical corrective in the detailed problem-oriented specification, testing, and proving of planning methods. Cooperative analyses and criticisms of the extant individual problems is more important and more promising than general speculation. In addition to this censor function, this basic methodology should not only analyze preconditions for method improvement by analyzing general planning methodological problems, but also provide constructive assistance for the solution of such problems by opening up new evaluation methods and criteria of theory construction.

Examples of such largely open methodological problems can be found, for example, in the afore-mentioned interplay of descriptive-explanatory and normative procedures in planning projects. Because of the relatively good transparency of the goal hierarchies, planning could become a paradigmatic testing ground for the scientific-theoretical-methodological analyses of such interdisciplinary praxiological problems. Other crucial problems of the planning processes can be addressed by the methodological analysis in view of the role of different types of models for explanation, justification, forecasting or conditional singular projections more precisely. So far, most planning theorists still simply adopt the early form of the Popper-Hempel thesis of the structural identity of explanation and prediction, although this identity thesis had to be abandoned (even Hempel later on restricted it considerably). If one holds on to that view that explanations and predictions have exactly the same logical structure and differ only by pragmatic circumstances of the time conditions or the given, then very many plan forecasts and model forecasts would collapse, as far as they are not based on real laws of nature, but only on random trend-like regularities or on quasi-nomological hypotheses (i.e., on law-like "all-statements", which, however, contain individual constants such as historical epoch terms, names as well as space-temporal and other individual restrictions). The optimism of many planners and futurologists indeed often passes on too quickly over the fact that mostly only trends or similarly

random empirical regularities underlie the forecasts and projections instead of really general laws of natural or the quasi-nomological regularities (or quasi-laws) of the social sciences. Here, the analysis of philosophy of science could become particularly effective as a critical corrective. Admittedly, the problem of the exact determinism of natural laws (in the normal, non-atomic world) has not yet been solved even in the philosophy of science - and is - probably not solvable at all from a purely semantic-logical point of view. This has the consequence that between explanations and justifications on the basis of so-called reasons of reason (*Vernunft*) or reasons of conviction we cannot always distinguish exactly yet. If 20 highly qualified astronomers predict a solar eclipse, then I as a layman have good reasons to do this likewise - but on the basis of a rule approximately of the kind: 'Always if a sufficient number of highly qualified astronomers predicts an astronomical event, this will also turn out to be real.' The rule can be formulated in a grossly law-like manner and the argument can be used for rationally well-founded prognoses. Nevertheless, one cannot say that the eclipse occurred because astronomers predicted it. Explanations give answers to 'real why-questions'9, justifications not necessarily. However, justifications are certainly usable in some sense for rational predictions, especially if the underlying rules can be partially traced back to real natural or legal laws. Singular projections (like trend extrapolations) are mostly suitable only for justifications in this broader sense, but not for strict explanations. Indeed, some model forecasts mostly offer only such justifications - and if they are traced back to social science quasi-laws - only "quasi-explanations". The prognostic reliability of such arguments has not been precisely investigated so far and thus is hardly ascertainable by criteria. The scientific-theoretical monograph on the rational forecasts is missing as well as the epistemological analysis of the "quasi-laws" (the so- called quasi-nomological hypotheses), which constitute a large part of the social-scientific "all"-hypotheses. One can see from these examples how some unresolved problems in the philosophy of science play a major role in determining the reliability problems of social science model forecasts and thus also of planning methods. The analysis and interdisciplinary, but detailed problem-oriented discussion of the methodological status and methodological applicability of model forecasts in planning processes would be a worthwhile joint field

of work for planning theorists and philosophers of science - a field from whose cultivation both disciplines can definitely only benefit.

A rather new example may confirm this: Thagard's (2016) rather connectionist analogue model as a visualized network approach to the roles of values, individual and social emotions as well as social mechanisms like, e.g., instigation, transmission and development in urban planning takes seriously such interdisciplinary cooperation. He uses what he calls "cognitive affective maps" (CAMs) to represent "new urbanist" values based on his "theory of emotional coherence" in diagrams depicting processes of "maximizing coherence by satisfying (or even: satisficing, after H. A. Simon? / HL) conflicting constraints". He proposes "that elements in coherence systems have, in addition to acceptability, an emotional valence which can be positive or negative" indicating "likability, desirability, or positive or negative attitude" "related to each other by positive and negative value constraints". "The calculated valence of an element is like the expected utility of an action" (also in planning) "with degrees of acceptability analogous to probabilities and valences analogous to utilities" "implemented in a computational model called 'HOTCO' for 'hot coherence' in which units (artificial neurons) have valences as well as activations. Positive emotional connections are implemented by mutually exitatory links between units" – and negative by "inhibitory" ones to be calculated for a sum-upon the individual as well as the social level. "Hence, emotional cognition requires attention to social processes as well as individual, psychological ones". Here, we have a wonderful example for a fruitful mutual interdisciplinary cooperation, even intersection, between psychological, group-sociologic and cognitive science and complex systems-theoretical models leading to fruitful new perspectives and to concrete results for extant practical planning processes.

2. Rehabilitation of practical philosophy due to the planning discussion

As we saw in the first part of this paper regarding the practice of systemic planning it is hardly possible to separate purely descriptive ('exploratory') forecasting from normative forecasting. Normative preliminary decisions

about goals and guiding values to be taken into account, about strategic estimates of means and alternatives under limited resources, about social norm orientations, practicality considerations and feasibility conditions would usually limit the development of alternatives to forecast possibilities.

1) *In practice*, complex socio-technical-economic forecasting passes over into value- and goal-oriented planning, into normative strategic decisions (conditioned by possible partial goals or opposing actions and alternatives). Complex and long-range forecasts are practically applicable only in dependence on "estimations of future goals, needs, desires, orders, etc." and on the retrospective limitation of present strategies and scopes of action by these normative guiding concepts (Jantsch 1969). The separation between merely descriptive prognosis/prediction and 'normative' determination/specification (planning, decision, strategy) is often only analytically possible, - especially for highly complex socially integrated systems.

2) The normative presuppositions of planning designs and the normative elements in decisions have thus far not sufficiently been taken into account. Yet, they cannot be taken as a basis for all planning strategies in an un-analyzed way, if one does not want to limit oneself conservatively to action alternatives and plans as well as whole future systems only as expansions of present ones (Ozbekhan 1969). Ozbekhan expressly distinguished his system-oriented 'human-action' model of planning from the orthodox 'mechanistic' (or purely 'technocratic') planning. He favored the normative priority setting (deciding, selecting, prescribing, evaluating) and the always new - considerations of values, goals, purposes, norms as being indispensable. While in the 'mechanistic' model the very goals and values are given from outside, the problems are defined beforehand and the planning consists merely in system-internal *re*-organization under external control, in the new 'human-action' model the goals are determined *within* the planning process itself on the basis of selected values and guiding norms: the latter ones are changed according to the system development - partly adaptively, partly normatively. Rigid goal-orientation in planning design and plan execution is thus (to be) replaced by flexible goal-planning and by constant management of goal conflicts including retro-active influences of permanent control on goal formulation (goal changing or dynamic goal planning). The "rolling" or ever-changing planning

strategies should try to include goal-changing feedbacks and even changes in values - especially when it comes to long-term planning of complex socio-economic-regional systems and eco-systems.

3. The normative, value-oriented, policy-criticizing treatment of planning has so far been too long deferred to in traditional analyses - both at the stage of design and at that of application. However, what Ozbekhan and Jantsch (1969) somewhat imprecisely call 'normative planning' or the 'normative level of planning functions' - in contrast to merely 'strategic' (working out alternatives) and 'operational' (merely instrumentally oriented) planning - urgently needs further rational analysis.

4. In the same purview or measure as the speed, the range, the interdisciplinarity, the systemic interweaving of planning processes and also the number of competing planning bodies (the planning of organizational units) grow in the pluralistic society, the superordinate integration of the planning goals in goal hierarchies (goal systems) becomes more and more indispensable. The necessary superordinate aspects of unification were often neglected because each planning analysis thus far had to follow its own 'method' for data collection and evaluation.

5. There is a lack not only of systematic surveys and uniform planning techniques, but above all of evaluation methods, that could be equally applied to the planning in different disciplines. The comparability and compatibility of the evaluations in broader systemic planning projects can only be ensured from a superordinate point of view, i. e., also with the participation of methodological and philosophical generalists and philosophers of science (see also below). The basic methodological analysis of the normative decisions and the reconstruction of the evaluation criteria for them can usually not be done by the individual scientific researcher or the planning specialist alone.

6. The repeated call for help by planners for scientific partners is more comprehensively also to be interpreted as an appeal to philosophers of science and methodological analysts to undertake a *general basic methodological analysis of planning*. Also, the clearly voiced call of planners and planning scientists for uniform methods, even for a "general theory of planning", was already to be interpreted as an appeal to the epistemological partner to analyze the logical structures, the prognostic reliability, and the nomological hypotheses or

quasi-hypotheses as the most important foundations of planning procedures (see above).

7. Even more essential for interdisciplinary comparability and integration of planning concepts and processes is, of course, the methodological construction of sufficiently generally applicable evaluation methods and criteria that guarantee intersubjective control and interdisciplinary comparability. Research here has barely progressed beyond very preliminary approaches. In particular, there is a wide gap between very general and highly theoretical decision research (e. g., the game-theoretically oriented normative decision theory) on the one hand, and the practical evaluation of individual projects on the other. In most cases, too few variables are sufficiently quantifiable in complex systems for assessing the utility functions required to be established in detail (for decisions involving safe or calculable risks). Almost always in practice, the probability distributions of the variables in question over the state-systems are not known either, so that decisions under certainty or calculated risk cannot be estimated in a differentiated way. How should it be possible, for example, to quantitatively assess social damage of a psychological nature (noise, pollution, etc.)? Indeed, the variability of strategies and their dependence on optimality criteria to be constructed or even in the first place to be selected from a theoretically infinite number have been generally worked out by mathematical game theory and decision theory. Practical applicability however lags behind – due to lack of data and quantifiability in practice.

8. Scientific theories do not replace decisions about optimality criteria - and for such decisions any elaborated norm-theoretical basis is still missing. The technological specialist is overburdened with such normative decisions in meta-theory. The game theorist, in turn, according to his far-reaching presuppositions, can hardly meet the requirements of practice and detail. There seems to be a dilemma between the details of the problems and the intersubjective applicability of theoretically based evaluation criteria: The more detailed and singular the complex planning problem, the less objective criteria and statistical decision principles or even unique solution procedures of linear optimization seem to be applicable. One has to rely on "rule of thumb"

heuristic procedures, which do not offer solution guarantees and which have not yet been sufficiently investigated.

9. The generalization of planning projects and its adaptation to complex systems, in which sub-planning and an assorting of many different disciplines is coordinated and integrated, requires the logical and systematic coordination of objectives under more general value sets. This has in recent years also become apparent to practitioners among social partners and technologists. People are beginning to turn away from traditional mechanistic-'technocratic' planning with rigid goal systems. Even the network planning techniques operate to some extent with only grossly functionally circumscribed intermediate goals that can be varied within limits or which are rather flexible (e. g. in the U.S. Apollo programs).

10. Ozbekhan (1969) reproached conventional analytical philosophy for having reduced itself to self-trivialization (especially in neo-positivism) and for having unduly neglected the problems of setting goals, values and norms. Philosophy, on the other hand, would again have to responsibly take over the task to work out "new world concepts". It would have to "derive value judgments from long-term goal projections" and thereby to evaluate alternative future situations in scenarios according to the ideas of the good, true, beautiful, etc. (which are certainly present in time- dependent, historical, culturally determined characteristics and environments). The technologists would have done their work, now it should be the turn of philosophy (Feinberg 1968).

11. "We need new values, new norms" was repeatedly demanded by planners and technologists in many and often repeated discussions. In correspondingly simple formulations, the philosopher was expected to provide the "new recipes". Quite naively, it was assumed that new conceptual concepts of the mentioned kind were the main deficiency of today's planning difficulties and the disorientation of large-scale systems. A traditional residue of conceptual fetishism characterized the discussion: as if new concepts per se already solved social problems. It was too little recognized that the main difficulty is not so much the new conceptual formulation of guiding ideas and the design of humane social plans, but rather the *social enforcement of such plans, plan implementation and institutionalization* - especially in liberal pluralistic industrial societies without coercive central power. Also, new concepts can do little to

solve problems without the corresponding theoretical conception (which gives meaning to the concepts in the first place). The accusation, however, that philosophy has made too little effort to analyze the normative components of planning and decision-making processes is quite justified. Technologists, social projectors and planners feel somewhat "left alone" by philosophers.

12. In fact, from the expectation of planners, as far as they have gone beyond orthodox planning, there is reason enough for an indispensable *rehabilitation of practical philosophy – both practice-oriented and moral*. Until now, planners and technologists like Ozbekhan were forced to base their planning concepts on "home-made" moral-philosophical discussions, so to speak, without the assistance of philosophers. This led to such meager statements as that "love" is the basic norm for judging "social intercourse" in terms of its "goodness," that the "governing value" of science, "truth," is formed in the norm of "objectivity," and that "the norm underlying technology ... is utility." Ozbekhan believed that Western humanity decides and acts mainly according to values based on these "three general and traditional norms: *Love* as a social bond, *objectivity*, and *utility*."

In the course of the development of an earth-spanning "ecosystem" (ecosystem), to which - comprehensive planning will be oriented more and more, new norms are to be proposed and established: The conventional biblical-Christian tribal morality of "love thy neighbor," which has led to the nation-state, must be overcome in the course of the "planetization of man" (Teilhard de Chardin) or rather "related to the planet as a whole." There is no partial solution for the "Spaceship Earth" (Ozbekhan after Ward). "As a new and fundamental norm" for the eco-system, Ozbekhan would like to focus on and see a future "planetary ecological balance" on our planet Earth: Under this norm belong, for example, the creation and maintenance of hygienic external environmental and living conditions. (The basic value for him would be that of a humane survival of humankind.) Since Ozbekhan's time at least the whole world debate on *sustainability* came up since the Brundtland-Report as of 1987 and is still very much booming. In a sense, the *ecological* sustainability debate did almost take over or usurp the discussions of worldwide and regional macro-planning about renewable energies and managing

the climate crisis. (I cannot deal here with that, see Lenk 2018, chapter 19, and Lenk & Maring 2010.)

Back to the methodological context, the philosophy of the normative will be able and obliged to contribute to the differentiated basic discussion of planning and social decision-making processes in at least three different roles:

1. *Basic methodological analysis*. The basic methodology of assessments is to be developed analytically, precise criteria are to be constructed or made explicit, especially for the compatibility and comparability of assessments in different object areas and disciplines, for the recognition and avoidance of conflicting goals, etc.

2. *Value and norm theory*. An analytical theory of value concepts, objectives and norms would have to be developed and connected to a theory of intended actions. This could only be done in close cooperation of philosophers together with behavioral and social scientists as well as cultural anthropologists.

3. *Draft contents of future normative guiding concepts*. In connection with certain social-scientific trend extrapolations and functional considerations for securing system conditions necessary for human survival and nature, future social guiding values and norms are partly to be proposed, partly to be predicted and differentiated: For instance, it can be reasonably assumed (predicted and/or suggested) that, in view of all the problems of avalanche-like growing populations, different evaluations of reproductive behavior and anticonception will (must, should) spread.

4. Likewise it can be said that ecological norms (as for example the preservation of ecological equilibrium on the planet earth, environmental cleanliness, sustainability, avoidance of 'smog' and radioactivity contamination, water hygiene, a turn to renewable energies for humankind etc.) will (must, should) indeed be valued higher in the future than up to now. It is a new fundamental set of values and many related norms for future planning processes.

5. The moral philosophical speculation could thereby proceed in two stages of different realizability claims:

a) in the way of cautious variations and differentiations of experientially predictable or estimable social trends with regard to normative attitudes - taking into account probable realizability and relatively surprise-free projection;

b) in the formulation of bolder (sometimes so-called 'utopian') pointed contrast drafts to present leading norms for influencing social images of leading values, which could be achieved, for instance, by a consciously intended 'self-fulfilling prophecy'. [This could possibly be - initiated in concrete pictorial (television) packaging by 'fiction' publications].

c) The turn of the young (first of all the intellectual) generation to "sensual" (rather hedonistic) attitudes, predicted by futurologists in trend extrapolations and surprise-free scenarios, has been socially spread and 'generated' by socially critical publications and the utopia of the hippie life.

d) But that seems to be almost overcome by now on the side of very ambitious activists who demonstrate for the Paris Congress goal (as of 2015) to reach the 1,5 centigrade for a margin of still allowable mean earth warming. (The last World Climate Congress of UNESCO unfortunately did not dare to concretize the necessary measures to be taken therefore.)

6. In general, a philosophy of normative designs must not disregard the image-forming and socially guiding role of utopian ideas in shaping sociosystems, even if knowledge of social psychology, behavioral science, cultural anthropology, sociology of institutions, and depth psychology is still far from sufficient for a more precise analysis of the influence of guiding norms, values, and goals on current behavior and the design of institutions. Interdisciplinary image research is still in its infancy.

Just as in this and in the theoretical analysis of action, philosophers and behavioral scientists - (in the broadest sense: including the sciences mentioned in the previous paragraph) should also cooperate critically discussing, confronting, and correcting each other in the analysis and drafts of normative orientations. It's high time not only for developing the respective ideas, but - above all – to come down to internationally effective actions! The time of pure armchair moral philosophies and absolute overall ethical drafts completely isolated from any real scientific knowledge is over (see Lenk & Maring 2003 and Lenk 2009, as well Lenk 2007, 2009, 2018, 2019, 2022). At least for

the correction and - examination of the normative and moral philosophical drafts the results and problem analyses of all relevant behavioral sciences have to be consulted.

Albert (1968), for instance, suggested to connect normative-philosophical drafts with the results of the real sciences by applying certain "bridging principles" and to check and control them by proven empirical-scientific results. One could even take Kant's categorical imperative: act as if your maxim of action "should become the *general law of nature*" (AA IV: 421), as such a "bridging principle". Which sentences about the behavior in particular can be classified as laws of nature, that depends in each case also on the state of development of the empirical sciences and not only on the logical-scientific analysis. - The further systematic elaboration and analysis of such bridging principles is an urgent task for future moral-philosophical and, in a broader sense, norm-logical investigations.

Such work is especially necessary for any planning methodology, since planning is characterized by a particularly intricate interdependence between normative and descriptive statements. Beyond the formulation of specific "bridging principles", the philosopher could and should consciously seek the connection between comparative results from behavioral science and the moral-philosophical construction of systems of norms and values. Thus, programmatically, a constructive meta-ethical discipline should be elaborated, that sifts, critically discusses, and systematically varies existing ethical models and designs new ethical (and metaethical) models.

As tasks of such an ethics one can also understand to design and make available not already a unified theory but many different *models for moral* systems and the forms of moral conversation. Such models for morals can be formed by deliberate modification of metaethical principles: for example, by variation of the so-called scope or "range rules" or, rather, meta-rules (Fotion 1963), as e.g.: "Moral rules should apply equally to all people." Or one can modify the basic moral values themselves in a culturally appropriate way, or finally even some rules of normative argumentation and discussion. (As far as possible, one may vary systematically. But this is not sufficient, because some rules stand logically unconnected next to each other. The total set of models remains open.)

This collective discipline of ethical and meta-ethical models & designs definitely also takes into account the effort for rational-critical justification as a characteristic of many meta-ethical partial models. By the variety of the provided possibilities of comparison only it supplies a necessary condition for the successful fulfillment of the demand for rationality, if one has once decided for the occidental ideal of rationality - and here, to my mind, we scarcely have another alternative left today. Thus, this very "meta-ethics" is also appropriate to the conception of the regulative and critical function of ethical models. It prepares and facilitates the critical decision by orientation and construction of standards. It ensures that this decision can be critical in the first place.

The traditional disconnect between cultural anthropological descriptive ethics and philosophical normative ethics is proving increasingly fruitless. Results from depth psychology and working hypotheses from behavioral research are of similar relevance to ethics as those from cultural anthropology.

The most interesting questions indeed arise precisely at interfaces between philosophy, linguistics and social sciences. Empirical description is just as insufficient to answer them as the demonstration of logical possibilities or the construction of standards of correctness alone. Theoretical explanation, model construction, logical testing, empirical investigation and description must work together.

Only through such a multifaceted collaboration of many sciences can "ethical theorizing be - brought back from self-isolation and be seen as the delicate boundary probing whereby philosophers seek to refine and reconstruct the moral structure of their culture" (Ede1 1963).

However, the philosophical discussion of both – "bridging principles" and metaethics as a collective discipline for constructing adequate models of norms – are still in their infancy.

When will philosophy, on a broad scale, resume its task of helping to shape the future: namely, to design critically, controlled by reason, models of norms that will be acceptable in the future? The call for the philosophers of such normative designs can no longer be ignored. Who can and will withstand the realistic criticism of the planners and fulfill the hopes for control and decision criteria that at the same time are socially practicable? Initial

attempts at cooperation between behavioral scientists and philosophers in the analysis of norms and values have already in the sixties resulted in publications (e.g., Baier & Rescher 1969, Rescher 1969).

As regards the problems of in-depth planning analysis, unfortunately, there has to my knowledge not yet been much institutionalized cooperation between planning theorists, practitioners, and philosophers of the normative - hardly even the participation of some social scientists. In particular, the analytically trained philosophers and philosophers of science have not yet addressed planning problems very much, as we saw in the first part of this paper. It was also discussed there how dangerous the non-integrated "laissez-faire" of methodological naivety is in view of the rapidly growing systemic interconnectedness of ever more complex planning systems, how much humane living conditions might depend on the successive further development of methods that are still relatively uncertain today. Neither total optimal solutions nor abstinence from methodological analyses and from approaches to their improvement - be it ever so much in the name of "purity" or "exactness" of science - can be viable points of orientation for the methodologist of such complex cross-disciplinary problems. Philosophers of science and basic methodologists should address the increasingly intensifying challenges of such complex planning problems in detailed collaboration with planners, planning theorists, and relevant professional scientists: Not to exploit existing opportunities for improvement would be to my mind irresponsible.

Just as for the improvement of planning techniques and methods the participation of philosophy of science in the construction and discussion of reliability and evaluation criteria is indispensable, so analytical philosophers of the normative should devote themselves to the study of objectives, guiding values and social norms in connection with planning problems. Deficiencies in previous knowledge and obvious difficulties should not deter philosophers here either, but should stimulate them to cooperate, first critically orienting themselves somewhat "pragmatically" to special and typically "practical" problems, particular hierarchies of goals and detailed evaluation norms, and - then generalizing in an attempt to arrive at a rather down-to-earth philosophical theory of norms, values and goals.

Although in the basic methodology of normative decision-making, and especially in the theory of values and norms, no generally accepted, unified, and consistent theory exists today (except perhaps Rescher's book as already of 1969), methodological-philosophical considerations and analyses of normative generalists placed in broader contexts can contribute critical corrective measures and, in cooperative interplay, may under certain circumstances exercise effective control in the general interest.

Universalists such as philosophers of normative problems and designs, moral philosophers and value theorists, sociologists of culture and institutions, human scientists, behavioral scientists, and social psychologists should therefore be on the team of planners and institutionally involved in planning preparations and decisions.

Even if the theoretical preconditions are not yet sufficient for an extensive normative or moral philosophical analysis and/or grounding of planning decisions, such a realized collaboration can be a fruitful "*practical*" rehabilitation of the efforts of *practical philosophers*. One could speak less precisely of an initial *institutional* rehabilitation of practical philosophy (see e.g. Riedel 1972). The scientific rehabilitation of practical *philosophy* itself, correctly called like this, could then be achieved step by step out of such a cooperation, or at least be cooperatively stimulated, in that the participating philosophers, starting from really "practical" individual problems, take into account more general value points and norm analyses as well as methodological problems of evaluation and then work on them in a theoretical-general way.

The critical *censor function* of the philosopher in the institutional-"practical" cooperation could and should, at least according to the intention, then be supplemented by a *guiding function* - and this in the multiple way mentioned (see above): both

a) methodological-scientific theory as well as

b) content-developing (moral-philosophical in the broadest sense).

Feinberg (1968) wanted to limit the role of the philosopher to an analytical "philosophy of goal setting," to the attempt of a "general classification of goals," and to the "critical analysis" of the goals set "democratically" in his

"Prometheus Project."[1] It seems to me, however, that Feinberg underestimates the role philosophers could play in formulating the content of moral blueprints for the future. Certainly, philosophers cannot prescribe values and norms, but they can go beyond explicating existing, often insufficiently articulated value orientations and goals to formulate and propose variations with the aim of reprogramming action-controlling images. Feinberg seems to me to be all too optimistic in (over)estimating people's articulation ability, imagination, resourcefulness, and judgmental competence and willingness. Without formulated guiding concepts (which in part must also be called approximately "utopian"), a democratic overall survey would probably result only in an unimaginative "morality" limited by individualistic-egocentric points of view on the lowest common denominator(s), but hardly in an impressive integrated system of universal human goals that could serve as an overall orientation. The role of the moral philosopher is also not to be reduced to the (undoubtedly necessary) function of the cautious, merely analyzing critic. We have well to take into account that the philosopher qua philosopher cannot make binding prescriptions, but should only draft and elaborate *proposals* - in the sense of successively stimulating and refining existing value orientations and of contrasting them with other kinds of guiding concepts (be they already valid in another culture or only constructed by conscious modifications).

Contrary to the opinion of many meta-ethicists of the linguistic-analytical Oxford school, in my opinion the philosopher should and could be a *moral reformer* after all - in the mentioned sense of stimulating and refining alternative creation: not a moral dictator, not a preceptor, not a prescriber or moral judge, but a differentiating "proponent" who presents reasoned proposals and puts them up for discussion.

The analytical censor function and the achieved specification of methodological-scientific thinking must of course not be abandoned - especially

1 The substantive goal-setting and the consensus itself should be brought about by a world-wide goal-setting debate and vote ("Prometheus Project") with the participation of every interested party. In this way, the long-term general goals and guiding values of mankind are to be obtained. (The practical difficulties of having a politically independent "agency" to carry out the worldwide survey and democratic determination enterprise cannot be discussed here.)

in view of the still unsolved problems of how normative and explanatory-descriptive components interact in moral and norm philosophical contexts. These problems must be urgently addressed in cooperation with all the individual sciences concerned.

Beyond the analytical tasks, however, the philosopher should not forget (with too much caution and timidity) the task of constructive creative design. Not in idealistically isolated and complacent sole production, without consideration of social realities and real sciences, but cooperatively in the concert of disciplines, (s)he should again become a little bolder, construct designs and put them up for criticism. Not the least because social planners, decision makers, technologists expect this from her/him (even if partly too naively), an appeal seems necessary for the "practical" rehabilitation of practical philosophy and the analytical basic methodology of normative orientations and settings.

On the other hand, planning could become a proving ground for the basic-methodological analysis of partly descriptive, partly normative propositional systems because of the rather good transparency of the goal complexes and hierarchies. The philosophical and methodological re-appraisal of planning problems could therefore also serve the further development of axiology and practical philosophy itself. We urgently need problem-orientation and practicality, specification requirements and possibilities, cooperation with the sciences of behavior and action, and the incentive to establish and develop an analytical theory of norms, values, and goals. All that would promote practical philosophy just as much as the request to the philosopher to constructively design partially new systems of values and norms. And it would make use of his creative speculation again more daringly and yet not out of touch with social reality.

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WOLFGANG LUDWIG SCHNEIDER

Planning- and Control Optimism as Triggers for the Evolution of Unplanned Structures. The Example of Central Economic Planning in the GDR

Abstract

Highly generalized ideas of planning and control become effective as "practical heuristics", which orient the search for sources of interference that affect the fulfillment of plan specifications and define the selection range of countermeasures that seem promising. If the selected countermeasures do not produce the desired result, new attempts at correction are triggered, the selection range of which is in turn limited by the orienting control heuristics, etc. Based on these premises, my paper concerns the following two questions: (1) What social processes of disappointment processing and learning are triggered in a planning system by discrepancy experiences, and in what ways are these processes oriented by a particular control heuristic? (2) What structures emerge as a result of the processes of disappointment processing guided in this way? – I will address these two questions using the case study of central economic planning in the defunct GDR (German Democratic Republic) and the optimistic control heuristics on which this planning was based.

The present text follows on from a project within the Hessian state research focus "Institutional Change and Everyday Experience in the New Federal States", which I conducted together with Bernhard Giesen. It is a translation of: Schneider, W. L. "Planungs- und Steuerungsoptimismus als Auslöser für die Evolution ungeplanter Strukturen. Das Beispiel der zentralwirtschaftlichen Planung in der DDR", first published in: Junge, K./Suber, D./Gerber, G. (Eds.): Erleben, Erleiden, Erfahren. Die Konstitution sozialen Sinns jenseits instrumenteller Vernunft. Bielefeld: tanscript (2008): pp. 483-504; open access: https://doi.org/10.14361/9783839408292-022 . The translation was carried out with the help of DeepL (www.deepl.com).

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I.

Every action presupposes certain forms of experiencing the world as a subjective condition of its possibility. The premises assumed therein about the state of the world and the possibilities to change it by action-shaped intervention do not only orient our actions directly. They also regulate the way in which possible failures are experienced and what conclusions are derived from them, i.e. in what way learning from failures is done or not done. Even though they function as premises of instrumental action, these presuppositions are themselves non-instrumental in nature. Rather, they define constitutive assumptions of certain instrumental actions that are not readily abandoned and exchanged for more world-compatible assumptions even in the face of obvious failures, but are often immunized against doubts and attempts at correction.

This also applies to the planning of actions. In this context, planning is not only to be regarded as a phase of preparation for action, but as a type of action of its own, which is to be clearly distinguished from the actions that are carried out in order to realize previously designed plans. The implementation of plans usually does not proceed according to plan, and the results achieved often only incompletely coincide with the planned results. This circumstance allows conclusions to be drawn about what planning means for a planning system: Through planning, a system establishes its own expectations, which it uses as an instrument of information acquisition, i.e., fixes them provisionally as premises of its further experience and action. Thus it risks to have to process disappointments of expectations to a higher degree. It does this in the hope that it will have sufficiently effective means of intervention at its disposal to be able to transform short-term disappointments into experiences of success in the longer term.[1] Until this happens, however, the system must come to terms with the discrepancy experiences it has generated itself, it must try to isolate the causes and identify those responsible

1 These disappointments can, of course, also be of a pleasant nature, namely when the planned targets are exceeded. However, this typically leads to a rapid correction of expectations, with the result that future targets become more ambitious and the likelihood of their being undershot increases.

for influencing the system in such a way that the goals it has failed to achieve for the time being can ultimately be achieved.

Highly generalized ideas of planning and control become effective as "practical heuristics",[2] which orient the search for sources of interference and define the selection range of countermeasures that seem promising. If the selected countermeasures do not produce the desired result, new attempts at correction are triggered, the selection range of which is in turn limited by the orienting control heuristics, etc. In the recursive interaction of planning, disappointment about the failure of planned goals and attempts of error correction, which follow a certain control heuristic, unplanned structures can develop, which are far more momentous than the planned successes possibly achieved. Accordingly, planning and unplanned evolution are not to be played off against each other as contrary poles of a distinction. Instead, planning is to be understood as an essential motor for the unplanned evolution of structures.[3] This general thesis can be translated into the following questions to be answered empirically:

(1) What social processes of disappointment processing and learning are triggered in a planning system by discrepancy experiences, and in what ways are these processes oriented by a particular control heuristic?

(2) What structures emerge as a result of the processes of disappointment processing guided in this way?

In the following, I would like to explore these two questions using the case study of central economic planning in the defunct GDR and the optimistic control heuristics on which this planning was based.

II.

Optimistic control heuristics, this formulation requires concretization. First of all, it can be stated that already the attempt of central planning of the

2 On the concept of "practical heuristics," which I take up here, see Giesen (1982).

3 This thesis emphasizes the well-known figure of non-intended consequences of intentional action with regard to planning and control processes.

economy must assume the *basic calculability and plannability* of the essential economic variables. This - in itself trivial - statement has to be specified with regard to the basic premises that determined the economic planning of the GDR (German Democratic Republic, East Germany, 1949-1990). If we restrict ourselves to the period between 1971 and 1989, i.e. to the Honecker era, and ask in the brevity offered here for the central background assumptions that are significant for this period, then one premise in particular stands out. In interviews conducted with former leading functionaries of the GDR state apparatus after the collapse of the GDR, the postulate of the 'unity of economic and social policy' (formally adopted at the VIII Party Congress of the SED (Socialist Unity Party of Germany) in 1971)), which can be regarded as Honecker's government program, as it were, with which he gained distance from the Ulbricht era, is repeatedly emphasized.4 This decision was connected with the projecting of a welfare policy, the financing of which would have required an average economic growth of at least 4 % per year. Objections to this from the Planning Commission were "wiped away" (Pirker et al. 1995: 73). The task of economic planning was supposed to be to meet the sociopolitical targets. That this would be possible was simply assumed - especially by Honecker - and the submission of corresponding plans was demanded by the top management of the Plan Commission. This optimism was essentially based on expected increases in productivity, which were to be achieved through a boost in motivation among workers, which was hoped to be a consequence of the new social policy. Control optimism as a premise of economic planning was thus enforced by the political leadership against explicitly expressed reservations of high-ranking and knowledgeable functionaries.

Two conditions were of particular importance in immunizing this premise against data and objections: First, the competitive situation with the Federal Republic (West Germany); second, the traumatic experience of June 17,

4 See, among others, the interview with Gerhard Schürer, the longtime chairman of the State Planning Commission, and Siegfried Wenzel, his deputy (Pirker et al. 1995: 73f). Also the interview with Helmut Koziolek, director of the Central Institute for Socialist Economic Management at the Central Committee of the SED (Pirker et al. 1995: 269).

1953 (popular uprising in the GDR, bloodily put down), which made it clear that an impairment of living standards could easily lead to political destabilization.5 This sketch should suffice for our purposes. As brief and incomplete as it is, it at least makes one thing clear: Control optimism in the form that was characteristic of the political leadership of the GDR in the Honecker era is not to be understood primarily as a psychologically anchored conviction, but rather as a decision premise that was enforced in communication under certain conditions as well as on the basis of power. This decision premise had the status of a normative basis for action that was binding even for those who were personally distanced from it.6 What measures could be based on this premise, and what patterns of communication or action were (co-)generated by it? In order to answer these questions, I will begin with a brief outline of the organizational-structural adjustment attempts with which the

5 Various demands to restrict the high subsidies for basic foodstuffs and rents in order to relieve the state budget, avoid waste (such as feeding bread to pigs) and make funds available to finance other social policy measures would have led to price increases and could be rejected as too risky against this historical background of experience. This was possible mainly because hard restrictions were lacking. Growth shortfalls, which led to gaps in coverage and could be read as an indicator that the social policy programs could not be financed to the extent that they had been launched, did not set a limit here because they could initially be compensated for by borrowing in the West.

6 Cf. the following statement by Claus Krömke, personal assistant to Günter Mittag, head of the Secretariat for Economic Affairs of the Central Committee: "Honecker formulated this - it did not come from us: 'The economy is not an end in itself, but a means to an end'. This means to an end has been taken very literally. The economy has been treated instrumentally, as a simple tool. You just have to turn certain levers, and then that's what will happen. This is an impossibility in terms of the functioning of the social mechanism, but this is how it has been handled politically. They said to us, you are responsible for the economy - why is there not this, not that, not that? This was the general attitude. Since the unification of economic and social policy, the party was no longer willing to support performance-enhancing measures by imposing restrictions but was focused on, it has been said so and so, and it must always go forward; if it doesn't go forward, it's the economy's fault. I'm simplifying this very crudely, but that was the atmosphere, and it has become increasingly so" (Pirker et al. 1995: 49).

GDR administration tried to solve the control problems in the area of production in the 1970s.

III.

From an administrative point of view, central planning is easiest to carry out when the planning ministries are dealing with a relatively small number of production units, which in turn are strictly centralized internally. At the end of the 1970s, the GDR economy was restructured along these lines with the formation of the large combines (Kombinate).[7] To this end, several 'People's Owned Enterprises' (VEB) were each brought together under the umbrella of a combine management. This management consisted of a directorate, which was led by a general director according to the 'principle of individual management'. The general directors were appointed by the Secretariat for Economic Affairs of the Central Committee (ZK) of the SED (which was under the direction of Günter Mittag) and appointed to this office by decree of the superior industry or sector minister (cf. Gutmann/Buck 1996: 39, Pirker et al. 1995: 56). Plant management→ Combine management→ Ministry→ Plan Commission→ ZK-Secretariat for Economic Affairs.[8] This hierarchical structure greatly simplified administrative and communication procedures in the preparation and control of plans. At the same time, it was intended to enable more effective use of productive forces. Goods production was thus centralized in about 150 combines, which were subordinate to 11 industry ministries (Pirker et al. 1995: 45).[9] In effect, this created

7 The corresponding ordinance on the 'People's Owned Combines' was passed in 1979. Cf. Gutmann/Buck (1996: 38).

8 Cf. the interview with Claus Krömke with the statement: "Then Mittag was the one who now had the task of translating this political specification into performance to a certain extent, and then the whole process ran: Schürer (chairman of the State Planning Commission; W.L.S.) - ministers - general directors - plant directors. This had to be implemented downwards in the process of plan elaboration" (Pirker et al. 1995: 45).

9 The number of combines given varies somewhat, depending on the source. For Günter Mittag's justification of the formation of the combines, see Gutmann/Buck (1996: 40, 44).

monopolistic producers, alongside which there were no other suppliers with whom their performance could have been compared and whose ambition was to reduce dependence on external suppliers as much as possible by internalizing the relevant areas of production. These self-sufficiency efforts were a logical reaction to the ubiquitous supply bottlenecks of the planned economy. However, the overall consequences of these efforts were counterproductive. They led to a growing production depth in the combines: mechanical engineering companies tried to produce their own screws; the Cosmetic Combine Berlin produced its own plastic bottles, aluminum tubes, caps, labels and cardboard packaging. As a result, production in small batches was extremely uneconomical. Even outdated parts of the plant with low productivity were kept going as long as possible so as not to become dependent on unreliable supplies. All in all, the autarky efforts of the combines led to a decline in the overall division of labor and a corresponding drop in productivity.

With the transfer of all independent, private and semi-public industrial enterprises to state ownership in 1972 and the establishment of the combines structure, which was completed in the early 1980s, the degree of centralization of the GDR economy was significantly increased. In 1971, there were still 11,253 enterprises with various forms of ownership. By the end of 1981, this number had fallen by more than 60 %, to 4,332 state-owned enterprises.[10] The increase in the degree of concentration of industry, together with the elimination of private and semi-public enterprises, was essentially aimed at increasing the degree of planning of the economy and thus the overall economic effectiveness of production. As a result, however, important elasticities of adjustment were eliminated, which had previously made it possible to cushion unforeseen disturbances in the structure of the planned economy. The autarky efforts of the combines then drove the development toward ever greater concentration of the economy. On the one hand, they can be understood as a logical reaction to disruptions in the area of required supplies. At the same time, however, they contributed in a circular reaction to a further reduction in the adjustment elasticity of the system as a whole and

10 For these figures, see the Statistical Yearbook of the GDR 1972, p.118 and 1982, p.128 - reproduced here after Gutmann/Buck (1996: 38f).

thus to an increase in the economy's susceptibility to disruptions, which in turn strengthened the autarky efforts.

The planning administration reacted to this and to other undesirable side effects of central planning by refining the control and steering instruments: The key figures to be billed became more detailed; their number grew - and the more difficult it became to fulfill the plans. Or in the words of Christa Bertag, former general director of the Cosmetics Combine Berlin:

> "The requirements and what we had at our disposal diverged more and more, i.e. the coverage of the the actual task at hand by the material hedging became shorter and shorter. It was significant - and this was actually what struck me most - that the more difficult the situation became, the more this plan accounting system was complicated. More and more factors were introduced that had no significance at all for the actual economic work. [...] We had about 500 plan figures that had to be accounted for daily, monthly, quarterly and annually anyway" (Pirker et al. 1995: 254).

The ever-shorter cover between the task and the material hedging, i.e., between the plan requirements and the funds made available for them, had a major cause in the largely earnings-independent specification of social policy expenditures already mentioned above. The necessary average economic growth of at least 4 % per year could rarely be achieved. The resulting financing gaps were covered by foreign loans. The hoped-for productivity growth through the import of Western technology, which was supposed to enable repayment of the loans through exports to Western countries, failed to materialize.[11]

Attempts to resolve the discrepancies between economic performance and sociopolitical spending programs through credit-financed modernization of production facilities failed, leading the GDR into a debt crisis. The need to earn foreign currency despite relatively low productivity forced exports to the so-called non-socialist currency area at prices that often did not cover

11 From 1971 onward, the GDR's foreign debt grew rapidly and in 1980 already amounted to 35.83 billion Valuta Marks. Total public debt rose from about 12 billion marks in 1970 to 43 billion marks in 1980 and amounted to 123 billion marks in 1988. Cf. the Statistical Yearbook of the GDR 1989, p. 103 and p. 139, here quoted from Gutmann/Buck (1996: 15, 43) and the sources cited there.

costs and further exacerbated domestic shortages. The difficulties resulting from this and the disproportionately high expenditures for consumption were tried to be solved, among other things, by limiting expenditures for new and replacement investments. The result was obsolete machinery in constant need of repair, long downtimes and high personnel requirements for maintenance and repair.[12] Here, too, the development shows a continuous worsening of the difficulties.

IV.

Let us now change our perspective and ask how the discrepancies between the plan's targets and the production possibilities were dealt with at the level of the combines and factories. We have already mentioned one reaction pattern, namely increased efforts to achieve autonomy. Due to the narrow scope for autonomy at these organizational levels, the possibilities for dealing with such discrepancies by adapting the formal organizational structure were, of course, very limited. At the same time, the constraints outlined above made it increasingly difficult for the combines and factories to meet the requirements of the plan. In order to avoid sanctions, therefore, ways and means had to be found to fulfill the official requirements in an externally acceptable manner. Because the officially intended ways were not viable, this created an anomic situation with pressure to develop "innovative" strategies (in Robert K. Merton's sense). A whole range of informal practices was used to cope with this situation.

Shortages of materials or tools were overcome by building up unaccounted-for stocks and by procuring them through unofficial channels, i.e., mainly through informal barter agreements with other enterprises. Goods intended for trade according to the plan were withdrawn from trade and converted into non-purchasable goods, i.e., diverted into a parasitic shadow

12 "Already in 1980, about 55% of the plants and equipment were older than 10 years, 21% even older than 20 years. As late as 1990, quite a few plants were still operating machines from the forties and earlier. About 15 % of the production workers employed in industry spent their time repairing old and defective machines" (Krakat 1996: 147).

economy of an exchange in kind of commodity for commodity, in which involvement in a web of reciprocal favors was the basis of exchange transactions. In this way, bypassing the plan, a network of barter relationships with a black market character emerged on the basis of personal contacts between leaders of plants.[13]

Of central importance for the evaluation of the operating result was, above all, the indicator 'industrial production of goods' (Industrielle Warenproduktion, IWP). This and other indicators were expressed in prices. This gave rise to a whole range of possibilities for manipulation. Unrealistic production targets could be achieved by producing particularly high quantities in those areas of the company's own product range where this was most easily possible. For example, one textile combine produced large quantities of tracksuits instead of women's underwear, thus meeting its industrial production target. The already existing shortage in the supply of women's underwear was, of course, exacerbated by this.

Reducing product quality by using cheaper raw materials also made it easier to achieve the production target. Similarly, the possibility was used to pass off minor changes to a product as a significant improvement in order to then charge a higher price for the product unit. Although the indicator 'industrial production of goods' was known to be open to these and other possibilities of manipulation, it remained until the end of the GDR the central measure of success for evaluating the production results of the factories and the performance of the management personnel. The assumption suggests itself that the fixation on this parameter had the status of a compromise formation in which the control and monitoring interests of the central planning authorities coincided with the interest of the plants and the responsible persons in securing tactical maneuvering leeway.[14]

13 It is, of course, difficult to estimate the extent of these exchange relationships. Compared with other socialist states (especially the Soviet Union; see Berliner (1952: 358)), these exchange relationships in the GDR were probably rather 'underdeveloped'.

14 Cf. the following statement by Claus Krömke: "These figures on commodity production and growth have acquired the function of 'beacons', they were the actual yardsticks for the entire work, and not only in the politburo, when the plan was settled, how many percent plan fulfillment,

In order to achieve the plan specifications as far as possible, the leaders were dependent on the cooperation of their subordinates. They had only limited means of sanction at their disposal for this purpose. The position of employees, legally protected by the Labor Code, was very strong, and dismissal, even for serious offenses, was difficult. The possibilities for exercising incentives through regular wage supplements were narrowly limited. Due to machine downtimes and material deliveries that did not arrive on time, there were frequent forced interruptions of work during regular working hours, which could often only be compensated by overtime. This, however, required the willingness of subordinates to cooperate, which could be achieved above all through 'generosity' on the part of the superior; generosity in tolerating occasional absences from the workplace, in crediting overtime, some of which was not worked at all, and so on. Confronted with unrealistic expectations of success, for whose failure they were primarily held responsible, superiors were forced into the role of accomplices who made 'common cause' with their subordinates when it came to circumventing or only ostensibly fulfilling official requirements. Formal requirements and rules thus functioned as resources that supervisors could use to trade employees' willingness to cooperate for a willingness to manipulate these requirements.

Thus, at all levels of the economy, the consequential problems of central planning created pressure for deviant behavior. Informal practices, used

thereof the extent of criticism depended, but they were also decisive down in the districts and in the counties, and there it was even worse. Every district secretary, every county secretary felt responsible for ensuring that the plan in his area was fulfilled at 100 percent and even more. And then he started, because his political work was measured by this, to reduce his activity to this figure, because that is so beautifully simple, to measure performance by a compressed figure; unfortunately, people very often try to do that, and it has become the system with us. Then nonsensical measures were taken, so-called 'good assortments' were run, which could be nicely calculated, but which nobody needed. These were additional difficulties and obstacles that arose. But the political work was measured by the fulfillment of the number, and everyone was under this pressure, Mittag, the districts, the counties - that was inherent in the system. And no one wanted to come under attack. And then they started doing nonsensical things" (Pirker et al. 1995: 47f.).

collectively and across the various hierarchical levels, undermined the formal requirements with the intention of achieving the planned goals by inadmissible means or at least pretending that they had been achieved. The function of these practices was, on the one hand, compensatory: They provided the planned economy with urgently needed elasticities for balancing ubiquitous disturbances. On the other hand, they undermined the binding nature of the planned targets, falsified the balance sheets, and destroyed the reliability of the information provided by the enterprises to the ministries and used as a basis for future planning.

However, the tendency to manipulate the plan can be observed not only among the subordinate bodies, the combines and enterprises, but also among the planning and controlling bodies themselves. The reason for this lies in the tendency to overproduce the need for responsibility, which is inherent in central state planning and which, as will now be shown, had an effect at all levels of the hierarchy.

V.

If plannability is assumed and given planned goals are nevertheless not achieved, then the question of the reasons for this is pressed into a specific form. Attribution to external, uncontrollable circumstances cannot then be the end point of the explanation. Any ultimate attribution of failures to uncontrollable situational conditions would obviously cast doubt on the premise of plannability. Therefore, as long as central planning of the economy was not at issue, the possibility of (ultimate) attribution to factors in the factual dimension was severely limited. Built into the structure of the centrally planned economy was a preference for personal attribution of responsibility. This did not preclude the individual actor from referring to circumstances that were beyond his control. But this only shifted the problem of responsibility, because it immediately raised the question of which other actors were responsible for these circumstances.

The possibilities for solving the problem of attributing responsibility to individuals through externalization were therefore restricted and became less and less plausible as the GDR continued to exist: In the 1950s, it was still

possible to use the legacy of the old conditions and the lack of experience with the instrument of planning to explain planning failures and supply bottlenecks, supplemented by references to sabotage actions that allegedly emanated from remaining fascists and the incorrigible[15] as well as from West Germany or the United States. An example of this is the explanation for the crop failures in 1950, which were caused by a massive infestation of potato beetles. According to the official account, this was not a freak of nature but the result of American sabotage. The crop failures - so it was said - were due to "Ami beetles" dropped from airplanes (cf. Wandtner 2000).

The plausibility of external attributions must have diminished considerably over the years. On the level of GDR-internal attributions, there remained above all those who were not yet convinced, those infected by bourgeois thinking, those who had withdrawn from the leadership role of the party and the cause of socialism, whom it was necessary to convince and educate, as it were by way of an internal mission. So much for the possibilities of externalizing responsibility, the use of which relieved the party and state bureaucracy, the functionaries and the leadership personnel.

A typical feature of hierarchies is the tendency to delegate responsibility upwards. This was particularly true under the premises of centralized planning. Because the companies had little room for maneuver and were not free to determine the scope of production and the product range, to select suppliers and customers, to hire workers and to make investments, it was obvious to place the blame on those who provided these data.[16] Those who claim the power of command also have the possible means of power to remedy

15 In this context, see also corresponding attributions in the early plays from Heiner Müller's (1974) “Geschichten aus der Produktion”.

16 Cf. Hoß (1991: 186): "Since almost all material, personnel and financial funds were allocated to the combines and enterprises by the system of centralized planning and accounting, a pronounced 'demand thinking' developed in the economy, which can be reduced to the simple formula that if the state charges an enterprise with a production output, then it must also provide the production factors necessary for it". The number of approximately 250 binding state indicators for annual planning, "which often did not even correspond in purely arithmetical terms" (ibid., 184), already illustrates how little leeway the combines had to shape on their own responsibility and what inconsistencies could arise from this alone.

grievances, misplanning, sloppiness, etc.; this attribution can hardly be avoided if economic processes are regarded as reliably plannable and the corresponding organizations and agencies exist that are responsible for them.[17] However, the possibilities of officially enforcing such an allocation of responsibility from the bottom up have been extremely limited.

The power of the political-administrative apparatus includes the power to officially assign blame. Self-incrimination is rather unlikely in this context and is to be expected primarily as a side effect of internal conflicts in which blame is instrumentalized to lift certain position holders out of the saddle. However, this does not block the communication of deviating attributions of blame; rather, it is pushed back into informal contexts and to subordinate hierarchical levels. The concentration of decision-making power over plan specifications at the political top provokes the danger that plan decisions will be significantly influenced by political criteria and that economic considerations will recede into the background.[18] Disparities in the economy created by this cannot be compensated for through independently operating selection mechanisms such as markets or political elections. The elimination of unproductive firms or firms that do not meet demand by economic competition is blocked, as is the electoral voting out of political leaders. Far-reaching corrections of a course once taken are thus difficult to make. They require not only the leaders' personal ability to learn, but also the willingness to admit mistakes and thus risk weakening their own power position. The chances of internal opposition coming from within the government apparatus itself are also slim. Anyone who strongly disagrees calls the leadership into question.[19]

17 In companies operating under market economy conditions, the same tendency can be observed in the relationship between employees and management.

18 For an illustration, see Schabowski (1991: 121ff.).

19 Cf. the following account by Schabowski (1991: 118f.): "At the end of the 1970s or the beginning of the 1980s at the latest, when the disproportions in the national economy became more and more burdensome, it should have been put on the agenda in the politburo and in the government whether we had not placed too heavy a burden on the national economy with the programs for housing construction or microelectronics. Wasn't the unconditional primacy of new construction over reconstruction, the maintenance of old buildings worthy of preservation, especially in

He must reckon with opponents who believe they can derive greater or at least more reliable benefit from supporting the established leadership than from opposing it. He therefore does not have an easy time finding allies, quickly falls out of favor and loses his position. Under these conditions, course corrections follow two main patterns: the leadership retires through illness, old age, death or through a palace revolution.[20] A change in political guidelines is often attractive to the successor: It promises a way out of the accumulated problems, and thus makes it possible to positively set oneself apart and raise one's profile vis-à-vis one's predecessors and to acquire an independent basis of legitimacy.[21]

Apart from such exceptional cases, the recognition of attributions of responsibility to the top of the hierarchy was hardly possible. Anything else would have jeopardized the legitimacy of the political leadership. From the perspective of the top leadership, therefore, shifting the attribution of responsibility downward was the more attractive strategy[22], for whose

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medium-sized and small towns, to be corrected? No one raised the question of how to stop the decay of extensive residential areas in Leipzig. That would have cast doubt on our entire previous course and its inspirer, Honecker."

20 The latter is especially likely if it is feared that the established leadership's course will lead to a catastrophe that could affect the government apparatus as a whole and/or if aged or sick leaders already appear so weakened that no effective resistance can be feared from them.

21 Thus, Honecker's new policy at the beginning of his era, which ultimately proved to be ruinous, also initially contrasted with Ulbricht's line, if one may believe Schabowski's account when he states that "[...] the party, apart from die-hard Ulbricht supporters, was impressed, in part enthusiastic, by the general line that the new man at the head of the party had proclaimed. Honecker had opened up, if not the prospect of a new age, then at least of a GDR that, with a broad and deep system of social securities, would have something solid to offer in the face of the consumer pressure emanating from the Federal Republic and, moreover, could tangibly claim a higher social quality for itself" (Schabowski 1991: 121).

22 This, of course, is not a specific feature of real socialist states. As an illustration of this, cf. the explanation of the head psychiatrist of a prominent psychiatric sanatorium in London for the fact that since 1997 it has no longer been businessmen but public service employees who have provided the majority of patients, with reference to the Blair government's "blame

implementation the use of its own power and propaganda resources lent itself. The opposing tendencies to delegate responsibility within the hierarchy, combined with the extensive blocking of the possibility of attributing failures to uncontrollable external conditions (see above), tended to create a closed cycle of the circulation of personalized attributions of responsibility, which was constantly supplied with new control-induced disappointments of expectations that had to be explained and for which those responsible had to be found. The control-optimistic premise of the reliable plannability of a complete national economy, which here had taken the material form of organizational units endowed with the corresponding mandates and competencies, thus led - measured against the limited political-administrative control capacities - to an overproduction of the need for responsibility.

How was this problem coped? I.e., in what way was it possible, on the one hand, to reduce the production of responsibility demand to a manageable level and, on the other hand, to cover the remaining demand by attributing responsibility selectively? Several strategies can be demonstrated to solve this problem: (1) strategies of curbing the need for responsibility, and (2) strategies of delegating responsibility:

(1) Reduction of the need for responsibility was achieved through censorship of communication and concealment from above. For example, plan targets were tacitly adjusted downward during the course of the year and then, at the end of the year, "plan fulfillment" or even "overfulfillment" was publicly reported (cf. Schabowski 1991: 141f.). The discrepancies between target and actual values could thus be disguised. Thus, at least in the public presentation of the production results of the state-controlled economy, there was no need for responsible actors, which were to be blamed. Complementary to this, active concealment was practiced from below. Relevant options for this have already been mentioned above: manipulated reports from the factory management, accounting for overtime not worked by the brigades, even the invention of "Potemkin enemies of the state" and their successful "decomposition" by the Stasi (short for "Ministerium für Staatssicherheit" or ministry

culture," i.e., "this government's habit of constantly shifting responsibility to subordinate departments when it itself has once again failed" (Heimrich 2007: 3).

for state security, responsible for the GDR secret police), which was thus able to report the fulfillment of its "annual work plan"[23] , fall under this category.

(2) Where it did not seem possible or opportune to keep discrepancies between plan targets and fulfillment latent and thus also to hide the question of responsibility for such discrepancies, attributions of blame could hardly be avoided. Particularly striking here are reports of sharp personalized attributions of blame from the top down. This strategy can be found, for example, in the internal dealings of the planning administration and the Central Committee's Secretariat for Economic Affairs with general directors and plant managers. Reports from combine managers indicate that they were "read the riot act" by the responsible minister or Günter Mittag for failing to meet the plan targets. The seminars for the general managers of the combines held annually at the Leipzig Autumn Fair were increasingly given this function. Originally serving primarily to exchange experiences, these seminars were more and more used to "put pressure on more performance."[24] The former general director of the Cosmetic Combine Berlin, Christa Bertag, gives the following description:

> "The Mittag seminars in Leipzig were the incarnation of power for me. Mr. Mittag appeared there, no one really knew what he would say. Sometimes one had already heard from this or that ZK department, watch out, it's your

23 See below and Kleine-Brockhoff (1990).

24 This is the account given by Claus Krömke, Günter Mittag's personal advisor, in an interview (Pirker et al. 1995: 55). Cf. also the following statement by Günter Mittag (ibid., 27) on the Leipzig seminars: "At the beginning, the purpose of the Leipzig seminars was to impart knowledge through the exchange of experience. And later, when the economic levers of the economic system were overridden, this had an even greater significance. When it was a question of filling certain gaps in the fulfillment of the plan, this was done more in two parts, also as an exchange of experience, but also with the purpose of finding solutions among themselves by bringing them together. Groups from the planning commission were then also present to do these things materially-technically. In Leipzig many good examples were mentioned, that can be read, but some ministers and general directors had to be started giving the count - why? If the economic lever does not work, only the word can work. And administratively to dismiss ten men, there was no such thing".

> turn. There sat seasoned people, general directors, not so young greenhorns like me, like lambs, just waiting not to be called there. [...] And I experienced other things from Mr. Mittag that were humiliating to the point of no return. When we, as general directors, were called to the Central Committee for some kind of consultation, 15 general directors of the chemical industry stood there, herded together like lambs in a pen, some of them felt sick and left. That was impossible, terrible. That was actually the worst thing" (Pirker et al. 1995: 248).

The quotation makes clear how intractable factual planning problems were shifted to the interaction between the central figure of the political administration and the general directors and acted out in sharply personalized form. Other sources confirm this assumption:

> "Criticism easily turned into humiliation: especially the directors of PC ('People's Chemistry'; code name of a plant studied; W.L.S.) stated that they were often dispatched by the 'bigwigs' like 'snot boys'" (Rottenburg 1991: 314).[25]

Shifted from the factual to the social dimension and raised in the context of a hierarchical structure of relations, conflicts over responsibility for the failure to meet political plan targets take the form of "ceremonies of degradation" (Garfinkel). Insults and disparagement as typical components of hierarchical communication indicate the insolubility of problems that cannot be moved outside the realm of political-administrative responsibility. Especially in the interaction between representatives of the governmental planning administration and the directors of the combines, it is decided anew in each case to what extent responsibility will be assumed by the central administration or pushed off to the plants. It is therefore hardly surprising that it is precisely at this exposed interface of the allocation of responsibility that the symptoms described above occur.

Within the companies, the management is then essentially forced to enforce the imposed specifications as far as possible and thus tends to act as an internal representative of the central administration. Another strategically central interface here lies with the positions in which these specifications have to be translated into everyday operational processes:

25 See also Schabowski (1991: 141ff.) for confirmation of this.

"A key position in this process was held by the 'formen' or 'pushers' (shift supervisors), who in many cases represented the joint point of informal compromise formation. They were faced with demands for performance from above as well as demands for defence and wages from below, they had to find acceptable compromises and represent and practice them both upward and downward in the interest of the functioning of their hall. Their position as foremen depended on their success" (Kern/Land 1991).[26]

From the perspective of the workers, this position already extended into the political-ideological space, against which they often sharply demarcated themselves.[27] The internal space of the labor collective as a largely politics-free cooperation context, the management levels extending beyond the foreman's area, and the associated white-collar apparatus as a parasitic 'water head', in which non-production-related political criteria determined action - this pattern of interpretation corresponds to the dichotomous world view of industrial workers familiar from West German industrial sociology of the 1950s (Popitz/Bahrdt), albeit with the important difference that for GDR workers it was no longer the physicality of their own work but politics that took on the role of the upward demarcation criterion.[28] Politics as a non-

26 Cf. also the following statement by a former foreman: "As a foreman, you are always just the buffer between the top and the bottom. The colleagues are not satisfied with you because you can't achieve anything. At least not what they expect. And at the top, you practically have to represent the plant." Cf. also the account of the former technical department head in a mechanical engineering company (i.e. the person responsible for production) in Niethammer/Plato/Wierling (1991: 471f., 476f.), according to which in this position "three [...] colleagues were burned out" (ibid., 477) within 11 years, who were not able to cope psychologically and physically with the constant strain, fell ill and left.

27 Cf. for example the statement of a machine operator in Kern/Land (1991): "Before the turnaround ('Wende', 1989/90), the foremen also had too much to do with political odds and ends, they had to go to party meetings, organize demonstrations, and so on. This was all at the expense of the actual work".

28 This is the thesis of Kern/Land (1991), who – contrasting it with the former dichotomous worldview of West German industrial workers – condense the "mentality of GDR workers that is still current today" into the paraphrase: "We create the values. But you make life more difficult for us (rationalization deficits) and deprive us of the profits for political frippery

production-related, even production-disturbing matter - this perception can be understood as an obvious reaction to instructions that appear absurd, for which responsibility was to be attributed to the political planning authorities and their internal 'accomplices' within the plants, but also as a defense against political instructions and approval rituals in which one had to participate if one wanted to avoid difficulties.

A second strategy of delegating responsibility consisted of a general complaint about the lack of commitment, work ethic and political awareness of many working people. The discrepancy between target and actual values of plan fulfillment was thus defined as an educational problem. This problem was to be countered with political instruction, campaigns and training for the purpose of consciousness-raising and education. Here too, of course, the leaders in the factories were often reproached for having neglected their educational task. This diagnosis was a standard element in explaining problems in production.[29] And it seems to have been more than a ritual phrase, more than a mere tribute to official ideology. As Richard Rottenburg notes with regard to a company he studied, the ideological framework of this attribution

and bonze luxury." As Kern and Land note, the continuity of this orientation pattern may also reflect the GDR industry's backwardness in modernization. Beyond that, however, one can assume that the political organization of the economy, with the consequence that disruptions in the daily work process (which led to losses in performance pay, made overtime necessary, etc., and thus directly affected the interests of the employees) could be attributed to political-administrative missteps, equipped this pattern of interpretation with a changed and autonomous basis for reproduction.

29 Cf. the company chronicle already quoted above after Rottenburg (1992: 255) with the formulation: "[...] the insufficient delimitation of responsibility and the insufficient perception of the educational function by some of the leaders made the management of the collectives more difficult". Kleine-Brockhoff (1990: 12) cites an analogous explanation for the catastrophic condition of boiler plants, which the Stasi reporters found during their "inspections for the prophylactic prevention of accidents and malfunctions at boiler plants in the Suhl district subject to supervision": "The duty of the responsible managers to exercise control" was "insufficiently perceived," and "no one paid the 'necessary attention' to the 'political-ideological educational work' of the thousand boiler guards, 'especially with regard to the overall personality'".

was gladly abandoned with the end of the GDR, but "the attitude of management toward the workers remained that of educators toward educated even after the fall of the Wall" (Rottenburg 1992: 255).

There is a close causal relationship between the strategies of top-down delegation of responsibility and bottom-up obfuscation: The massive top-down delegation of responsibility had the consequence that the information supplied from the bottom up became increasingly unreliable. The use of a planning-optimistic control heuristic as a premise for communication and decision-making in a political administration that attempted to run almost the entire economy within a state along organizational lines thus had the effect that planning, by the nature of its controlling reactions to deviations from target values, got itself into additional trouble, because it thereby deprived itself of the information bases it needed. One answer to this self-generated problem was to commission the Stasi to obtain the relevant information. Department XVIII of the Ministry of State Security ("Stasi") was responsible for securing the national economy. It was concerned with the "tire situation at VEB (i.e. 'People's Owned Enterprise'; W.L.S.) Traffic Combine Suhl" as well as with the "deficiencies in the 'partial assembly of the floor vacuum cleaner 05/06' at VEB Electrical Installation Sonneberg" or with the "reasons for the 'withdrawal of quality mark Q from the Mokick (i.e. a moped with a kick-starter; W.L.S.) series S51'"; It proposed the construction of a new combined heat and power plant for the city of Suhl as well as the dismissal of incompetent management personnel in companies, and in doing so it gave particular emphasis to the demands of the companies that had previously fallen on deaf ears in the ministries.[30]

30 Cf. Kleine-Brockhoff (1990: 11): "While plan fulfillment and overruns were reported from the factories, the party leadership heard the truth about the impending political and economic collapse via Stasi reports. In its distress, the lethargic SED leadership pumped up the secret apparatus into an omnipotent super-authority, which without hesitation took on a titanic task: it set about controlling the planned economy itself - the secret service as the sequester of the sick system". - This thesis is supported by clear empirical evidence: According to Erich Mielke's Official Order 1/82 (VVS MfS 0008-19/82), the Stasi was to "'support the state- and economy-guiding organs' in 'all areas of the national economy.' The SED

The work of state security was, however, subject to the same structural constraints of administrative planning as the production sector. For example, annual work plans were issued from Berlin for the Suhl district, "which called for a 'further repression of hostile-negative forces'. The success [...] [was] to be 'accounted for' annually." The required results were only easier to fake here than in production, namely through "Potemkin enemies of the state," who could then be observed, fought and finally successfully decomposed (cf. Kleine-Brockhoff 1990: 13f.). Here, too, the claim of central planning, authoritarian leadership and control over the distribution of responsibility for failure from above produced strategies of information manipulation from below. The reliability of Stasi information was thus undermined by the same structural problem whose consequences in other areas were to be

leadership orders the party's storm troopers to manage the crisis in the planned bureaucracy" (Kleine-Brockhoff 1990: 12). In the Stasi district administration of Suhl, which is the focus of the case study cited here, the relevant tasks were primarily carried out by Department XVIII - 'Securing the National Economy,' equipped with 34 official and 420 unofficial employees - whose original purpose was once to combat enemy agent activity and sabotage. "In addition, a still unknown number of 'societal employees security' as well as all eight district service offices together with their own swarm of informers deliver news from the factories. [...] The generalists from the Stasi feel competent for everything: for the deficiencies in the 'partial assembly of the floor vacuum cleaner 05/06' in the VEB Electrical Installation Sonneberg, for the reasons for the 'withdrawal of the quality mark Q for the Mokick series S 51', for the problems that occur in the hard metal plant Immelborn during the production of the 'turning plate for woodworking with a coercive field intensity of 250 to 270 Öhrstedt' or the 'tire situation in the VEB Traffic Combine Suhl'. At one point, the Stasi suggests firing almost the entire management team of the VEB Vehicle- and Hunting-weapons Factory Suhl …. [...] The situation reports for the district chief Hans Albrecht become more and more demanding. For in daily operations the comrades of the Stasi understand that a clear class standpoint cannot replace modern equipment. On October 20, 1988, the secret service therefore demanded 'the construction of another combined heat and power plant and the renewal of sections of the district heating pipeline in the city of Suhl'. Already for the winter of 1989, one could only 'hope' that no 'extreme weather conditions' would occur. The Stasi tries to hire and fire; it determines investments; it checks supply contracts - McKinsey on socialist" (Kleine-Brockhoff 1990: 12f.).

compensated for by the Stasi's intelligence activities. It is obvious to interpret the surveillance of Stasi members by other Stasi members under these conditions not only as a sign of an irrational "security mania of the SED leadership clique" (ibid., 14), but above all as a consistent (involutive) unfolding of the structural logic of a political-administrative system, which then disposed the holders of leadership positions - in an almost realistic assessment of the manipulative distortion of supplied information - to an 'exaggerated' need for secret surveillance.

The fact that active obfuscation was also practiced between various instances of the state apparatus with the aim of warding off unwanted responsibility is demonstrated by an episode from the Thuringian district of Suhl: Alarmed by the constant reports from the Stasi headquarters there about harsh criticism from the population about the supply situation, the Berlin Ministry of Trade and Supply sent an investigative commission, which, however, came to the conclusion that everything was in perfect order there. A further inspection by Stasi officers also confirmed this result. The riddle's solution: the district secretary "had been warned and had ordered an emergency filling for all stores." The consequence: The leading Stasi major general "is ordered to party headquarters to listen to a lecture on false information after a two-hour wait" (Kleine-Brockhoff 1990: 13). Mediated by the overproduction of the need for responsibility, which urges the constant search for culprits, the planning-optimistic heuristic thus generates an omnipresent tendency toward camouflage, which undermines the administrative strategies of planning and control through systematically pursued disinformation.

VI.

Let us recall the questions I raised at the beginning. The aim was to investigate which ways of coping with disappointment were prefigured by the extremely control-optimistic heuristics underlying central economic planning in the GDR, and which unintended social structures were generated by this kind of coping with disappointment. The findings on these two questions just outlined can be summarized as follows:

In the Honecker era, attempts were made to overcome planning problems with the establishment of the combines, i.e., through a far-reaching change in formal organizational structures. Control optimism motivated a further push for centralization here. The main consequences were: (1) a further reduction in the elasticity of the economy and thus an increase in its susceptibility to disruptions; (2) increased striving for autarky and growing production depth of the combines at the expense of productivity; (3) rapidly rising foreign debt as a result of the failed attempt to thoroughly modernize production through credit-financed import of Western technology. The attempted solutions thus contributed to the aggravation of the original problems.

We then looked at the informal practices used by managers in combines and factories to try to bridge discrepancies between plan requirements and production results. The key words here were the creation of illegal stocks, black-market-like bartering between plants by circumventing the plan, selection of the assortment from the point of view of maximum plan billability, reduction of product quality, and fraternization of superiors with subordinates in circumventing formal requirements. On the one hand, these practices were suitable for partially compensating for the functional deficits of the planned economy. At the same time, however, they undermined the binding nature of the planned specifications, led to the waste of materials in the production of store goods that could be billed at favorable rates, exacerbated procurement and supply problems, and distorted the balance sheets.

Centralized planning thus generated self-overload with experiences of disappointment, which was dealt with by various forms of attribution of responsibility or manipulative curbing of the need for responsibility. Due to the distribution of power, responsibility was primarily attributed from the top down. This led to the manipulation of information at all levels of the hierarchy in order to avoid the attribution of blame and the associated sanctions. This exacerbated the planning problem for the top. Intensification of control through the use of agents and informers, who were tasked with transmitting reliable information from the production area, was then a perfectly obvious consequence. Planning optimism thus created additional problems for planning. These problems were attempted to be overcome, on the one hand, by

concealment and, on the other hand, by increasing the exercise of power and control as well as by propagandistic and educational influence. The great importance assigned to the attribution of responsibility and the use of political-pedagogical motivational programs indicated the factual limits of planned control.

The example of the GDR thus makes it possible to see what structural consequences are likely to result when a planning-optimistic control heuristic is implemented institutionally across the board and thus becomes a 'material force'. What can be observed in this social planning experiment on a large scale, however, is certainly not limited in its validity to the historical context of the GDR and other states of real socialism. Organizations cannot dispense planning. Therefore, on a smaller scale, analogous tendencies should also be observable in individual organizations under market economy conditions, in which planning-optimistic heuristics are among the premises of management or organizational culture.

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ENRICO DAGA, ANDREA SCHARNHORST & RICHARD P. SMIRAGLIA

Ordering the world, ordering our thinking, ordering interdisciplinary collaboration — on knowledge organization and ontology engineering

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Abstract

The more we rely on machines to navigate the information oceans, the more important so-called structured data become, i.e. data that have been given a certain meaning. In this contribution we bring together two specialists in the field: Richard Smiraglia, currently executive director of a non-profit research institute The Institute for Knowledge Organization and Structure, and Enrico Daga, currently Senior Research Fellow at the Knowledge Media Institute of the Open University in the UK, to discuss with each other the history of Knowledge Organization in various fields, and important challenges in the present. The conversation was led by Andrea Scharnhorst, policy advisor at DANS, an institute of the Royal Netherlands Academy of Arts and Sciences.

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Introduction

The more we rely on machines to navigate the information oceans, the more important so-called structured data become, i.e. data that have been given a certain meaning. Such data are used in search engines, for information retrieval, or to train machines to extract structures from unstructured text (and other data). The scientific terms to describe systems which help us order knowledge are various, and they are variously applied in different disciplines. Examples include controlled vocabularies, ontologies, classifications, keywords, metadata schema, data schemas, thesauri, and so on.

In this contribution we bring together two specialists in the field: Richard Smiraglia, professor emeritus in the field of library and information science, and currently executive director of a non-profit research institute, The Institute for Knowledge Organization and Structure, and Enrico Daga, who holds a PhD in artificial intelligence and is currently senior research fellow at the Knowledge Media Institute of the Open University in the UK, to discuss with each other the history of knowledge organization in various fields, and important challenges in the present.

The conversation was led by Dr. Andrea Scharnhorst, policy advisor at DANS, an institute of the Royal Netherlands Academy of Arts and Sciences. Andrea came into academia via physics, did her PhD in philosophy of science, and has since moved towards information sciences.

The conversation centered around three themes: (1) Your own path in academia; (2) Are knowledge organization systems (KOS) unique or universal? (3) The role of KOS for/in interdisciplinary work.

1. Knowledge organization and our own paths in academia

Scharnhorst: Let us devote some time to discuss with each other the history of the knowledge organization and how you experienced this in your own academic journey. Let me start: I am a senior fellow and policy adviser at DANS, which is an institute of the Royal Netherlands Academy of Arts and Sciences, and holds a data repository service. I came to this conversation via

physics and philosophy of science. So I'm neither trained in information science properly, nor in computer sciences.

When using the term *Knowledge Organization* I'm aware that I already set a certain normative tone, as the term *Knowledge Organization* is not neutral and common sense, but has been used after World War Two to mark a specialty in philosophy of science, library, and information science. So, I'm curious to hear about both your thoughts about *Knowledge Organization* in general. Could you both summarize your own path into Academia, and how you came across knowledge organization and what intrigues you?

Smiraglia: I will need several days! I'm a child and nephew of musicians. So I grew up playing at age four with my first accordion and clarinet, then started with the trombone, and eventually, around 1970, when I graduated from high school, I played flute and piano. I went to college here in Portland, Oregon, where I majored in flute playing. But, I also met Edith Kilbuck, who had a major influence on me; she was a brilliant harpsichordist. At that time, the harpsichord was just re-emerging, and I studied with her. And I bring that up because I have just acquired a harpsichord a few months ago, and this is my lifelong dream: here I am, 53 years later, playing the flute, piano, and harpsichord.

So I say all that because I also worked in libraries, in high school, universities, and in college. And when it became time to get a master's degree in music, I thought: Well, let's do something to make money, instead. So, I went to Indiana University, Bloomington to the then School of Library and Information Science, and worked in what is now called the William and Gayle Cook Music Library[1], one of the world's leading music libraries – I think the sixth largest. From there I went to work at the University of Illinois at Urbana-Champaign as cataloguer of printed music, and that's the world's fifth largest collection of music. So I had, in addition to my musical career, all these interactions with the *stuff* of music: I mean, I had millions of scores. And one of the problems we were dealing with that day was shifting old collections that were classified using the *Dewey Decimal Classification*, re-binding

1 https://libraries.indiana.edu/music-library

them, and putting them in a new building, using the Library of Congress *Classification* for music. And so this meant that if I had a work by Karlheinz Stockhausen[2] there would be one score. But, if I came to something like a Beethoven symphony, there would be 400 scores, and there would be different editions over the course of centuries, and I had to spread them all out on the table and arrange them. And I became very aware of the problem of: When is this work a symphony and when not? When is this the score and when is it not a score? What are all those variations? In information science, we say – thanks to the next 20 years of my work – 'How do we disambiguate the cluster and provide context within it?'. So that became my PhD, you know: What is a *work*? Specifically, what is a musical work? How do we disambiguate a cluster once we've given it a name? So, at the time that was considered a problem in what librarians call descriptive cataloging. But, as you see it, it is essentially the problem of the gathering and disambiguating.

And that is the problem of what Ingetraut Dahlberg called: *Knowledge Organization*. How do we bring together things that are alike, that are like each other, and then within this cluster disambiguate for precise retrieval? My dissertation was about a study of what's called a derivative bibliographic relationship. Which is essentially to find the 'work' in quantitative terms so it could be studied empirically. We discovered that these clusters, like almost everything else in information, follow power laws. We discovered that what we're doing is essentially classifying with alphabetical terms. So, we call that an alphabetico-classified system or structure.

Later, I became a professor of information science. I taught knowledge organization, and research methods, and did this for 45 years at University of Illinois, Columbia University, Long Island University, and finally the University of Wisconsin, Milwaukee.

So that's my academic career. I worked on that problem of what is a *work,* and in 2001 I published a book called "The Nature of a Work"[3], which pulled together all the science existing at the time. After that I began working

2 https://en.wikipedia.org/wiki/Karlheinz_Stockhausen German composer, known for his groundbreaking work in electronic music.

3 Richard P. Smiraglia (2002) The Nature of 'A Work': Implications for the Organization of Knowledge. Scarecrow Press.

on problems of epistemology and the phenomenology around this. So, to give an example, we say 'chaconne'[4]. But how do we know what a chaconne is; and do you and I agree on what we think a chaconne is … how that has to do with people's experience.

So that's basically, where I was when I met Andrea. I was invited to the Virtual Knowledge Studio[5] when I went to work on the book 'The Elements of Knowledge Organisation'[6]. At that time, Andrea was working on a project about Wikipedia[7]. They had downloaded the whole of it, I think, yes, and wanted to know what the underlying knowledge structure was. I just sat there and laughed. It was too big a problem, and I just kept saying: What is the research question? And the others kept saying, indeed, what is the question? But, in the end we did a lot of good work with that, by connecting to the Universal Decimal Classification (UDC)[8], which is a faceted classification and it's almost a linguistic-style combination of work representations.

I taught the team[9] that the point of classification is to remove language from the problem, so that we can work with pure ontology. That's why the UDC classification uses symbols, because the symbols simply represent the

4 Type of musical composition, see https://en.wikipedia.org/wiki/Chaconne.

5 A research institute at the Royal Netherlands Academy of Science, 2005–2010. Wouters, Paul, Anne Beaulieu, Andrea Scharnhorst, and Sally Wyatt (Eds.). (2013). Virtual Knowledge. Experimenting in the Humanities and the Social Sciences. Cambridge, Mass.: MIT Press.

6 Richard P. Smiraglia (2014) The Elements of Knowledge Organization. Springer.

7 Suchecki, Krzysztof, Almila Akdag Salah, Cheng Gao, and Andrea Scharnhorst. 2012. "Evolution of Wikipedia's Category Structure." Advances in Complex Systems 15 (supp01): 1250068–1. doi:10.1142/S0219525912500683. (Preprint Physics and Society; Digital Libraries. http://arxiv.org/abs/1203.0788. A. Akdag Salah, Cheng Gao, Andrea Scharnhorst, and Krzysztof Suchecki (2011). Design vs. Emergence: Visualisation of Knowledge Orders. MAP. Courtesy of The Knowledge Space Lab, Royal Netherlands Academy of Arts and Sciences. In "7th Iteration (2011): Science Maps as Visual Interfaces to Digital Libraries," Places & Spaces: Mapping Science, edited by Katy Börner and Michael J. Stamper. http://scimaps.org.

8 https://udcc.org/index.php/site/page?view=about

9 The project was called 'Knowledge Lab' and the team consisted of Krzysztof Suchecki, Almila Akdag, Cheng Gao, and Andrea Scharnhorst.

levels of ontology without the problems of language. So there you remove the phenomenological issue.

Around 2017/2018 I created this research institute, The Institute for Knowledge Organization and Structure. We received our Digging into Data grant[10], which ran for four years. As soon as that was finished, I left the university and now I just work privately in this research field.

Scharnhorst: Thank you very much, Richard. The Wikipedia project was all about the evolution of knowledge organization systems, starting with the Wikipedia categories (and category pages) but also looking into the evolution of the UDC. I remember that I told my father-in-law about it: Jürgen Scharnhorst, who also worked on dictionaries as a language specialist. And he said: Andrea, this is nonsense. This will never work. It is usually done top down. When making a dictionary, we extract the terms, for which we really find evidence in mundane communication, or whatever the collection/domain is for which the dictionary is made. How could this be achieved by collective, unsupervised editing, when even the understanding of the English among the different editors will be different. But, in the *folksonomic* nature of the Wikipedia categories (English Wikipedia), we found structures and change. My own interest goes back to my physics background, where I was studying in the field of statistical physics and thermodynamics of nonlinear systems. And that's all about dynamic processes, so that's all about change. I was very intrigued to find such changes in classifications, something which I naively thought is kind of God-given and stable. I'm still kind of puzzled by this: How volatile knowledge organization systems are in practice, although they are supposed to be stable, standards and give us guidance and be our reference systems – like the latitude/longitude system does to measure Earth.

10 Digging into Data was a funding stream of the Trans-Atlantic Platform for the Social Sciences and Humanities, which enabled collaboration between North American and European scholars. https://www.diggingintodata.org/, https://diggingintodata.org/awards/2016/project/digging-knowledge-graph, https://web.archive.org/save/https://diggingintodata.org/awards/2016/project/digging-knowledge-graph.

KOS classifications *should* help us to navigate the seas of knowledge as the former help us to navigate Earth. That's a good bridge to Enrico I think.

Daga: Richard, I certainly can understand how it could take days to talk about it all, and I really hope in the future there will be opportunities to hear more from you. I share with both of you a kind of nonlinear trajectory. I mean, when I first engaged with academia in my undergraduate studies, I was studying performing arts and the history of theater and music. Actually, my bachelor thesis was on the use of music in contemporary performing arts. And so what I was looking into is how you can take a structuralist kind of approach to entangling the texture of the performance. And what was the role that music was playing in the rhetorics and in the performance. I also share with you, Richard, that I was playing music and acting. I was doing a lot of art. But at some point, I realized I needed a job. At that time the Web (world-wide-web) was rising, and there was a lot of need for web developers. I also realized that in the 10 years I was working as an artist, I had developed two or three digital libraries for smaller organizations, as a kind of aside job, and that was really very enjoyable. I 'jumped' to computer sciences when I became engaged in web technologies and particularly semantic web technologies. This happened by chance. I was working as a web developer, and that happened to be in a research organization, and then I just got engaged with projects on semantic web technologies. So, my background is really from that niche area of ontology engineering. I was developing tools for ontology engineering. So, the terminology is one of the first things I heard, let's say in my academic career. Then, I moved to the UK, did a PhD, and so forth.

But what really attracts me, of all these stories we are telling, is that in the end – whether we look into the software engineering part (how we support humans with computers); whether we are looking into describing human things with formal methods; whether we are looking into communicating with machines at different stages – the key is always, and this is technology independent: How do we organize and structure knowledge? This happens from 'How do we organize and structure a website?' to 'How do we organize a structural digital library, a database? How do we organize and structure the information that we can use to understand how complex systems work and

what users do with these systems? That's what I'm particularly looking at in this phase of my career, is: How we can describe the journeys of the data in complex systems, particularly in systems that are user- and data-intensive. So, how we can describe them as, and how ontology, engineering, or knowledge organizational seasons can help in mastering this complexity. I just sketched a few notes while listening to both of you, and think there is a big embarrassment concerning terminology. I find this very often in computer sciences, which is my kind of reference academic area, and even more specifically ontology engineering, and the semantic web. I'm used to reading and reviewing computer sciences papers. I write papers for computer sciences on venues. I'm always, as a humanist, very irritated by the lack of consistency in terminologies and also by the lack of interest the typical computer scientist has in terminology. However, I think the devil is in the details.

We should actually try to use the terms consistently, and to question ourselves about why we are using that term and not another; why we are describing this as a knowledge graph and not as an ontology; why, we are describing this as a taxonomy instead of a database or a concept scheme, or a term list and so forth. What is a keyword and what is a label? This is a useful place to reflect about what are the terms that we use.

Also because language has a key role in ontologies. Here, Richard, I would like to connect to what you were saying before. You pointed out that we want to have classification systems because language is ambiguous, so we want to get rid of language. The problem is that we need language to understand those classification systems and to interact with them. So, the word we choose becomes important because it's what we attach to our own internal kind of machinery [our brain]. And we use those words for making sense of the knowledge organization systems. I remember that I had a debate a few months ago with a colleague. They built a taxonomy of topics for computer sciences, and they derived this from papers. They built this kind of topic-subtopic, a very rich and interesting ontology. So, ultimately, you can browse the scientific literature along topics and subtopics. I remember that there was one topic on semantic web related to a subtopic of Linked Data, and one related to a subtopic of web of data, something like that. That thing kind of puzzled me. So what is the semantics of this topic–subtopic relationship? The

answer was that the relationships they found, the semantics was just the result of the algorithm. So essentially, the algorithm was clustering topics and articles, it was considering relationships to subtopics in an extensional way. So, there are articles that typically have the topic X, but are also about this other topic Y. And if there are more articles having topic X, this topic is supposed to be more general. That was the kind of trick. But this has nothing to do with the definition of the concepts. This has more to do with how the concepts are used, or even more, in the assumptions that we make when we take these concepts and we put them together. And sometimes, how we use them together is not even expressed in a knowledge organization system. So people put things together, but it's very hard to know why they made those choices, for example.

So one of the first things we started 10 years ago, when I was more involved in the ontology engineering part, was to look for ontology design patterns[11]. This idea was borrowed from software engineering, from object-oriented software engineering, and it was brought to ontology engineering by Aldo Gangemi[12]. You have design patterns, and those are well-known, good-quality design solutions that you can use. And the idea was that ontologies are the same. They are design patterns, and we can reuse those to make sure that ontologies are well designed. But, in the end, we don't know why an ontology pattern is good or not. Yes, there has been literature on the quality of ontologies. But, at the end, we just agree that it is good, or some people agree that it is good, or the reference community or the domain expert says it's good. And here I finish. I don't know whether this is useful.

11 Presutti, Valentina, Enrico Daga, Aldo Gangemi, and Eva Blomqvist. "eXtreme design with content ontology design patterns." In Proc. Workshop on Ontology Patterns, pp. 83-97. 2009.

12 Gangemi, Aldo. "Ontology design patterns for semantic web content." In International semantic web conference, pp. 262-276. Berlin, Heidelberg: Springer Berlin Heidelberg, 2005.

2. Knowledge organization and interdisciplinary work

Scharnhorst: I find it very inspirational. Because you also touch a string of my 'scientometric' heart. In scientometrics, where people look at quantitative traces of scientific communication, namely, article publications, and how you can cluster them. They find clusters, give them names. And there's a huge debate about how to do that properly.[13] And computer scientists (and physicists) are very much intrigued by this kind of data mining. Those papers and references form complex networks, you see. But those working on better clustering algorithms are sometimes also a bit *laissez-faire* in the way of attaching labels to those clusters. Richard, how does this resonate with your experiences? What would you like to say in response?

Smiraglia: Well, the thing that I noticed most clearly was, I think we call this *siloing*. I have been very much aware of that, being an information scientist who works with computer scientists on occasion. Those two communities do the same thing, but call it something different, and don't ever talk to each other. And this really is not a new problem. I had the good fortune of having two PhD advisors because my first advisor, Arlene Taylor[14], she was renowned for being one of the first to bring empirical methods to the problems of the distribution of names in large library systems. But then she left the University of Chicago. And so Don Swanson[15] took over as my advisor, and he was very much aware of this problem [of silos]. This also had to do with him having a specific medical condition that different medical communities couldn't treat, even though two of them were both studying it simultaneously, but would not talk with each other. One of his most famous papers is called

13 Gläser, J, Glänzel, W & Scharnhorst, A (2017). Same data – different results? Towards a comparative approach to the identification of thematic structures in science Special issue. Scientometrics, vol. 111, no. 2.

14 Taylor, Arlene G. "A Five-year Projection of the Impact of the Rules for Form of Heading in the Anglo-American Cataloguing Rules, Upon Selected Academic Library Catalogs." PhD diss., University of North Carolina at Chapel Hill, 1981.

15 https://en.wikipedia.org/wiki/Don_R._Swanson

'Undiscovered public knowledge'[16]. And it's all about these things that are actually known and common, but nobody knows that they are known and common.

So, one the most recent examples of that for me was during our 'Digging into the Knowledge Graph' project. One of our computer science people from the VU (Vrije Universiteit Amsterdam) started to give a long talk about versioning of things. And I had to leave the room, because I've been writing about that for 40 years. But he had no idea that we ever thought of it. He thought it was a brand-new idea. Oh, my goodness. And what's the other one? The use of terminology in computer science is often puzzling to me. 'Semantic shift' – that's it. Yeah, it has nothing to do with anything semantic, right? I had the group in Amsterdam explaining it to me, you know, and I was following what they were doing. But then I said: Well, which terms shift? And they answered: "Oh, it doesn't have anything to do with specific terms." Well, then that's not semantics.

I once worked with the CIDOC-CRM[17] expert group; I did so for two decades. And there was that famous ontologist (Nicola Guarino[18]), and he just kept standing up, waving, and saying 'No, no, no, that's not what that is'. So I think it's a really serious problem – the silos that academic disciplines form.

I also worked together with Rick Szostak. He's a Canadian economist and a professor for knowledge organization as well, and also works in our institute [IKOS]. He has created an interdisciplinary classification that's phenomenon-based. A classification that does not use disciplines or disciplinary structures, but that relates phenomena empirically. So there is a movement, trying to escape the siloing.

Scharnhorst: I also have a background in science and technology studies, and in philosophy of science. In those research fields, people have studied interdisciplinary working extensively. What made (still does) a deep impression on

16 Don Swanson (1986) Undiscovered public knowledge. Library Quarterly 56(2): 103–118

17 https://en.wikipedia.org/wiki/CIDOC_Conceptual_Reference_Model

18 https://en.wikipedia.org/wiki/Nicola_Guarino

me was a talk that Peter Galison gave at the WZB[19] in the 1990s. He introduced the vision of the concept of a *trading zone*[20]. He spoke about the fact that if people come together in an arena or marketplace, from very different areas, and they have different languages, they have to find a way to communicate with each other. To be able to do this, everybody needs to loosen up a bit, and finally they 'invent' a kind of pidgin language[21], a mixed language that isn't as pure any more as it was in their home communities. They kind of trade concepts, and terms to describe them. They agree about the use of terms and their meaning, and this way they create their own community and language. I remember that the GDR philosopher and novelist John Erpenbeck[22] also spoke about this. John said: When innovation is born, an invention or a new idea always starts in the head of one person. We don't invent collectively, we don't think together. But, to be able to fly and conquer more than one brain, this new idea needs to be communicated.

For that it needs a sender and receiver, right? Somebody needs to understand your idea. And that's where a shared language becomes important. Throughout my career, most of which was interdisciplinary, I observed that everybody is kind of solving this problem by *doing*, based on tacit knowledge and experience. There is no guidance. There is very little teaching, very little best practice. When people become aware of terminological problems they often start to do glossaries, and then they get tired of doing glossary, because it's also a lot of work to do one properly. So, they do this as a preparation, and in the meantime they figure out their 'pidgin' and leave the documentation. One could also say, it is a kind of illness that accompanies the immense growth of knowledge and the science system. What I would really be interested in, is to see if one could formalize the 'trading zone formation' more. I hear this in what Enrico said: We wanted to build a *good* ontology and repeat a good way. You search for a reference system and try to formulate this, and I hear this need also in Richard's stories.

19 https://www.wzb.eu/en

20 Described also in his book. Peter Galison (1997) Image and Logic. University of Chicago Press

21 https://en.wikipedia.org/wiki/Pidgin

22 https://de.wikipedia.org/wiki/John_Erpenbeck

3. Are KOS unique or universal?

Scharnhorst: On the other side, there might also be a logic in 'starting from scratch again'. I think there is something inherent to any new research collaboration. It's not that people are just stupid and not willing to learn from each other. Let me give you an example: In the Polifonia project[23], at the consortium meeting in Bologna, Albert Meroño Penuela made a remark that was an eye-opener for me: When thinking about how to build an ontology for this project, at some point we need to start from scratch. Yes, there are other ontologies about musical objects around, but if we follow them too much, too closely, we cannot think outside the box, think openly any more. So, we need to 'invert' the process, coming up with our project-specific ontology and then see how much this overlaps with already existing ones.

So that brings me to the question: Can or should ontologies be universal, or can they not? Do we have to live with the dichotomy of universal versus specific? Or can we define functions, situations, locations, points in time in research processes where the more universal nature is needed, or where the more unique nature of ontologies, or Knowledge Organization Systems in general, is needed?

Daga: It is a lot to react to. I will come back to answer your question about universal vs unique at the end. I'm intrigued by your remark, Richard – about a classification system that can work with features and not with concepts, which works in a kind of inductive way. This might be a way to kind of eventually overcome the problem of fixing terminologies. Because the fact that different communities talk about the same things in different ways leads to situations where: one puts people together, and some people get fixated on the terminology. They can't get out of those words or terms. I think there is a big problem. Not that we actually can really solve this, because it's inherent in the system, and it is really about the tools that we use. It's this kind of

23 https://polifonia-project.eu/ Permalink: https://web.archive.org/web/20230720111153/https://polifonia-project.eu/

semiotic problem. So when we point to something – let's say we point to the Moon, and we give it a name: Is this name for the finger-pointing or the Moon? So, if it is the finger we need to name, then the idea of a Pidgin language might work. Because the other person knows already in her/his head – assuming that in some way the other person knows already in his/her head what we're talking about, and we just need to reach it, find the quickest way to reach what they're thinking of. But the problem is – especially for knowledge and ontology engineers – they curate 'fingers'. So they create names; and their organization – making it a kind of standard – and they want to forget what it stands for. They make use of these systems on behalf of the real thing, as a kind of simulacra. So those labels become important, and communities get attached to those labels. And if you change those labels, people don't understand any more. It is the same when we refer to professional language, and it can go down to everyday workplaces.

I remember last year I was involved in this working group around the university [Open University] to systematize the terminology that the various departments use, from recruitment to new students, to finance, budgeting, and people that work with claims or policies. There was an office that only specialized in retainment. That means you need to avoid students leaving before completing their studies, which is a big issue at the Open University because we have 200,000 students all over the world. And we are a distance learning university. So there are a lot of people that just drop out after a while. So the problem is that the same terms really mean different things in different departments for very strong reasons. For example: The accountancy rules that require – that impose on us – the use of one term rather than another, even though that other term would mean something much more flexible and broad. So when you build statistics and you integrate data, then it's a really hard thing to do. Because sometimes you get numbers that don't match, and you don't know why. But the reason, is because the concepts don't match and the terminology doesn't match, and people don't talk to each other because they just do different jobs. So these are very fundamental problems of knowledge organization systems.

Now, this is why ontology engineering started with the idea that an ontology was based on agreement. So, a certain community decides to structure

and organize its own discourse, agrees on an ontology, and describes this piece of word in this way, because that makes sense to them. So, universality and re-use are big problems, and these have been studied in ontology engineering. At least, that's the area I know. I'm sure that there's much more outside of ontology engineering, dealing with very similar issues. But in my area, there were heated debates about whether there should have been one ontology. Some people thought we should agree on one – THE ontology: Put all the big brains of the world all together, and agree on the ontology. I remember Nicola Guarino[24], who is one of the main founders of the ontology engineering discipline and developed the OntoClean methodology. You see, it is in the name: 'OntoClean'. But other people disagreed, and said it's ok if people see things differently.

The thing that we need to reuse – and this is what we need to find out – is: What are the good ways of doing these things? Because ontologies are artifacts, and they have a life cycle like any other artifact. You can't think that you can just make one big ontology that covers everything.

Although, you can abstract in many different ways. And then ontology engineering solves this problem by having foundational ontologies, or top ontologies. So, you work on very abstract patterns that nobody will use because nobody cares to distinguish perdurance and endurance. That's because you don't need that when you need to organize books or employees, or whatever in your system needs to be organized.

Let's focus on these abstractions, because those will necessarily be reusable. So if you go to the root of these schemas, this must certainly be reusable. I think that here we find great results. I mean, DOLCE[25] is fantastic. You look at DOCLE and you really see an effort on systematizing the foundations of our conceptual thinking by digging into philosophy, description logics, all of the kind of big thinkers. Trying to encode this into an ontology. But the problem is that when we need to do an ontology, we don't need to

24 https://en.wikipedia.org/wiki/Nicola_Guarino

25 'Descriptive Ontology for Linguistic and Cognitive Engineering (DOLCE) is a foundational ontology designed in 2002 in the context of the WonderWeb EU project' Quotation from https://en.wikipedia.org/wiki/Upper_ontology#DOLCE, and http://www.loa.istc.cnr.it/dolce/overview.html

say that a person is a 'perdurant'[26]; we just need to say that it's a person. And so then the pidgin language layer enters and saves us. Okay, because otherwise things get too complex for no reason whatsoever. Nobody cares in the end.

So there is a way or a question, which is my favor, and which makes all those complex discussions very shallow. And this is the big question: What is good enough? You cannot decide what's good enough if you don't have a task. So every time that we talk about ontology engineering, and discuss 'Let's do an ontology', my question is always: What is the task? So what is it the ontology needs to support? It is not 'we need to describe the domain', because – and now I contradict myself – nobody needs to describe the domain. What we need is to describe a domain because this helps us in understanding it. And that's where Albert's point makes sense.

So, Albert's point makes sense. But, not in the way: 'we need to start to think anew, because otherwise we can't be creative' [which was Andrea's summary of it]. I don't believe that. I believe in the fact that we need to start anew because otherwise we don't think; And then this process of building an ontology becomes useless to us. What we want is that the process of ontology building becomes useful to us, because in the end we want to understand something more about this domain. And here then the creative process is necessary. Otherwise, it is only painful. If you just have to try to understand what others were saying and put together something, that just does not work.

Scharnhorst: Another reply, another short round, and then we should kind of wrap it up, Richard.

Smiraglia: In the beginning, Andrea, you asked about the term 'Knowledge Organization', and I think that I have to remind us that that term came from Ingetraut Dahlberg, and that she was not in information science. She was a documentalist, and when she created the term Knowledge Organization she translated it from the German word 'Wissensorganisation'; and you have to

26 perdurant in (ontology) A happening; an entity that only exists partially at any given point in time (see https://en.wiktionary.org/wiki/perdurant)

read her writing, to understand why she chose this term, also to distinguish herself from mathematicians because she was trying to work with the concept of pure, universal ontology. Her society, which is now the International Society for Knowledge Organization, was intended to be a division of the 'science of science'. She saw this as a substrate of all science. And so, there is that tension in the field, 50 years later. This is a tension between the poles in universal classification or ontology, something that describes everything in one language and, on the other side, what's now called the postmodern approach, which is to say that each discourse community – which can be also be just one person – has its own ontological structure. And what we have to look for is a translation device – a crosswalk. So, those tensions still exist in the field.

Enrico, when you were saying – in connection with the purpose of ontology – that you will always ask 'what is the task?' I started to laugh, because it's exactly the opposite of what we do in my institute. Our purpose is to ask 'What is the underlying knowledge structure of the domain under study?' And we try to seek that by sort of an ethnographic method. What are these people [in a domain] saying, and what do they mean when they say it, and how do they use it, and to describe their domain. But of course both things are necessary, right?

And then a colloquial example: Just in the news, as you know, there are many shooting events in the United States. Lately, they've started to say 'it was random'. I always shake my head when the news says 'it was random', because I remember my professor Abraham Bookstein drumming into my head: "random" means with equal, known, and non-zero probability. What they mean is 'chance'. It wasn't random if someone chose to do it. I bring this up because it's the problem of colloquial language[27] differing from scientific language.

A musical example is this problem with *melody* that my institute is about to study. You know, users want to classify music by melody, but musicologists don't know what a melody is; or, rather: We can't agree what a melody

27 'colloquial language, everyday language, or general parlance – is the linguistic style used for casual (informal) communication' (https://en.wikipedia.org/wiki/Colloquialism)

is. I mean, we have an idea what it is: it's that tune. But we can't nail down what a melody is, to be able to classify it. So the question is not to have a classification that is universal or domain-specific, but rather it's culturalism. That's what it really is: Where the two different understandings are not shared. To determine where the intersection is, that's an interesting problem to go forward.

Scharnhorst: Thank you very much, Richard. Maybe we can have a last round, and share what we three do when thrown into a situation (as we always are in our kind of daily practice) of engaging with a new community, when we are thrown into a new project, or into new 'clinics'. Richard does these beautiful workshops, called clinics. So how would you get the dialogue going? What would be your favorite 'recipe', to tackle the problem of people not understanding each other? How would you do this? What would you do?

I can tell you what I do. I try to understand the academic backgrounds of the people involved, to which *academic tribe* they belong, which epistemic formation they had in their career. Am I talking to someone who came into academia via mathematics, physics, chemistry, social sciences, philosophy, or art? Yes, it becomes increasingly complex to 'science-locate' a person (as Katy Börner would call that) as academic curricula themselves become a mixture. The big disciplines are broken up and recombined. But often, for me, that helps me to at least have a hypothesis about the 'epistemic mindset' of that person, and with which method a scholar is most familiar: quantitative, qualitative, text, statistics…

Engineers, I found, usually really wanted to build something; So this is different from a more theoretical approach. Whatever their discipline – natural or social sciences or humanities – at the end, everything is connected. But your own research practice determines your view, and therefore also your behavior in interdisciplinary work. So I try to encourage people to share information about their own academic trajectory; And I try to share my own experiences, making explicit what determines my worldviews. Because, at the end, you want to achieve something in such an interdisciplinary encounter or maybe you have to write something together, such as a project deliverable.

So, Enrico and Richard. Do you have the secret recipe?

Daga: In the first round, I would ask: Why we are here? What is the task? And a first task could also be to have a formal understanding of the domain of these two groups that might be in such an encounter. That's absolutely fair, just to clear the air. But the reason why I emphasize the need to determine the task is because, often, knowledge engineers get into such a collaboration by following the approach to build a knowledge organization system top-down. They try to understand the discourse in a certain domain, build a system, and then pretend that this system can solve the problem at hand. Or they recommend a service or product. And that is when I kind of get nervous. Because your concern – as a researcher, as a knowledge engineer, which is 'I want to understand the domain, I want to do the *right* ontology, I want to use all my tools' – becomes a burden; baggage that doesn't help the final goal. Okay, so this is why I put my software engineering and systems engineering head on and say: Look, why we are here? If we are here to help those guys, we need a knowledge organization system, but that system has to feed the task. If we are here just to do something else, then we do something else, and then that might be exciting as well. It's probably more exciting than solving the problem of the domain.

And I think that the problem of interoperability and interdisciplinarity is anthropological. In the sense that if you want to understand how to bring together different communities, you need to understand language and norms. And these are different for different communities.

So if I need to write a computer science paper, it must have a certain, specific language; and often, this language is also very specific to the subcommunity. So I need to pay attention to what language I use. I mean, we look at a "call for papers" to decide what types of words we need to use, to write about a subject [for that community]. So, we do the work. Then we ask ourselves, where we submit the paper for publication? There, there, there or there? Oh, there is this one. Okay, what are the topics? Oh, yeah, we can express our work in a particular way, and we use relevant words. We can take the same work, then do another step such as another piece of the work; then choose another venue, with different words, different problems. Oh, yeah,

we can use these words. And we move on with our research. Again, all those words are *fingers* they are not the Moon.

And the assumption is that we know what this 'Moon' is about. So we know that I'm working on ontology engineering methodology. That's actually a place where terms probably remain the same. But when we work on recommender systems or user models, what is important is language and the rules of the game. The rules are different between communities. So what are the ingredients that the paper needs to have, etc? What type of discourse is considered to be scientific?

And this changes dramatically. Even within computer science, it's completely different between the area of computer interaction to that of databases. Okay, I don't know if I answered anything

Scharnhorst: Interesting. Richard would you like to give it a go? So, the initial question was: If you are thrown into an interdisciplinary setting, what's your recipe to get it going, to look in it, to organize yourself in the group, to organize the knowledge exchange in the group?

Smiraglia: I think I said it before. I realized now why you brought us together. I'm beginning to see it. Enrico was starting with: What is the task? My version of the starting point is: What is the research question? And that's where I always go, and that comes from my training in Chicago. Once we find the question, then we know how to begin.

So what I was thinking about, though. Well, again, back to the CIDOC-CRM, which is a cultural heritage ontology, and it's designed primarily for use in musea and archives.

But I found that the meetings are excruciating. Because, there will be 30 or 40 scholars together in the room, all around one big table, and they're all from different disciplines. And so they all have different vocabulary. And whatever the problem is, there will be 15 or 20 different solutions, because everyone places their own one on the table. And I was describing this once to my colleague, Paul Wouters, and he sent me to a book by Collins[28]. The

28 Randall Collins. 1979. The Sociology of Philosophies. Belknap Press.

main idea is that you have a limited number of schools of thought [in the history of philosophy] and they grow and grow until they fall apart. And then they come together, and compromise around a truth or a hypothesis that they can live with. And this is what happens in the CIDOC-CRM meetings. At the beginning, there will be 30 answers to the question, and then over the course of five days it narrows down, and we get to the gist of the true research question, or you could say: the task. What is it that we try to describe here?

And this is the method we apply in our own institute. We begin with a meta-analysis, we bring a group of scholars together – they're not all from the same discipline, they are offering their own data to the conversation – and we lay out all the questions and get the big confusion. And then, over time, we narrow it down to the critical question. This is what phenomenon-based classification does. What is the thing? What is its nature? How do we describe it? So that's, I think, the intersection with interdisciplinarity.

Scharnhorst: Thank you both very much, Richard and Enrico, for your contributions.

2. THE OPENHERITAGE PLANNING CONTEXT

OVERVIEW

The second part of the yearbook reflects on knowledge transfer in OpenHeritage, a European planning project on the adaptive reuse of heritage (2018–2022, www.openheritage.eu). The experiences described here – for example on the role of professionals as intermediaries, or the fundamental problem of translation between European languages and cultures – can be seen as exemplifying problems of knowledge transfer as well as theory formation in the field of planning.

6 John Pendlebury (*Conservation and the challenge of consensus*) describes the long evolution of the conservation planning system in UK, and concludes by examining what constitutes 'good' conservation practice.

7 Harald A. Mieg (*The Transferability Matrix*) introduces the idea and structure of a Transferability Matrix that was developed as part of the OpenHeritage project at the request of the European Commission and intended to facilitate knowledge transfer.

8 Hanna Szemző, Levente Polyák, and Harald A. Mieg (*Knowledge transfer in OpenHeritage - a discussion*) discuss knowledge transfer in the OpenHeritage project, includes the roles of models and mechanisms.

9 Dóra Mérai & Volodymyr Kulikov (*Takeaways from teaching a course about adaptive heritage reuse*) discuss knowledge transfer through formal education, reporting on their OpenHeritage-based academic teaching.

10 Katarzyna Sadowy (*Found in translation: Challenges of translating recommendations from an EU-funded project*) reports on the cultural and linguistic challenges encountered in translating the Transferability Matrix into a local language to assist project partners.

JOHN PENDLEBURY

Conservation and the challenge of consensus

Abstract

The chapter starts by briefly recapping some of the key features of the evolution of conservation as an activity since the nineteenth century. I then discuss my own positionality as my own values necessarily inform my analysis. The next part of the chapter discusses sanctioned conservation values and the way they have evolved with the growth of the idea of historic environment, both as a valuable economic commodity and as a source of individual and community identity before discussing what constitutes 'good' conservation practice. The challenges I subsequently discuss that face the conservation movement are intimately related to the successful pragmatism of the sector. The fuzziness of conservation values and principles has often been of benefit as arguments and cases are mobilised to suit the occasion. A much larger issue is the potential for extending processes of definition and management of the historic environment in more pluralistic ways. I discuss this briefly in relation to two wider theories of democratic debate and place governance: 'inclusionary argumentation' and 'agonistic pluralism'. Finally, I discuss the need for critically reflexive debate that can argue for conservation in intellectually rigorous ways as an important and diverse practice and as an important goal within a pluralist, democratic society.

This is the slightly adapted chapter 11 from Pendlebury, J. (2009). Conservation in the Age of Consensus. Routledge, adjusted for readability only. Reprinted with permission.

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1. Introduction

This chapter starts by briefly recapping some of the key features of the evolution of conservation as an activity since the nineteenth century and some of the issues that have gone unresolved in that process. I then discuss my own positionality; my own values necessarily inform my analysis of the challenges that I think face the conservation system and movement. The next part of the chapter discusses sanctioned conservation values and the way they have evolved with, for example, the growth of the idea of historic environment, both as a valuable economic commodity and as a source of individual and community identity. A multiplicity of values exists, and these are important for framing how we conserve. What constitutes 'good' conservation practice is discussed in the next section. While there are clear, authorised sets of principles for managing monuments or sites – the conservative repair approach – no such clarity exists for the management of places, with their multiplicity of buildings (and people). A simple extension of conservative repair principles is both inadequate and impractical. Characterisation, the catch-all term used for a disparate set of methodologies, has perhaps some potential at least in helping to describe and understand place.

The challenges I discuss that face the conservation movement are intimately related to the successful pragmatism of the sector and the issues this conceals, and this forms a significant subtext to the chapter. Though there may be officially sanctioned creeds, the reality is that the activity of conservation is wildly heterogeneous and therefore, inevitably, is not in reality underpinned by any universally agreed values or generally followed practices. At the same time, within the UK, the conservation movement has been very successful as an effective lobby of government and the public and at presenting a united front in doing so. The fuzziness of conservation values and principles has often been of benefit within this process as arguments and cases are mobilised to suit the occasion. Similarly, the pragmatism of the sector has enabled it to move from mid century high modernism and to absorb postmodern influences: sometimes apparently seamlessly, for example with a more diversely defined historic environment, sometimes more contentiously, for example over the nature of legitimate strategies of intervention.

The challenges thus far identified are, at heart, internal to the conservation movement. A much larger issue is the potential for extending processes of definition and management of the historic environment in more pluralistic ways. Changing the nature of conservation planning to respond to this context is admittedly a challenging arena to address, with no simple solutions, and I discuss this briefly in relation to two current, wider theories of democratic debate and place governance: 'inclusionary argumentation' and 'agonistic pluralism'. Finally, I discuss the need for critically reflexive debate that can argue for conservation in intellectually rigorous ways (as well as pragmatically) as an important and diverse practice and as an important goal within a pluralist, democratic society.

2. Evolution

Given the influence of the Society for the Protection of Ancient Buildings (SPAB) and the principles it formulated, it is easy to forget how modest and lacking in influence its origins were. SPAB, Morris and the preceding prophet, Ruskin, are key figures in the mythological history of the conservation movement. They are credited with unveiling universal truths about the value of the heritage and the appropriate actions to sustain this value. They were also activists and, with the formation of SPAB, created the first major society to fight proactively for the cause. Also, they were outwith the state: the clarion cry for conservation came from concerned citizens, not from government diktat.

From the modest origins of SPAB, the conservation movement had developed considerably by the time of the Second World War, both as a voluntary movement and in terms of the first mild pieces of legislation, particularly in the inter-war period. The impact of twentieth-century modern urbanisation was a strong stimulus. This was a modernity that extended beyond the 'deserts' of nineteenth-century industrialism. The growth of a motor-driven nation impacted on the countryside, and market towns and cathedral cities were affected by corporate capital and chain-store architecture. With its assault on this deep repository of values of Englishness, the impact of such modernisation could no longer be ignored. For the originators of the

Georgian Group, rampant speculative development in London was a major source of ire. But many of the conservationists were not anti-modern; rather they sought a *better*, more planned and more sensitive modernism.

As in so many areas of national life, however, the war was a watershed when the role of the state was transformed. On the surface, this period was not necessarily an obvious step forward for the establishment of conservation as an activity, linked as it was with the often competing objective for large-scale planned redevelopment. However, conservation was modestly embedded within the framework of comprehensive planning. In addition, the period produced a series of town- and city-centre plans for historic places, which were the first concerted attempts to plan and manage the process of modernisation and change. As in so many aspects of society, the authority of experts to make rational decisions on conservation and planning issues was barely challenged at this time.

The post-war period was also an important foundation for the next watershed in the 1960s, as the conservation of the historic environment gradually moved from a marginal state activity, acknowledged by, but at the fringes of, town-planning practice, to one of its central objectives. Again, the anti-redevelopment extra-state campaigns of local and national groups form a deeply embedded part of the self-history of the conservation movement, though their ultimate triumph was in winning over the state. Victory involved utilising such tools as the listing of buildings, a mechanism developed for another and more restricted purpose. Legislative strides were made in the late 1960s and early 1970s, but it was, perhaps surprisingly, under the stridently anti-planning Conservative governments of the 1980s and 1990s that conservation's position as a policy objective was fully consolidated. From being an evangelical preoccupation of a small, cultural elite, the conservation of built heritage had become an embedded managerial process. At the same time new issues arose. The principal battleground became, in commercial areas at least, about the extent of permissible change, with developers prepared to work with old buildings if they could be transformed to their perception of the market's wants. They realised that a commodified heritage had economic potential.

Though there are inevitable arguments over cases and resources, virtually no one today challenges the basic premise that the historic environment is important and that the state has a central role to play in its protection and sustenance. Indeed, the same is broadly true on a global scale, with well-established systems of protection throughout most of the western world. Elsewhere, in rapidly modernising countries such as China, rhetoric might often not match reality. However, actions like those of Saudi Wahhabism in deliberately destroying material heritage (Howden 2005) seem iconoclastic. The importance of heritage protection is generally a globally agreed goal, with most countries signing up to the World Heritage Convention. This is the age of consensus.

3. Beneath and beyond consensus

The World Heritage Convention (Convention Concerning the Protection of the World's Cultural and National Heritage), at a global scale, is an articulation of the orthodox values that have grown up over the nature of conservation practice. It is part of an evolving jigsaw of instruments that exist at national and supra-national scales to help define, bind and organise the conservation movement both internally and in terms of carrying its case to the wider world. My own values and aesthetic sensibilities have been honed by my professional experience and relate closely to the modern conservation movement. They help me judge what is important, although this of course is filtered by my own personal experiences. So, for me, old buildings and places are often beautiful, and beauty should be treasured. I am undoubtedly infected by the common English condition of elegiac romanticism for buildings and landscapes lost. I have a belief in the significance of history, for me personally and society generally, and genuine wonder at the survival of things ancient. I have an old-fashioned dislike of waste, which today might be called sustainability. I have respect for the quality of much previous construction and despair at the fumblings of much modern building, and even good new places seem to gain from retaining something old. I have joy in a complex palimpsest of a place with its cheek-by-jowl layerings. I find it difficult to be sanguine looking at PVCu windows inserted into a beautiful old building.

While I might rationalise these responses into frameworks provided by the conservation movement, it is clear to me that they are essentially emotional. Furthermore, the buildings and places I treasure most, as well as being beautiful to my eyes, usually have personal associations with people or a particular time in my life. They are part of *my* narrative, *my* heritage. Furthermore, my attitudes towards the historic environment and its conservation are embedded in my wider values. Thus, although I believe conservation to be an activity that is fundamentally beneficial to our society, and that the state should protect the historic environment and provide resources for so doing, at the same time conservation as a practice does have wider social and economic impacts. While there are dangers of being hijacked by shifting short-term goals, for me these impacts should be compatible with a progressive political agenda.

The understanding of value as a neutral commodity to be revealed by the correct processes of investigation, which can be conducted only by a limited body of experts, is thus problematic. While such experts *may* be able discursively to channel their own responses and preferences into consensual channels internal to their profession, there is a wider issue here: the heritage we define and seek to protect is what we make it. The nature of heritage is that it is socially constructed; value is never an *intrinsic* quality but is externally imposed according to culturally and historically specific frameworks. These may be culturally, or temporally, collective or may be very personal; we each have our own value frameworks. Thus, value becomes an arena for plural interpretations and meaning. What need discussion therefore are conservation values: the reasons why, and what, we seek to conserve and the implications that lead from this as to how we conserve. Finally, we need to think about who decides what happens – whose heritage is it?

4. Conservation values

Specific value frameworks have been evolved by conservation practitioners as part of the process of justifying and framing the importance of conservation as an activity, starting with Alois Riegl, at the time the Austrian state-appointed 'General Conservator', and his range of cultural values divided

between 'memorial' and 'present-day' (Jokilehto 1999). There is tremendous continuity in these ideas over more than a hundred years. Indeed, some of the central tenets of the conservation-planning system and its emphasis on 'special architectural or historic interest' have shown a similar degree of continuity. Yet, much recent discourse about the desirability of conserving the historic environment has not been driven by traditional conservation values. We need, therefore, to consider further what values might be coming into play.

Governmental descriptions of the benefits said to accrue from our built heritage have expanded dramatically since the early 1970s. For example, the government's statement on heritage issues, *A Force for Our Future* (Department for Culture, Media and Sport and Department of Transport, Local Government and the Regions 2001), waxed lyrically and extensively about the role of conservation in establishing environmental quality and identity, local distinctiveness and continuity and as an active part of social processes, including community cohesion, social inclusion and as a stimulus for creative new architecture. Furthermore, in addition to these social benefits, conservation was held to aid economic processes and economic regeneration in particular.

From this web of motivations for sustaining heritage, I would like to draw out a number of binary divisions. These are not intended as hard and fast dualisms, but simply as a mechanism for illustrating some significant issues. The first distinction has significant implications for how we think about heritage value. Over recent decades the historic environment has been argued as important for its asserted role in affirming individual and group place-identity.

This rationale was evident in the 1970s but became submerged in the market-driven 1980s, as we can see with the commodification of locales such as Covent Garden. In the last decade or so, such values have begun to re-emerge into a place of prominence. For the first time they are reflected in government policy objectives, highlighting access and inclusion. As was discussed in the previous chapter, the stress that is currently being placed upon the value of continuity and familiarity in the built environment implicitly emphasises the significance of *ordinary* environments, whereas, historically,

conservation systems of selection and classification have sought to distinguish what is *special*. Furthermore, an emphasis on continuity implicitly contains an element of social policy; it suggests that the historic environment should sustain existing communities, rather than being an empty, architectural vessel. Thus, displacing effects such as gentrification should be viewed critically.

The second division follows from the distinction made both by Riegl and Feilden and Jokilehto (Jokilehto 1999; Feilden and Jokilheto 1998): Motives for conserving heritage have been separated into those uses that are explicitly concerned with current use values, and those that conceptualise heritage in terms of an inheritance over which we have a short-term custodianship. This resonates with Castells' distinction between groups that seek to control *time* and those that seek to control *space* (Castells 2004) (although, for Castells, controlling space was primarily a defensive impulse, for example, as used by 'NIMBYs'[1]). In understanding the ideology of the conservation movement, the focus on environmental stewardship, on the long term and the rights of subsequent generations, is crucial. This premise was embedded in the founding principles laid down by John Ruskin and William Morris. Heritage was established in a way whereby, it was argued, rights and ownership transcended property ownership and extended temporally to include both the producers of the material heritage and future generations. Though today we might conclude that the nature of heritage is fundamentally the contemporary use of the past, we should recognise the significance of this value framework and that, while heritage as a process exists in the present, it also has a history.

Much of debate over contemporary use values in recent years has distinguished between *cultural* and *socio-economic* motivations for sustaining the historic environment, and this forms my third binary division. These factors are frequently closely intertwined; social or economic exploitation requires a cultural asset, and most defined heritage consists of buildings that require social or economic use to sustain them into the future. The professional activity of conservation, within and without the planning system, is usually

1 NIMBY stands for "not in my backyard" and refers to the opposition to changes, especially infrastructural ones, planned close to one's home.

linked to cultural concerns, and this is how conservation professionals usually construct their own identity. This is perhaps even more true for those who are committed to conservation through involvement in amenity societies rather than directly working in the sector. Sets of principles, laws and policies have evolved that seek to sustain the cultural value of the object, often held to be embodied in the material fabric. However, we have seen over the last two decades or so that perhaps the key conservation policy discourse has become that conservation is complementary to, first, economic and physical and, more recently, social regeneration. This has involved the heritage sector adopting a heterogeneous pragmatism over ideology as part of the process of sustaining consensus on its political credibility. Indeed, a drive for economic development may clash with sustaining the fabric of material heritage; it is a paradox of World Heritage Site status that recognition of 'outstanding universal value' may immediately place such value under stress. Market processes tend to sanitise and present a simplified narrative to the consumer. From a modern conservation perspective, the lack of regard for the notion of authenticity is particularly troubling.

Somewhat cynically, one might add a fourth distinction: the term *values* is often used to justify conservation activity to other conservationists; the term *benefits* is used to justify to others, such as politicians, why they should value what we do. To use a religious analogy, values are a matter of faith. The conservation faith group then claims instrumental benefits for their belief system, for example, in terms of economic regeneration, but these are not the reasons for belief. Extending the analogy, it is like saying the church is important because it gives a sense of community, rather than because its members believe in God. At the heart of the conservation movement, and the conservation system and planning systems, there is an emphasis on what is identified as special and in seeing this patrimony as intrinsic and timeless, removed from transitory temporal and socio-economic processes. Yet, at the same time, in order to sustain the policy and political significance of conservation planning, arguments are made stressing the importance of the familiar and of the important role of the historic environment in achieving economic and social regeneration.

In practice, the benefits argued to accrue from the conservation of historic environments are sometimes closely tied to the historic status of a place, and sometimes these qualities appear useful but not essential. For example, if we value an old building for its historic evidential value, its historic nature is clearly central, but if we value an old building for the useful role it can play in regeneration, this may be valuable but doubtless could be achieved in some other way. This distinction between *fundamental* and *incidental* values discussed in the previous chapter is the final binary distinction I wish to make. In the same way that the Burra Charter process aims to establish significance (cf. Waterton et al. 2006), this distinction can help clarify why we seek to conserve a place and, therefore, how we should aim to conserve it.

The binary divisions I have outlined give some of the reasons (although it is by no means an exhaustive list) why we might seek to conserve heritage or what we might seek to achieve in doing so. So, for example, we might want to keep old buildings because they are rare works of an important architect, or because, though they lack any great architectural merit, they form a familiar backdrop in our everyday lives. We might think of them as being valuable for future generations, or for contemporary study. We might see them as saying something about the importance of national cultural achievement, or a useful aid in achieving social and economic regeneration. They might be a useful asset in a wider process or, alternatively, fundamental to our objectives. All these may be perfectly valid goals and motivations. Indeed, as a conservation practitioner I have used them all myself when the occasion has suited. However, it is important to understand our goals in any particular situation, not least as it may dictate the nature of the conservation process we wish to follow.

5. 'Good conservation' and the management of place

Though the discourse over the nature of heritage and the purpose of conservation has undergone transformation, accepted principles about *how* places should be conserved remain rooted in principles that began to be codified in the nineteenth century. The conservation movement and conservation practitioners have stood steadfast by the principles of the founding fathers.

Modern conservation practice has thus evolved from the key foundation document of the SPAB manifesto (Morris 1877), and 'modern conservation' has largely prevailed as an ideology over other ways of thinking about material heritage. This dominance has also been replicated on the international stage through the efforts of supra-national bodies such as ICOMOS (International Council on Monuments and Sites). Conservation, though it has sought to adapt to the uncertainties of the contemporary world, is an intrinsically 'modern' sensibility, relying on an ethically based rationalism, involving, for example, scientific principles of selection and emphasis on authenticity of material fabric. Though the very notion of an 'ethically based rationalism' is problematic, from my own modern, conservation-informed perspective, these remain meritorious principles and methods of continuing relevance in many situations and, perhaps in particular, for the conservation of the sorts of cultural monument for which they were evolved.

However, the conservation movement has struggled to develop anything as coherent for conservation at the urban scale, as part of a wider process of town planning. British practice has tended enthusiastically to embrace visual ways of seeing places and buildings. Townscape is a term that continues to be very frequently used in discussing the management of historic places, yet little has been written to advance this as a means of urban management since the seminal works of the 1960s. It remains a loose concept applied even more loosely, unfashionable in the domain of urban design for a superficial emphasis on visual composition. Proponents of urban morphology have argued that this concept be applied as a means of urban management of historic places, but, by and large, it remains trapped in academe. Some general sense of the significance of urban form has permeated into practice, but the resource intensity of Conzenian-type studies (e.g., Conzen 1960) would seem to preclude them ever becoming a widespread management tool.

In practice, the sheer extensiveness of protection, in the UK in particular, means much 'conservation' takes place removed from any such ethical and considered niceties. It is here that the British emphasis on the visual becomes more problematic. It is evident that much that occurs under the name of conservation management through the British planning system is geared

to achieving a visually acceptable result; conservation planning is a bureaucratic system often geared to achieving lowest common denominator minimum standards (Hobson 2004). Façadism is perhaps the starkest example of this. The importance of sustaining our historic environment might be a matter of consensus in planning and development, albeit perhaps only reluctantly accepted by some, but the manner in which this is achieved in practice is often far from the conservation orthodoxies discussed above. There are no generally agreed principles for the management of the wider urban environment, and the sheer extensiveness of protection means that there will *never* be the resources, and *never* the skills, for a modern conservation ideology to prevail in all these cases, even if there was political and societal support for doing so.

The emphasis on appearance produces results that may often dismay many conservationists, including the current author, but often seem to be welcomed and liked by wider society, including many other self-identified conservationists. The core of the conservation movement is often a long way from the wider public, from which it derives legitimacy, in its view of what constitutes proper conservation. Ultimately the core conservation community is small. Conservation as a movement relies on a wider group of people active in local conservation planning processes, and on a wider sympathetic public. Beyond the inner circles, conservation carried out with an emphasis on visual appearance may well represent a reasonable balance between historic 'character' and modern functionalism (and, indeed, orthodox practice, which, for example, advocates the introduction of visually identifiable new fabric, may jar with the wider public). The notion of authenticity, so central to conservation thinking, may in reality have little role in much conservation planning. We can view the reduction of orthodox conservation goals to a 'heritage aesthetic' as a postmodern conservation practice, stripped of the carefully constructed ethical framework of modern conservation.

However, perhaps in some circumstances this is legitimate; perhaps it is the sustenance of broad character that matters, rather than the application of fabric-based principles. The concept of character (e.g., Sharp 1968, Worskett 1969) has long been mobilised as a means of defining the essence of place that should be sustained in a process of change, its vagueness useful to

planners able to interpret it to their own purposes. Its formal articulation into the conservation-planning system came with the legislation that introduced conservation areas. Nearly thirty years after the current concept of conservation, area character appraisal was formalised using a combination of townscape analysis together with some basic analysis of historical evolution. Subsequently English Heritage in particular has promoted the process of characterisation (cf. English Heritage 2000) as useful in a wide range of places, including those not formally identified as having heritage value. It has been argued as a means of understanding the 'everyday' and as a tool for public participation. In practice, though, characterisation work being undertaken is often reductive in nature and varies wildly in methodology, and it remains to be seen whether, as a technique, it can be developed in ways that accept pluralistic definitions of heritage definition and interpretation. Furthermore, while characterisation may have potential as a tool to achieve a better understanding of place, it does not in itself deal with a critical issue – how decisions are made.

6. Conservation, community, conflict and control

There is a series of different levels of engagement that people might have with built environment conservation. There is a small group for whom it is an occupation or activity central to their identity. Other levels of engagement include a wider group active in conservation planning issues but for more obviously instrumental ends (albeit perhaps connected to a genuine attachment and passion for a place); a much larger group that usually plays no active part in the protection of the historic environment but has an active appreciation of it; and, finally, the more routine engagement most people have with the typically modest historic environment that they encounter as a backdrop to everyday life.

Across the wider heritage sector, there has been a strong emphasis in recent years on increasing engagement; on broadening the constituency for heritage. One strand of this activity has been an access agenda, helping more people in society benefit from established definitions of heritage. Improving access can include physical access, intellectual access and financial access.

Whether such moves are part of a liberal progressive process or, as some would argue, part of sustaining existing power relations, is a matter of debate. Either way, ultimately it is a relatively limited agenda. Bigger challenges come from allowing more pluralistic definitions of heritage and from extending some measure of control over decision-making in the historic environment.

Addressing these issues demands institutional learning, whereby heritage bodies begin to learn how to question their own values. To do so is a demanding task for the conservation movement: to sustain its historic trajectory away from patrician elitism while sustaining core meaning and practices where appropriate. Pluralism and diversity, and the partial 'letting go' of power and control they imply, are inevitably a challenge for a practice traditionally expert-defined and -led. This is made more complicated still if we accept the contingent and changing nature of values we attribute to heritage. This is not just an issue of extending access, important though that goal maybe; it is also about a pluralistic widening of who defines heritage, why it is considered important, what should be conserved and how it should be done.

Smith, focusing on indigenous groups in Australia and community-based examples in the UK, has argued cogently about the importance of control over heritage process in terms of creating personal and cultural meaning and the validation of a sense of place, memory and identity to particular and identifiable communities (Smith 2006). In the UK the resources of the HLF (Heritage Lottery Fund) have allowed it to support activities developed and controlled by local community initiatives that, in theory at least, might facilitate such empowerment. However, while it *may* be possible to identify a suitable community of ownership for particular projects, when considering the broad activity of the conservation of the historic environment, part of the spatial planning system, these issues become much more difficult.

Literature on heritage management has little to offer on the resolution of these thorny issues. However, in recent years, such concerns have been a major focus in debates concerning the nature of democracy. One major (and contested) statement of such theory, specifically applied to the field of place governance, is the idea of 'collaborative planning' (Healey 2006). At the heart of her argument is a process of 'inclusionary argumentation' within which

different forms of knowledge and reasoning and different values and systems of meaning are developed into 'conversations' between stakeholders from different social worlds and cultures. The focus is on the processes through which participants come together, build understanding and trust and develop ownership of whatever strategy evolves. Changing such soft infrastructure of practice should be accompanied by changes to hard infrastructure, to the design of the political, administrative and legal systems that facilitate these processes or 'systematic institutional design'.

An alternative position, which critiques the consensual nature of inclusionary argumentation approaches, has been advanced by Mouffe, amongst others: it is held that such ideas ignore the inherently conflictual nature of democratic society (Mouffe 2000). Mouffe argues instead for an 'agonistic pluralism' that recognises that mutually incompatible positions are a legitimate and necessary part of democratic debate. The democratic challenge is for such differences to occur in a framework of mutual respect rather than, say, violent conflict. The further challenge is to reconstitute the nature of power, inherent in any social relationships, in more democratic, pluralistic ways.

Exploration of these theoretical models may be helpful in developing the nature of conservation planning as a democratic process in a pluralist society. At the same time, some caution must be expressed; it is hard to see immediately how such abstract formulations might translate into practical strategies of action; they also ignore some of the specificities of the conservation-planning story. Discussions about the broadening of control often implicitly, or explicitly, tend to assume the ceding of power from an over-dominant centre to some form of more locally based governance. Yet the establishment of the policy weight enjoyed by the conservation-planning system was due in large part to the top-down interventions of central government overriding recalcitrant local authorities in the 1970s, and the consolidation of this position in national planning policy in the 1980s and 1990s. A 'letting go' of control by a centralised body of experts, away from the accepted regulatory framework, might in practice lead to local development nexuses, generally powerful in local governance, moving in, with consequent traducing or even erasure of the historic environment. Devolving power further to local

communities may just result in empowering a NIMBYism that is, in reality, primarily concerned with other issues, such as sustaining property values. The conservation-planning system and the principles that apply to its management may be part of a wider hegemonic discourse, sustaining the power of a cultural elite, but is this necessarily worse than ceding power to an economic elite or to an exclusionary local politics? It is a difficult circle to square: devolving power – but to the 'right' recipients.

Addressing the concerns raised here does not necessarily suggest rapid institutional change. In the short term, it might be the same professionals administering the same systems but in a more critically reflexive way, more systematically engaging wider stakeholders and cultural communities. The ethical framework of the conservation practitioner becomes redefined to extend from a concern with the material fabric of the historic environment to include a duty to attend to the views of all those people who might have a cultural claim to that place. Gradually systems can be redesigned to facilitate this. This is not just about seeking to empower local communities. Often people outside a locality, outside the region or outside the country will have a legitimate voice that should be heard. And of course, this should include the right not to engage. As Shore has shown, not all the wider public wishes to engage with professionals over issues of heritage definition and management (Shore 2007).

7. Closing words

There is much to celebrate in the history of conservation. The transformation of conservation from the marginal preoccupation of an artistic elite to being an important consideration in the management of the environment is a remarkable and, I believe, fundamentally positive achievement. Yet we should not forget the patrician origins of the activity, nor their ongoing significance that, for me personally, does not always sit comfortably with the wider values I hold. Many in the conservation movement *are* part of a self-defined cultural elite (Hobson 2004), while often spuriously claiming to be 'the voice of the people' (Law 2004).

Ultimately, I believe, conservation should also be compatible with (but not driven by) a progressive modern liberal political agenda, corresponding with my own wider value framework. If as conservationists we believe that the goals we pursue have a relevance to society as a whole (and are not just our hobby) and should be embedded in an extensive system of state regulation, we need to accept both the social and economic consequences that follow and that these are not inherently beneficial or benign. British conservation has been guilty of over-fetishising the object. Conservation strategies that inextricably link physical and social regeneration, such as that tried in Bologna in the 1960s and 1970s, have not been common. However, conversely, the need for cultural programmes to contribute to social and public policy outcomes, such as regeneration, has put increasing pressure on policy arenas, such as conservation, to respond to government objectives. The need for the conservation of historic environments to be more plural and democratic in nature should not be synonymous with slavish responses to shifting political imperatives.

Acknowledging that conservation can have regressive consequences should be part of a more reflexive conservation debate. The heritage sector should be *critically* researching and examining the benefits it claims for the activity of conservation. Benefits asserted, such as the contribution of the historic environment towards personal or collective identity, towards regeneration or towards a process of social inclusion, often have weak underpinnings in terms of theoretical and empirical evidence. Much of what passes for conservation research seeks uncritically to affirm predetermined outcomes. Indeed, the British conservation movement's mobilisation to prove the value of conservation has been matched by its denial of the negative social consequences that may derive from conservation actions, albeit these may be unintended. Physical transformation *may* engender gentrification, displace non-powerful groups and suppress narratives of place that do not sit easily with new commodifications. At times these outcomes have been directly facilitated by conservation policies and programmes. Since the 1970s the conservation movement as a whole has, at best, been disinterested in these potential consequences of conservation actions; this stands in marked contrast

to a pragmatic willingness to assert its relevance to achieving benefits of any kind, including social inclusion.

New understandings of the world brought about by postmodernism, or the 'cultural turn' with its revealing of the socially constructed nature of heritage and conservation, the power relations this embodies, the critique this presents to the authority of expert knowledge and values and its dissipation of grand narratives, challenge the essentially modernist practice of conservation. These perspectives provide a clear critique, often effective in puncturing our sense of self-righteousness, but they are less good at providing alternative frameworks capable of practical implementation. The after-modernist challenge is about finding coherent routes through this fuzziness.

One outcome of this should be more explicit discussion of what we are doing as conservationists and why. The hazy consensus that exists over the desirability of conservation, which enables arguments over its benefits to be opportunistically presented and at the same time hides underlying tensions and unresolved issues, has a utility in practical politics. Yet the ambiguities this creates should be of concern to conservationists, because they help conceal destructive and inappropriate acts and create problems for conservation as a justifiable and coherent practice. This surface consensus masks difficult political, philosophical and technical issues about what to do in specific cases.

If there are multiple reasons why we might wish to conserve, and multiple views about which reasons are relevant or irrelevant in any one case, these emphasise the importance for those experts in control of decision-making processes to be both open and receptive to these different perspectives and to be clear and explicit about the basis upon which decisions are made. In doing so we should not smooth over conflict but, as the agonists argue, accept it as a necessary part of democratic negotiation. At the same time, we should try to make our systems and processes open to those who wish to engage in such debate.

Linked to this should be a clearer acknowledgement of the heterogeneous nature of what falls within the ambit of the historic environment and the diverse principles and techniques that might then be applied to its management. There *is* a difference between an artistic masterwork and a local landmark; or between an uninhabited architectural monument and a large-scale

social-housing development, which might also happen to be a modernist icon. This makes for a multilayered heritage, and the ways we seek to manage this should be qualitatively different. For example, local lists *shouldn't* just be a record of buildings that didn't quite match the criteria for statutory listing. This does involve empowering different groups in decisions over the definition and management of the historic environment. There will be mess, mistakes and bad decisions, but then these are all features of the current system.

Finally, in the not so distant future, circumstances may be such as to provide challenges of a radically different scale and order to anything thus far discussed. Climate change may not just affect our everyday conservation practices, but also our sense of the progression of history and the evolution of hybrid, palimpsest landscapes. The decades ahead may prove to be an era of literally letting go of cultural built heritage.

Postscriptum 2023

If I were writing this chapter today there is undoubtedly much I would change, but there are perhaps three particular issues facing heritage management that would need further development. First, is the way that economic drivers have become predominant in heritage decision-making during the last decade. This is noticeable in the UK, where economic goals are increasingly institutionalised in heritage management, but is part of a wider global phenomenon. Second, whilst a changing climate was briefly alluded to in the chapter, a decade and a half on the visible consequences of a changing climate are now all too alarmingly apparent. Much remains to be done in understanding the consequences for heritage and the management of the built environment more broadly. This relates both to climatic impact on heritage, but also the need for heritage management regimes to better address how they contribute to carbon emissions. Finally, but not least, the historic injustices made material in the historic environment have rightly received much greater attention in recent years, although again, much work remains to be done. We need to reappraise and develop a more nuanced understanding of much of the historic environment, which we might once have uncritically considered to be historically important and beautiful.

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The Transferability Matrix

Abstract

This chapter deals with the transferability of measures for the reuse of heritage objects (buildings, sites, etc.) in Europe. It offers insights into the OpenHeritage project, which was concerned with adaptive heritage reuse (AHR) in Europe. Moreover, the chapter outlines the considerations to formally frame the issue of transfer, resulting in a transferability matrix (as requested by the European Commission). The discussion centers on issues of transfer and transferability in AHR in general, and the relationship between professionalization and formalization in particular.

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The European Commission is deeply concerned with the issue of transferability: Can policies or planning concepts that have been developed and successfully applied in one place be transferred and applied to another place? This is not a purely theoretical question; it concerns governance, and calls for a coherent governance system in Europe. This chapter deals with the transferability of measures for the reuse of heritage objects (buildings, sites etc.) in Europe. It offers insights into the OpenHeritage project, which was concerned with preserving European sites of diverse heritage value, including those lacking formal recognition or protected status. Moreover, the chapter outlines the considerations for formally framing the issue of transfer, resulting in a transferability matrix.

The OpenHeritage project ran from 2028 to 2022, bringing together academics from diverse disciplinary backgrounds, and practitioners with various roles in heritage management and reuse planning from 11 countries. OpenHeritage understood heritage "not simply as a physical object or something defined exclusively by heritage authorities, but as a complex assemblage of interconnected elements – including buildings, places, objects, knowledge, ideas, and practices – that accompany a heritage object" (Oevermann et al. 2023, p. 160). OpenHeritage identified and tested challenging practices of *adaptive heritage reuse* in socially or geographically marginal contexts throughout Europe. The focus was on community-driven heritage projects.

As requested by the European Commission, OpenHeritage foresaw the creation of a transferability matrix (TM) that condensed the many case study experiences explored within the project and addressed the issue of transferability in general. In concrete terms, we might ask: Can the collaborative reuse of a former convent in Naples by small business owners and cultural projects (Scugnizzo Liberato, https://scugnizzoliberato.org/) be implemented similarly in Budapest or Warsaw? Or: What underlies the successful spread of the "ruin bars" concept that started in Budapest (https://ruinbarsbudapest.com)?

1. OpenHeritage and the Transferability Matrix

The task specification for the TM was part of the European Commission's terms of reference; it addresses the transferability of "good practices and policies" for adaptive heritage reuse (AHR, cf. Lanz & Pendlebury, 2022) and speaks of "mechanisms" that influence their transferability." The task was to develop *a complex transferability matrix that points to mechanisms that promote the transferability of good practices and policies, but also to those that hinder it*. For a first, basic version of the TM, we can define a matrix by combining transfer *mechanisms* on the one hand, and on the other hand the *transferability* of good practices and policies, as depicted in Figure 1. For an advanced version of the TM, we use *models*. Models often include references to their conditions of use (e.g., regarding funding). This allows conclusions to be drawn about the most appropriate mechanisms for applying these models.

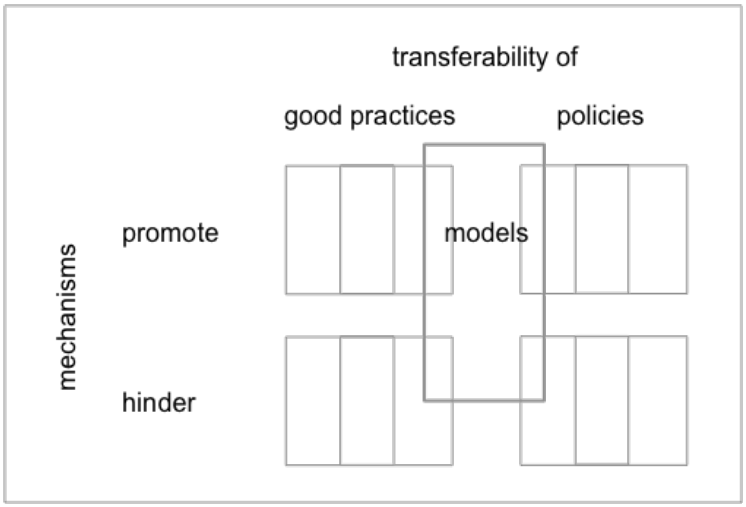


Figure 1. Structure of the transferability matrix (TM), including models. In principle, the matrix has two dimensions: transferability (horizontal axis, listing good practices and policies in AHR) and mechanisms (vertical axis, distinguishing '*promoting*' versus '*hindering*' mechanisms).

In planning as in AHR, cases deriving from other cities or countries are often used as a guide. However, case studies have a general problem: If cases are too specific, they may not appear transferable to different situations; if they are too abstract, the case may seem irrelevant. Therefore, as a guide, we often use general models that represent typical combinations of good practices and policies. Such models are somewhat generalized, but their core lessons can still be illustrated by specific case experiences. In addition, the *local reference* – and often the national context – comes into play; the more important or decisive these local or national factors, the less scope there is for adaption and transfer to other contexts. Thus, if one focuses solely on the historic authenticity or uniqueness of a given case, there is no scope for transferability to other settings. These challenges of case-specificity and local conditions make the use of models more important for transferability.

Figure 2 shows the final version of the TM as a matrix of models and mechanisms. The mechanisms represent types of application conditions for the models, e.g., political or legal framework conditions. There are more models, and there could be more mechanisms. The next two sections present the models and mechanisms in more detail.

	CLT (see 4.2.1)	**Cooperative** (see 4.2.2)	**NPO** (see 4.2.3)	**Private** (see 4.2.4)	**Commons** (see 4.2.5)	**Municipal Ownership** (see 4.2.6)
Stakeholder Integration						
Governance						
Project Management						
Contract Options						
Funding						

Figure 2. The OpenHeritage transferability matrix (final version; Mieg, 2021), here showing the example of ownership models. The models are described below in Table 1, and the mechanisms in Figure 3. The shading indicates whether mechanisms are relevant here (dark gray = highly relevant). In the case of ownership models, funding is particularly relevant.

2. Models

Models can be excellent vehicles for building communication and understanding, and can support all aspects of transferability assessment (planning, decision-making, etc.). Models have a medium degree of abstractness. In the context of OpenHeritage, models represent typical combinations of good practices and policies for AHR. Therefore, models are sufficiently abstract to be applied to different settings. At the same time, they can be represented by concrete examples and are thus sufficiently specific to be of practical use. This is well illustrated by ownership models (see Figure 2), which play a major role in AHR. Cooperatives are one such ownership model. Cooperatives may be represented abstractly (e.g., their characteristic values, legal structures, and organizational concepts), but can also be made tangible through practical examples from different countries.

In the context of OpenHeritage, we can distinguish three types of model: first, *thematic models*, e.g., concerning issues such as the ownership of a property; second, *models of good practices*, e.g., successful strategies for initiating AHR and making it heard in the city, or forms of (inclusive) urban policy that enable the embedding of AHR projects in the urban community; and third, *model cases*, i.e., specific projects or cities that can be considered as role models for AHR, such as the Old Market Hall (Stará Tržnica) in Bratislava. The use of a rolling utilization and development concept made it possible to breathe new life into the hall and restore its function as a central location for the community. Tables 1 and 2 show the OpenHeritage models sorted by two factors: first, ownership models; second, general strategies (with implications for policies) and specific cases which may serve as role models. The large number of different ownership models demonstrates the great importance of ownership issues for AHR.

Table 1. OpenHeritage models of adaptive heritage reuse: Ownership models (for details refer to Mieg, 2023).

Ownership Models					
CLT: Community land trust	**Cooperative**	**NPO: Non-profit organization**	**Private**	**Regulation of the commons**	**Municipal ownership**
A CLT is a model of community-led development, where local non-profit organizations hold land, and develop and manage homes and other assets important to their communities	A cooperative is democratically owned by its members; it is autonomous and self-organized. Cooperatives have existed in Europe since the Middle Ages	In this model, a non-profit organization acquires a property and leases it on condition that its subsequent functions are not merely profit-driven	In this model, a private investor with a social agenda provides a property that they already own or have acquired. (e.g., the Jam Factory contemporary art centre, Lviv, Ukraine)	In Italy, the ownership model of the commons is based on constitutionally granted access to "common goods" for "civic use" (Art. 43 of the Italian constitution; cf. URBACT, 2018)	Municipal ownership can be an element of a city's strategic land use planning. The actual site management can vary greatly depending on the property, context, and stakeholders

Table 2. OpenHeritage models of adaptive heritage reuse: Strategies and cases (for details refer to Mieg, 2023).

Strategies and Cases					
Heritage strategies	**Governance of inclusion**	**Flexibility**	**AHR tactics**	**Cases as models**	**Disintegrated models**
- Obtain formal heritage status - Preservation by using - Raise awareness - Connect heritage with people - Align with socio-economic values - Amplify the heritage links - "Mainstream" heritage - Explore multiple layers and voices - Different understandings of heritage	- Setting up an open, participatory process - Designing space to be accessible - Ensuring affordable housing - Empowering marginalized groups - Strategies of sharing power - Politics and policies to support inclusive processes	Flexibility in AHR increases gradually with: - Adaptability - Diversification - The creation of ecosystems (Szemző et al., 2022)	1. Problematization: e.g., informal meetings 2. Interessement: e.g., capturing local knowledge 3. Enrolment: e.g., structuring the decision-making process 4. Mobilization of allies: e.g., creating a network of projects	Two sites, two cities: 1. Szimpla Kert, Budapest: The potential of the place! (https://ruinbarsbudapest.com/szimpla-kert-ruin-bar/) 2. Stará Tržnica, Bratislava: You need a business model 3. Naples: Regulate commons 4. Lisbon: An active, integrated strategy	Examples: - Touristification (e.g., Berger & Pickering, 2018) - Gentrification (e.g., De Cesari & Dimova, 2019) - Heritagization (Bessière, 2013) - Commodification (Goulding, 2000) - Musealization (e.g., Macdonald, 2013) However, open heritage requires community integration

3. Mechanisms

Part of OpenHeritage's mission was to identify "mechanisms that promote the transferability of good practices and policies, but also those that hinder it". The impact of political mechanisms is obvious, for example in the political value given to heritage issues, whether funding is made available, or a legal framework has been established, etc. Such mechanisms can also be found in communication at the local level, as the success of a planning project may depend on how local stakeholders feel about it and whether they can be involved. In OpenHeritage, we identified five core mechanisms:

Stakeholder Integration refers to the social function. This is about conditions of community-building and communication in a community – in short, the cooperation of local actors.

Governance is concerned with the political function and framework conditions: These may be formally regulated within a political system, but may also consist of the informal exercise of power.

Project management refers to the specific organisation and management of a particular AHR project (tasks, time, people, resources…).

Contract options refers to the range and effectiveness of legal arrangements to contract appropriately for a specific AHR case.

Funding concerns financing and securing resources for an AHR project (e.g., Patti & Polyák, 2017).

It is important to note that this list of mechanisms is by no means exhaustive. One obvious additional consideration for heritage is the spatial dimension. How large is the heritage object, where is it located, how is it accessible, etc.? For AHR, it makes a big difference whether the heritage is a single building or an entire neighbourhood; whether it is located in an urban or rural context, etc. It is easier to transform a single building than an entire neighbourhood; and easier to define and activate a community for a heritage site in a city than for an archaeological site in the countryside. In practice, the spatial dimension was very much in the background in OpenHeritage, and therefore did not find its way into the TM.

As OpenHeritage has shown, all five mechanisms matter. If one mechanism becomes too dominant, then heritage reuse can lead to a "dis-

integrated" model (see Table 2), such as the funding aspect in cases of heritage "touristification" (e.g., Berger & Pickering, 2018) or gentrification (e.g., De Cesari & Dimova, 2019). To understand the extent to which mechanisms are considered, an AHR traffic light system was proposed. For each type of mechanism, four categories of conditions that affect AHR can be identified:

- Sufficient conditions (success factors): highly recommended to do / to have / to use
- Necessary conditions: necessary to do / to have / to use
- Important constraints: to take into account

Figure 1 shows the traffic light system, indicating sufficient (green, top spot), necessary (yellow, middle spot), and knock-out (red, lowest spot) conditions. The exclamation points warn of important constraints.

MECHANISM	FUNCTION		
		🟢	highly recommended to do / to have / to use
		🟡	necessary to do / to have / to use
		🔴	to avoid (hindering mechanism)
		!	important constraint (to take into account)
Stakeholder integration	Social	🟢	early engagement of key stakeholders
		🟡	community integration/building
		🔴	lack of social trust
		!	shared values
Governance	Political	🟢	support by local authorities
		🟡	multi-level governance
		🔴	lack of transparency
		!	power relations
Project Management	Managerial	🟢	(social) entrepreneurship
		🟡	team building & timing
		🔴	incompetence
		!	intermediaries, potential of the place
Contract Options	Legal	🟢	long-term contract security
		🟡	ownership / partnership model
		🔴	insufficient legal system
		!	contract options may limit funding options
Funding	Financial	🟢	business model
		🟡	sustainable funding
		🔴	corruption
		!	non-financial resources (resource integration)

Figure 2. Core mechanisms (or causal channels of action). To become practical in OpenHeritage, these mechanisms need to be combined.

The mechanisms can overlap or be somewhat mutually dependent. As mentioned, *functions* were specified (e.g., *political* or *financial*) to which the mechanisms contribute. As an example, consider the mechanism of *stakeholder integration*. This is listed first in Figure 1 because open heritage is an approach that understands heritage in relation to a community for which a heritage object has meaning. This mechanism concerns a *social* function, i.e., it is about how actors (people and organisations) refer to each other in a place. From there, community is defined as a group of actors based on networks of shared interests and often a shared history associated with the place. The four 'social' conditions mentioned are:

1. Highly recommended (green, top spot): *Early involvement of key stakeholders*. Early involvement of key stakeholders is important to gain both information and support for an AHR project and to avoid blocking key stakeholders at a later stage.
2. Necessary (yellow, middle spot): *Community integration/building*. An AHR project needs to make a positive connection to its local setting. Sometimes it can be useful to use the AHR project as a catalyst for neighbourhood development or in community-building (e.g., Davoudi & Pendlebury, 2010). Community building is a guiding requirement of OpenHeritage.
3. To avoid (red, lowest spot): *Lack of social trust*. Without trust, local collaboration cannot be developed.
4. Important constraints: to take into account ("!"): *Shared values*. Shared values provide a good foundation for motivation and collaboration in planning (see 'bridging values', Oevermann & Mieg, 2021). Opposing values can have an unfavourable impacts on AHR projects.

The understanding of mechanisms in the TM is characterized by the fact that they should preferably represent a different category than policies and good practices. This is because the policies and good practices (or models) determine one dimension of the TM, and the mechanisms determine the other dimension (as in Figure 1). From this emerged an understanding of mechanisms as *enabling conditions* for policies and good practices (or models). However, discussion of the TM revealed yet another slightly different meaning of mechanism: as a strong set of measures that make a desired effect likely

(see Chapter 8 of this book). For example, the 1997 Kyoto Protocol defines "mechanisms" for CO_2 reduction, i.e., a mix of economic and legal regulations and incentives, such as in the form of CO_2 emissions trading. In the following, I term these *higher-level mechanisms* because they consist of combinations of elementary measures.

Table 3 lists six potential higher-level mechanisms. They combine measures from the five or more mechanism channels shown in Figure 3 that increase the chance of implementing AHR. Not all of the mechanisms in Table 3 correspond to the OpenHeritage approach. I have therefore listed *Conservation Law* as the dominant mechanism. Here, heritage is protected by law, and further regulations govern what kinds of adaptive heritage reuse are possible. The chapter by John Pendlebury (see Chapter 6 of this book) outlines the difficult path that conservation law has taken in the UK. The mechanism of *musealization* exemplifies the implementation of potentially disintegrated models for AHR (see Table 2). A local authority may decide to turn a heritage site, such as an abandoned prison, into a museum or a memorial; the meaningfulness of such decisions is open to debate.

Third, *commons-based regulation* means that a heritage site in a community is declared a common good and that AHR measures follow from this. This has proven successful in Italy, and can be implemented somewhat similarly in European cities elsewhere (see URBACT, 2018). There is prominent research on the regulatory effect of commons (starting from Ostrom, 1990), and in this respect it is justified to speak of a mechanism here. Two higher-level mechanisms highlighted by the OpenHeritage project are the *Community-led OH approach* and the *Fundraising-based OH approach*. They are introduced by Polyák and Szemző in Chapter 8 of this book. I refer to both as "approaches" because they primarily define entry points into processes that require active management further down the line. The entry point is through the municipality's initiative, or through seeking fundraising for adaptive heritage reuse. Last but not least, I have listed my *5M model* (Mieg, 2023), which addresses AHR professionals, to use the experiences of OpenHeritage for AHR processes.

Table 3. Higher-level mechanisms for policy and planning in AHR, examples only

Mechanism	**Target groups**	**TM Models**	**Main TM mechanisms**	**References**
Conservation Law	Politics, Municipalities		beyond OpenHeritage	
Musealization*	Municipalities	Disintegrated models	Governance, Project management	Macdonald (2013)
Commons-based Regulation**	Municipalities, Politics	Regulation of the commons	Governance, Community integration	URBACT (2018)
Community-led OH approach***	Municipalities, NGOs, Politics	Heritage strategies, AHR tactics, Governance of inclusion, Flexibility	Governance, Community integration	Oevermann et al. (2023)
Fundraising-based OH approach***	Municipalities, Professionals, NGOs, Local initiatives	Ownership models	Funding, Legal options	de Roo & Novy-Huy (2020, 2022)
5M Model	Professionals	-	Community integration	Oevermann et al. (2023)

* Other, less powerful, mechanisms result from the implementation of the other disintegrated models mentioned in Table 2, namely touristification, heritagization, commodification, gentrification.

** also as an AHR ownership model, see Table 1

*** see Chapter 8

4. Professional heritage planning: From transfer to transferability

When I joined the OpenHeritage project, which had been running for three years, I tried to get clarity on what was meant by "transferability" in the project. The dominant idea could be formulated as the general question of whether the AHR policies and practices found in certain European countries could be applied in others. In particular, the question related to successful policies and practices in Northern and Western Europe and their possible application in Eastern European, former socialist countries such as Hungary, Poland, and Ukraine, which are undergoing challenging processes of political transformation. That the political situation was indeed unstable became apparent even during the project. The actions of the conservative-authoritarian Orbán government led to a Hungarian partner university of OpenHeritage having to move its operations from Budapest to Vienna, Austria in 2019. Subsequently, Ukraine faced full-scale invasion by Russia in 2022.

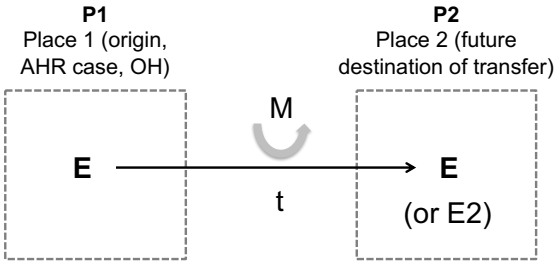
The first approach that could be identified for OpenHeritage was thus: *transferability is based on transfer*. At the same time, there were voices in the project, especially from the Italian side, that seemed to understand transferability differently, as a question of the *applicability of a theory*. The theory at stake was essentially the Regulation of the Commons according to Ostrom (1990), but extended for planning purposes to include interaction with stakeholder groups – from politics, business, the public, and academia – as well as extended from the research side with the methods of actor-network theory (cf. Latour, 2005).[1] I was skeptical at first, since every theory requires semantic closure, and any extension with pieces of other theories only proves that the particular theory cannot be applied as presumed. This last section of my chapter thus introduces two approaches to an understanding of transferability, first transfer-based transferability (4.1) and second model-based transferability (4.2). As I will show, the idea of transferability as the application of a theory can be used for our purposes if we speak not of theory but of models (as introduced in section 2, above). In discussing transferability in the context

1 For the theories used in OpenHeritage, see the Transferability Matrix appendix (Mieg, 2021).

of this yearbook, it has been noted that transfer can very often mean simply passing knowledge on to third parties, e.g., in the context of academic training, teaching colleagues, or simply enriching the knowledge of the next generation. I will return to this point when I conclude on professionalization and formalization (see section 4.3).

4.1 *Transfer-based transferability: The idea of compensation via functional equivalents*

Transferability is tricky to grasp when starting from the concept of transfer. Transferability then denotes a relational property of an *entity E*, located at an *origin P1* (and somehow connected there), to be transferable to a *destination P2*. Implicitly, there are other conditions associated with it besides entity (E) and places (P1, P2): A means of transfer (M) is necessary (a translation, a means of transfer, etc.). Moreover, transferability is also associated with a *time component* (t): Since transferability means *successful* transfer, the question arises of when this success must occur (e.g., immediately or only after some time?).



E:	entity to be transferred
P1:	place 1, origin (includes context)
P2:	place 2, destination (includes context)
M:	means of transfer or transformation
t:	Time it takes for the transfer to be considered successful
E2:	functional equivalent of E at P2

Transfer *within* or *between*: It makes a big difference whether the transfer is to take place within a context (within a project, within a city, within a cluster of nations) or clearly leads into a new context (between projects, cities, nations). Generally, transferability is higher when transfer occurs within the

same context. Talking to my Italian colleagues, I realized the importance of the legal tradition in Italy, which is more than two thousand years old and facilitates the definition of legal solutions. For example, in regulation of the commons, it is precisely this unbroken legal tradition – and the legal security that goes with it – that seems to be lacking in many Eastern European countries.

Last but not least, we must also consider that the transfer of an entity E can also occur with substitution (e.g., if municipal funding is replaced by state lottery funds), further referred to as E2. In this case, it is a transformation rather than a transfer. E2 must be *functionally equivalent* to E, i.e., E2 fulfills the same function at P2 as E at P1 (e.g., as a non-repayable one-time payment). To be able to determine functional equivalence, we must analyze and compare the situations at P1 and P2. The work of professionals advising on AHR processes can often consist of identifying exactly such functional equivalents, such as private funding opportunities for AHR initiatives when a local community lacks the necessary means.

4.2 *Model-based transferability: Defining the transferability impact*

We can also understand transferability as the relationship between a model and a target case to which the model is to be applied. After all, it is often no longer clear where a model was invented. This is true for almost all of the ownership models listed in Table 1. Even for Regulation of the Commons, there is now a whole range of use cases, so that if you want to use a particular model, you would be better off looking at a selection of cities with successful applications rather than just one classic case. Then we look at transferability, like the diffusion of innovations, the question is whether an innovation, for example a new system for monitoring urban drainage, can be applied in our city. Again, it can be useful to see how the system has worked in other cities.

If we limit the analysis to the model and the target case, we can capture a *transferability impact*. This is in line with the desire of funding institutions to see evidence for the effectiveness of interventions, a desire also expressed by the EU-appointed evaluators of OpenHeritage. Assuming mechanisms as in Figure 3, we can determine the transferability impact (TI) according to

whether all five relevant mechanisms have been adequately considered for the application of an AHR model to a target site. The following rating could be given: 0 = mechanism not addressed, 1 = mechanism addressed but not yet mastered, 2 = professional handling of the mechanism. This would measure the impact of transferability (TI) as a result of transferring the AHR method to an AHR case.

TI (AHR model x, Case y) = geometric mean (s, p, m, l, f)

$$= \sqrt[5]{s * p * m * l * f}$$

s=social, p=political, m=managerial, l=legal, f=financial mechanism addressed

The formula can be extended to include other mechanisms (e.g., spatial aspects). For the transferability impact (TI), I suggest using the *geometric mean*, i.e., multiply all five individual impacts of the five mechanisms and then take the fifth root. The advantage is that if a single mechanism has zero impact, then TI also becomes zero. That is, for TI to take on a value greater than zero, all mechanisms must be considered. If TI is not zero, it has values from 1 to 2. A value close to 1 means: all AHR mechanisms have been addressed but not yet mastered. A value close to 2 means: professional handling of the AHR case.

4.3 *Conclusion: AHR as professional planning, social innovation*

The Transferability Matrix addresses professionals in the field of adaptive heritage reuse. It is intended to provide a scientific approach to implementing the findings and recommendations of the OpenHeritage project. The involvement of professionals was a core part of the OpenHeritage project from its inception. Despite their different academic backgrounds (architecture, management, law...), they are now active as planning professionals in the broadest sense. Adaptive heritage reuse is first and foremost a planning task, not a scientific project. Feasibility studies are rarely conducted to determine whether and to what extent AHR could be useful; More often, professionals are faced with the task of helping an AHR project succeed, once initiated by a community.

Professionals are generally not interested in transparency in their "professional inference" (cf. Mieg, 2006; Mieg & Evetts, 2018)[2]: how and which proposals they make is left to their own discretion – aside from the universal requirement to justify their advice or proposals. Thus, they do not see it as their task to implement pre-defined models; rather, they prefer to make choices that will advance a particular AHR project. This includes an analysis of a city's resources and capabilities – social, financial, organizational, etc. – and the possibilities for expanding these resources and capabilities. Thus, creativity and social innovation are often mentioned in professional AHR project design (cf. Mieg, 2022). As a result, the mechanisms for evaluating the success of AHR projects may differ from those presented here.

I would like to conclude with a comment about formalization. A certain amount of formalization is helpful, even necessary, if we want to transfer knowledge for educational purposes. If AHR is to become a subject in its own right, then it must be possible to formulate generalizable propositions about it. In general, a certain degree of formalization is useful – firstly for professionalization, as it helps to enforce standards; for communication with other social actors; and for transfer to society (cf. Mieg et al., 2013). Just as the concept of the "ecological footprint" promotes social discussion about resource use, a simple measure of transferability impact could make knowledge of AHR socially accessible.

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2 We could call AHR professionals decision-support experts or "decision-making experts" (Mieg, 2006) with a professional relationship to AHR. The field of adaptive heritage reuse is not yet sufficiently professionalized; therefore, established methods are lacking.

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Knowledge transfer in OpenHeritage – a discussion

Abstract

Does transferability require actual transfer, such as the implementation of practices and policies from one city to another? If so, how similar is transfer to a one-to-one copy, or does it instead concern the transfer of intent? What are the mechanisms that promote or hinder transfer in adaptive heritage reuse, and what should be considered as an effective mechanism? These questions will be discussed by Hanna Szemző and Levente Polyák with reference to experiences from the OpenHeritage project.

This is a revised transcript of two online discussions held on 17 January and 23 May 2023.

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1. Transfer and/or transferability

Mieg: What is your understanding of transfer? Has your understanding changed as a result of OpenHeritage?

Szemző: Transfer is a very broad term and it can basically mean anything, especially when we consider that we use it so much in everyday life. So you can *transfer anything* – ranging from knowledge to money, to institutions, to practices. It's basically the result of an exchange between people, institutions, or countries. It's a topic I hadn't really thought about before the OpenHeritage project.

Mieg: Was there a surprising aspect to this?

Szemző: What I experienced is, our *project consortium was a hub of transfer*, and I think that's something that's often underestimated or undervalued. The exchange within OpenHeritage – the shared project management and implementation – involved a lot of knowledge transfer.

Polyák: Transfer is practically a *process* in which, for example, a city wants to go from situation A to situation B; that is, it wants to achieve something, it wants to change something, and in its operation and functioning it wants to learn something from another city, place, phenomenon, or initiative. So transfer is this learning process in which one initiative, place, or city learns from another.

Mieg: Could you give an example?

Polyák: I've been working with transfer for around 10 years in the URBACT program, which is practically an action planning and knowledge transfer program of the EU. In the URBACT program, transfer is very well defined. Mostly there's a "good practice city", and there are other cities that are trying to do something similar; or they're facing the same problem or challenges, and they want to learn from this one city to address their own challenge. And

there's a specific methodology of transfer, where the experts and the lead partners of the cities that are transferring the knowledge to the other cities, they analyze the good practice. They often break it down into different elements.

Mieg: And in OpenHeritage?

Polyák: In Open Heritage, I think something I learned very intensely is that *you can't force*. Well, you can think in advance, you can create a great scheme of transfer, and you can create a great scheme of how certain entities can learn or take different elements from another entity. But you can't really force anything or anybody. And you can see that: In certain contexts, maybe there's reluctance, or there's a kind of distance or self-protection from certain kinds of mechanisms. And that's something you can't always know before you try it.

Mieg: And what about transferability?

Szemző: The way we understand transfer also includes transferability. This distinction between transfer and transferability is a bit artificial, because the way we actually use transfer in everyday situations also means transferability. *When we talk about transfer, we are already talking about transferability.*

Mieg: Could you expand on this?

Szemző: Some friends of mine went on a field trip to Sweden to learn about the education system, and based on their description I realized there is such a big difference between what was taking place in Sweden in contrast to Hungary, that I had the feeling that hardly anything could be transferred. However, people can be *inspired*. So we can inspire people in Hungary to change things, but it seems impossible, really, to import or transfer knowledge from Sweden.

Mieg: Okay. In your Sweden–Hungary example, there seems to be neither transferability nor transfer given. However, if we consider inspiration as a form of transfer, then we must also assume transferability. We can infer: If transfer and transferability are usually brought about under the same conditions or assessed by the same criteria, then we are talking about the same phenomenon.

Szemző: I would say there are *different levels* of transfer and transferability So when you look at Germany, where the system is much more similar to what takes place in Hungary, then you can actually transfer and adapt German practices to Hungary. However, when you look at Sweden you can only take inspiration. And I think this is something that we can dwell on: how these different levels of transfers and transferabilities operate.

Mieg: You already highlighted this point in a discussion we had last year: Places or even communities can have very different *absorptive capacities*, and that the transfer of a new best practice can have a different depth or integration in the recipient place. A low absorptive capacity would usually be associated with a low level of transferability.

Polyák: To increase transferability, when we designed OpenHeritage, we included for purpose some commonly used models, such as Community Land Trusts. This is a crystallized, well-defined model. In short: A community land trust is a model of community-led development where local nonprofit organizations own land and develop and manage homes and other assets important to their communities. This model has been replicated in different places. It is interesting to see that even the most well-defined model like a Community Land Trust, even this changes a lot when you go to France or Belgium or Holland. The Community Land Trusts become very different things, even if they carry the same name and they clearly transfer an entire model in all these details; in the end it's going to be very, very different. So I think what's important is that we're aware of the *contextual differences*. And we're also aware of the *impossibility of a one-to-one transfer*, because maybe that's not what we want.

We're not creating a new franchise for McDonald's, but creating something that people need.

Szemző: It's very important in adaptive heritage reuse that we don't transfer an exact mechanism like McDonald's does, although even McDonald's has local differences. You can transfer an assembly line. You know it works the same in the US, Budapest, or Beijing. But you cannot transfer in the same way the very specific kind of knowledge that guides adaptive heritage reuse. So then what you really transfer is the *intent*, and you try to realize this intent in a different place, taking into account the specific local context. We could say that the intent gives you an idea of a model.

Polyák: A little comment about assembly lines. I recommend Greg Grandin's book on Fordlândia, which describes how Henry Ford failed to build a factory in the Amazon – because you can't.

Mieg: We will talk about models and mechanisms in more detail. I would like to use the discussion so far to point out a possible difference between transfer and transferability. Transfer implies transferability. The URBACT example works with transfer from a model city to a target city. If this succeeds, we can assume transferability, which can occur with different degrees of absorption in the target city. But let's take the case of the Community Land Trust model. Here we already have a model and an idea – an intent, as Hanna would say. In this case, no real transfer needs to occur from a model city to a target city. Transferability is much more about whether the CTL model is applicable to a particular city. If problems are encountered with the CTL model, one would draw on previous experiences in several other cities and cases with the model. Transferability is not based on transfer in the strict sense.

2. Means of transfer and the role of models within transfer

Mieg: I would like to direct your attention to the means of transfer. These should be adapted to the contextual differences. Could you both please

reflect on the most surprising experience within Open Heritage concerning means of transfer?

Polyák: I was really surprised by, for example, our failure to introduce digital tools although this was not really a necessary part of the transfer per se. But we wanted to add a kind of *digital dimension* to all the local heritage labs, or the ability to use digital tools for their work and for the local organization. And Platoniq (a team of social innovators and digital platform developers, based in Spain) was available to help. I was really surprised that, in certain contexts, there was a complete lack of openness, a complete refusal, especially in Germany. I was really surprised how the idea of using a digital dimension was just rejected.

Szemző: When we were writing the proposal, digital seemed to me to be the solution for everyone and to everything. And now I can see the obstacles. Among other things, I was not aware of the maintenance issue. That actually turned out to be a major issue. And so "digital" has its own set of complications.

Mieg: I would like to point out the *timing* of projects. There are different project phases with changing needs and constraints, which also had to be considered in the Transferability Matrix. The use of digital tools and social media may depend on the maturity of the project. Social media are helpful when an initiative needs to mobilize allies. They are less helpful when the initiative is in a phase of consolidation or negotiation with the city government.

Polyák: Sure, it depends on the time, and it depends on the size of the community, on the goals. In OpenHeritage, the digital component didn't work. I think that's a very important lesson.

Mieg: Is there some another, positive experience?

Szemző: The most successful means of transfer were, I think – without question – the *videos*. I didn't know that before, and I think it was a very important

learning experience: how powerful and efficient videos can be in conveying messages. But for that – and for their effectiveness – they also need a very active group.

Mieg: And it seems that you need an authentic story to be told around the local group.

Szemző: I think it's both the authenticity and that the videos were very effective in conveying a message. The OpenHeritage videos were all very nicely structured, and that helped. They cannot tell the whole story, but they can create interest in a case of adaptive heritage reuse. The power of visualization in transfer comes down to this for me: It shows the difference between reading something and actually seeing something.

Polyák: I think the video is a great *entry point*, and then if someone is interested they can build on that and they can reach out to the protagonists. But, you know, in 6 or 10 minutes you can't learn anything; Instead, it can start a spark, and then they give you an idea, and then you can start to look into the details of whether this is actually something that can work.

Mieg: One might think, from our discussion, that this specificity of a case and also of learning is so important that you can't do transfer without that. To play devil's advocate, the question would be: Do we need any formal means for transfer at all? Is transfer ultimately something so specific and individual that you cannot model or design that by formal means?

Szemző: Let's go back to what we said earlier about knowledge transfer. Knowledge is a very specific kind of good, often difficult to transfer. It is enough to transfer the intention, which has to be taken up by those who are receiving it.

Mieg: Intention is sometimes very vague. The intention has to be realized and implemented in some way. For efficient transfer, we obviously need more specific forms of the intent, like a Community Land Trust model.

Szemző: The way *ownership* works is critical. That is actually one of my key takeaways from the OpenHeritage Labs. The Community Land Trust is based on a very specific ownership structure. There might be slight differences between the UK, Germany, and Hungary, but if you want to transfer the essence then you have to transfer that type of ownership. In housing, we very often say that the cooperative structure that works in Austria, Germany, and also in Switzerland really provides a number of advantages that are very difficult to transfer to a housing market dominated by private owners. So there, I think ownership models or the ownership structure stands out as uniquely important in determining the success of transfer in adaptive heritage reuse.

Mieg: Levente?

Polyák: Like Hanna said, it's about transferring intentions. But having a model can be very helpful, because sometimes you don't really know what you want. You just know that you don't want a particular thing to work in the traditional way; You know what kind of evolution you want to avoid. And you have the model that tells you that. This is where the ownership model or the regulation of the commons model is designed to have those consequences. I think it's a helpful idea to recognize if we have a model that addresses the same issue; And even if you can't establish the same thing in your legal context, it's very interesting – very important – to have an ideal, and the model gives you that idea, and the model also gives you *recognizability*.

Mieg: Could you expand on that?

Polyák: Whenever you have to convince your local politician, for example, or you have to convince your funder, and you can show that: Look, this is a model that works there, these are the elements, and these are the things that we lack here; But this is the result; If we have the support, this is what we can get out of this; It's not going to be exactly the same, but you know we're a capable group of people, and we can create something big. I think having a

model gives you a lot of help in explaining it, in defining it, in designing your own project around it.

Mieg: So models serve your professional work.

Polyák: I could see a lot of very *spontaneous transfer* of models, where people really recognize the transfer: Oh, wow! This is exactly what we need, and we didn't know this was what we needed. But now we know, and it will take 6 years or more, or 10 years, but we will get there. Maybe we will not use the same legal form – for example, because we cannot be a cooperative, because that is not supported in this country – but we will find another way. But now this is how we want to work, because we see this ideal. We share this ideal with all these initiatives from other contexts. So I think we need models, because they really help; Even if they are not, you know, copied one-to-one. Models really help the communication, the conception, the understanding, the development, the promotion.

Szemző: They are the tools. Perhaps we can say that *models are the essential tools that enable transferability and transfer.*

Mieg: To conclude this part of the discussion, I would like to quote the explanation of models within the Transferability Matrix (TM). According to this, models have an intermediate level of abstractness. In the context of OpenHeritage, models represent typical combinations of good practices and guidelines for adaptive heritage reuse (AHR). Therefore, models are sufficiently abstract to be applied in different places. At the same time, they can be illustrated with specific examples and are therefore sufficiently concrete. The TM shows the importance of ownership models and thus the question of who owns a heritage site. But cities or countries can also serve as models.

3. Mechanisms, conclusions

Mieg: Now we should talk about mechanisms. If we look at the context from which mechanisms were introduced to the OpenHeritage project, it is

politics. In the policy realm, there are prominent examples of mechanisms. The most famous ones I know of are the 1997 Kyoto Protocol and the subsequent 2015 Paris Agreement, both of which deal with climate change mitigation. The Kyoto Protocol defined "mechanisms" for CO2 reduction, i.e., a mix of economic and legal regulations and incentives, e.g., in the form of CO2 emissions trading. The Paris Agreement introduced a political monitoring mechanism for sustainable development. So what do you mean by mechanisms in the context of project definition?

Polyák: The way we brought the concept of mechanisms into the project reflects the way I or we thought about mechanisms before. The mechanism is just *a set of actions that takes something somewhere*, so it's a set of flows or things that move – like a set of cogwheels that are connected to each other. And when we want to change the system, then we add some elements and that will cause the whole system to change a little bit. But we might also introduce new wheels into the system, which are new mechanisms that create different results. And the difference is that a model is a way of creating and visualizing. So for me a model is more of an aesthetic constellation of actors and relationships. We have a model that feels like it's frozen in time; of course, it's not – it never is – and it's never an aesthetic constellation. But it is something that we identify with, and we try to realize something similar. And the mechanisms are what take us there.

Szemző: You have the model, and the mechanisms are the means that take us there. I would call mechanisms the *enabling environment*. I like this analogy of a cogwheel. So it is the mechanisms that enable the realization of either the goals, or actually – when it's more concrete – the models.

Mieg: What, from your understanding, are exemplary mechanisms in heritage management?

Szemző: *Local planning policies* are important; they create the conditions for adaptive heritage reuse.

Mieg: But is it a mechanism? I like the comparison with the CO2 mechanisms of the Kyoto Protocol. These are very explicitly called mechanisms, because they represent organizational inventions by which we now try to more effectively reduce CO2 emissions, and here we need mechanisms.

Szemző: If you have specific regulations for adaptive reuse, that are community-driven and basically involve some kind of community integration, then I think that would be a mechanism. I see mechanisms now as really part of the regulatory environment. They are actually tailored to achieve a particular outcome.

Mieg: OK. What else are mechanisms?

Polyák: For example, a *heritage fundraising process* involves a series of actions – one action based on another. These actions lead to an objective, and they have many elements, many steps. It might be a competition on how to adapt or reuse heritage, specifically tailored to certain types of candidates, and there's a whole set of steps to that. And it can be all kinds of tax incentives. It doesn't necessarily have to be tied to specific fundraising, because there could be incentives for somebody to put their property up for availability or use by civic actors. And in this case, what makes it a mechanism is that maybe a new incentive is introduced, and there's a monitoring process.

Mieg: In any case, Hanna, Levente, your understanding of a mechanism is more applicable to EU policy than the approach of the Transferability Matrix, which is more science/theoretic-oriented and has something like general functional spheres in mind, such as the political, legal, or financial sphere. However, potential mechanisms can be found through appropriate combinatorics. A nice example is the regulation of commons: If we consider urban heritage – e.g., a former urban factory building – as a commons, and add funding and a community-led process, we get a mechanism that has some likelihood of encouraging adaptive reuse of the heritage.

Szemző: But the regulation of commons is already a model.

Mieg: This is no problem. Each model can contain mechanisms to specify the enabling conditions. The regulation of commons is first and foremost a legal construct, an ownership model, which in the Italian context can trigger further activities in the communities. This is not necessarily the case in other countries. Similar to the regulation of commons is musealization, whereby heritage – such as a former factory or an old palace – simply becomes a museum. This may be a good idea, but not in all cases. In the TM, musealization appears as a disintegrated model – like gentrification – because there is usually no community integration involved. One can also understand musealization as a mechanism because it is strongly inclined towards a certain type of outcome – namely, to establish a museum. Whether this is desirable or even successful in the long term is another matter.

Polyák: A mechanism is a process.

Mieg: Yes, but with a high probability that the intent of the project or process will be realized.

Polyák: In practice, the regulation of commons is potentially *many different* mechanisms, because what you have as commons in Bologna, for example, is very different from that in Naples. I was part of a project on mechanisms for transferring commons. The good practice was in Turin, and the receiving cities were Budapest, Cluj-Napoca in Romania, and Polish Gdańsk. It was very clear from the beginning that the notion of the "commons" is untranslatable – at least for Hungary, Romania, or Poland. So what did we want? On the one hand, we wanted to create a pilot. In a way, it exemplifies a logic of spaces run by the municipality together with the civic initiative. Or maybe – ideally – by all the civic initiatives together, with a little bit of oversight from the cities. On the other hand, we had this idea – and in Italy we call it the commons; In different countries, we didn't call it the commons, but that's where we wanted to get. And we all went there in very different ways, because in Budapest, for example, it was impossible to give any decision-making right to any power other than the municipality. But then we try to create, let's say,

a format in which the city oversees everything, but internally there is some space for freedom.

Mieg: So models provide the recognizable intent, and mechanism do the work?

Polyák: Let's put it this way: Does transfer really mean the creation of an overall situation that is similar to the original, or it is to implement the same mechanisms towards a model that provides the guiding idea? Do we want to use the same legal mechanisms, the same business model, the same administrative and political instruments? If not, we have to create or reinvent models and mechanisms for a different context. These are different ways of understanding the impact of transfer.

Mieg: I take away two key insights from this discussion. First, there is Hanna's great remark that what you really transfer is the intent. From my point of view, in planning in general we very often have a situation in which, essentially, it is intent that is transferred – an idea that inspires and makes further interpretation necessary and possible. On the other hand, I am very fond of Levente's professional view on adaptive heritage reuse: It is about a process that brings about transformation through professional support. The focus is on local transformation, not on an actual transfer with defined methods, be it models or mechanisms. Professional support – including in adaptive heritage reuse – thrives on methodological discretion. Hanna, Levente, thank you very much for this inspiring discussion.

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DÓRA MÉRAI AND VOLODYMYR KULIKOV

Takeaways from teaching a course about adaptive heritage reuse

Abstract

This article examines the transfer of knowledge within a formal educational context. Knowledge generated in the EU-funded collaborative research and innovation project OpenHeritage was presented as part of a graduate university course on Adaptive Heritage Reuse (AHR). It argues that higher education provides a significant and effective dissemination channel for OpenHeritage and AHR knowledge. To broaden the perspective and applicability of the model for AHR beyond its current Eurocentric framework, future research could focus on incorporating approaches and cases from non-Western regions.

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This article reports on an experiment in teaching a graduate university course as a means of transferring knowledge generated during the EU-funded collaborative research and innovation project, OpenHeritage" (https://openheritage.eu).[1] The course "Adaptive Heritage Reuse: Policy and Practice" is a 4 ECTS (2 US) credit MA-level module comprising twelve 100-minute sessions. To date, it has been taught four times to students of the Cultural Heritage Studies MA Program at the Central European University (CEU), Budapest/Vienna.[2] First, we describe the course and explain how it was taught, and then summarize our observations concerning knowledge transfer through formal education. We explain how higher education serves as an efficient means for spreading knowledge generated by the OpenHeritage project.

1. The course

The course examined the concept and practice of *adaptive heritag reuse* (AHR) in various social, political, economic, and cultural environments, along with its benefits and challenges. Our participation in the OpenHeritage research project, within an interdisciplinary and international consortium, allowed us to formulate a series of questions to be addressed in the context of Cultural Heritage Studies:

- How does adaptive reuse contribute to the conservation of tangible and intangible heritage?
- How does it benefit the community?

1 This work was supported by the European project OpenHeritage – Organizing, Promoting and Enabling Heritage Re-use through Inclusion, Technology, Access, Governance and Empowerment. The project received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No [776766].

2 CEU relocated from Budapest to Vienna starting from the 2019–2020 academic year, due to the political environment in Hungary: The Hungarian Government created legal obstacles to its operation as a higher educational institution in the country. The course was first taught that year in Vienna but interrupted by COVID-19, with the last few sessions moved online.

- What aspects of the legal context are relevant for the stakeholders in these projects?
- What kinds of policies are supportive, and which discourage AHR?
- How does the concept of participatory governance benefit heritage?
- What is the role of adaptive reuse in urban and spatial planning?
- How can such projects be made financially and environmentally sustainable?

OpenHeritage worked with an open definition of heritage, not limited to listed assets but instead incorporating buildings, complexes, and spaces that have a symbolic or practical significance for local or trans-local heritage communities. This definition of heritage does not focus solely on material assets and their conservation for future generations, but also considers related intangible aspects: the discourse and processes through which the site emerges as heritage (Smith 2006). Participants in these discourses and processes are put in the center: *heritage communities* who should take part in and benefit from the adaptive reuse of heritage (van Knippenberg and Van Gils 2022).

Since the CEU course was developed for future heritage experts who will operate within established policy and legal frameworks for heritage protection, the starting point was the heritage site and how reuse can be an efficient means of conservation. This is inseparable from the ability of the reuse project to generate social and economic impacts, since the heritage communities and revenues generated by their activities are the resource pool that enables conservation. In practice, however, social and economic interests often contradict the narrow requirements of heritage protection systems, and future professionals will need to address such tensions. For example, many policymakers often view heritage reuse as a source of social empowerment and economic revitalization. However, what level of change is acceptable? How to find a balance between the principles of heritage preservation and the needs of the community? Who should be involved in the decision-making process? How to create the financial basis for such projects? How to ensure the sustainability of historical buildings by giving them new functions? The course did not aim to offer ready-made and generally valid answers for these questions, but offered tools to understand the specific context in terms of

policy – as well as politics – together with law, social and economic structures, and the historical and material/spatial/cultural/natural characteristics of the environment. We also analyzed good and less ideal solutions in the case studies developed in the OpenHeritage project, which served as models in the knowledge transfer process as defined by the OpenHeritage Transferability Matrix (Mieg 2022).

The learning outcomes included student's ability to:

- Identify opportunities and risks presented by AHR;
- Analyze legislation and define policies relevant to AHR in a broad and specific cultural, social, economic, and political contexts;
- Understand the benefits and challenges of inclusive citizenship and participatory governance;
- Identify possible financial models for AHR.

Since students were invited to write their own AHR case study, they were also taught relevant research methods. The course was taught using the "teaching with cases" approach (Anderson & Schiano, 2014). Similar to our approach in the OpenHeritage project, where we started by exploring the so-called observatory cases (Polyák et al. 2019, 3), the course relied on using AHR cases for teaching. The cases were selected from various geographical, political, and social contexts but were all from Europe, which was a limitation, especially in a global student cohort. The course focused on the urban sphere and one of the most pressing issues for heritage professionals: the heritage of the industrial era. However, we also analyzed other types of heritage sites.

The course utilized Observatory Cases developed by the OpenHeritage consortium members (https://openheritage.eu/practices). It also included visits to AHR sites in Bratislava, Budapest, Pomáz, and Vienna, where students met and spoke in-person with some of the salient stakeholders. These visits were key elements in the course because they offered opportunities for a different level of engagement. Students could also experience how the AHR projects impact (and are impacted by) the urban environment. The students learned methods of conducting case study research, such as observation, interviews, participant observation, and analysis of physical artifacts (Ebneyamini and Sadeghi Moghadam 2018, 7). Experts involved in the

OpenHeritage project – from the NGOs Eutropian (Vienna, Austria) and Stiftung trias (Hattingen, Germany) – working as consultants or managers of AHR projects, were invited as guest speakers to discuss cases and practices. Each student wrote a case study, which they presented and analyzed during the course. These played a central role in the discussions. Students were encouraged to select a case from their home country (spanning Europe, Asia, Africa, and South America). Students explored their chosen cases using the theoretical approaches and methods covered during the sessions. A peer-to-peer feedback session was organized as a project milestone. After incorporating feedback from their peers and course instructors, students prepared a final presentation in an online storytelling format (Microsoft Sway) according to the instructors' guidelines. This took the form of an oral presentation accompanied by slides during the two final sessions.

At the beginning of the course, we communicated to the students why their active participation was crucial and what was meant by "meaningful contribution" to the discussion. As explained in the syllabus:

> "Class attendance is imperative: by skipping a class, you deprive the other students of learning from you. Class participants are expected to contribute actively in class discussions, building on the comments from classmates and the class instructors to work towards understanding problems. A contribution is considered meaningful if a student adds something new by sharing knowledge, asking a critical question, raising a new perspective, synthesizing from examples, or summarizing arguments."

We also retained this principle in the online part of the course and developed the method accordingly.

2. Teaching

The course was tested in CEU's Cultural Heritage Studies Program during the 2019–20 academic year and integrated into the program curriculum for future academic years. The course became mandatory for the second-year group of the Management, Policy Stream in the two-year MA program in Cultural Heritage Studies in both years, and elective for the first-year

students. Module enrollment numbers were 10 in 2019–20, 14 in 2020–21, and 13 in 2021–22.[3]

The 2019–20 course took place at the Vienna campus of CEU. The course was designed with nine in-class sessions and three site visits, but due to the COVID-19 outbreak we had seven in-class sessions, two sessions with site visits (AHR cases), and the last three sessions (one of which was intended to be a site visit) had to be moved online. In 2020–21, teaching went online due to COVID-19-related restrictions that prohibited both class-based teaching and site visits. Consequently, we developed and tested an online version of the course. We kept teaching with the cases model, but combined synchronous elements with asynchronous work in processing the case studies. The course was offered again in the winter term of 2021–22 in on-site, hybrid, or online forms depending on pandemic-related regulations. We used Moodle, Zoom, Miro, Mentimeter, and other digital platforms for online/hybrid teaching.

In September 2021, the course instructors were awarded an Engaged Learning Course Development Grant by the Open Society University Network (OSUN).[4] The 1,500 USD grant was used to bring together students with communities of bottom-up AHR in Vienna: WUK (www.wuk.at), Zukunftshof (www.zukunftshof.at), and Sargfabrik (sargfabrik.at). Brotfabrik (www.brotfabrik.wien) is a differently organized but relevant project in CEU's neighborhood, where we held an informal conversation with the NGOs, hosted by the revitalized Brotfabrik complex.

Our teaching model and content were tested further with various (primarily European and regional) student groups at the Ukrainian Catholic University in Lviv, and with a distance-learning adult education group at the Karazin Kharkiv National University (Ukraine) applied to local case studies. Selected sessions were also taught at the Matej Bel University in Banska

3 In the 2021–22 academic year the course was taught by Dóra Mérai, Volodymyr Kulikov, and Bahanur Nasya (Eutropian).

4 https://iwtclasp.bard.edu/2021/02/18/dora-merai-and-volodymyr-kulikov-online-case-study-based-teaching/?fbclid=IwAR0rAiM-mIwwEhs9BJN18tTtw8yGk0UkCXOj9vrt2nULg-SsviAFiDuuQoZE).

Bystrita, Slovakia, the University of Erlangen-Nuremberg, Germany, and Otto von Guericke University Magdeburg, Germany.

In addition, we developed a one-week summer university course, "Industrial Heritage as a Source of Social Empowerment and Economic Revitalization," for professionals, focusing on the adaptive reuse of industrial heritage and related issues, which was taught online (also due to COVID-19 restrictions) at CEU in July 2020. The course focused on the potential of industrial heritage to be a transformative influence in post-industrial regions. It aimed to bridge an industrial past, through a deindustrialized present, toward an economically and socially sustainable future. The redevelopment and management of former industrial sites is a complex process requiring multiple skills and fields of expertise; therefore, the course involved a multidisciplinary faculty body, including contributors from OpenHeritage: Metropolitan Research Institute, Eutropian, and Newcastle University. Besides dealing with various theoretical and methodological problems related to de-industrialization, AHR case studies constituted an essential part of the course. The group was composed of 25 participants from 16 Asian, European, and South American countries. Each participant brought their own case study, which was developed during the course utilizing the OpenHeritage approach. Several participants joined the OpenHeritage Dialogs after the summer course and remained part of the broader network.

A third type of teaching program, developed based on the OpenHeritage results, consisted of a five-day field trip in May 2022 to Pécs and Budapest in Hungary with 20 students of CUE's MA in Cultural Heritage Studies. The field trip is part of the Cultural Heritage Studies curriculum and follows a case study and participatory teaching model. We visited AHR sites of differing historical periods, original functions, and forms of reuse, including the Budapest Jewish District Observatory Case and the Pomáz Lab. The aim of the visits was to see how on-site practices relate to the mechanisms defined in the Transferability Matrix (Mieg 2022, 50); those that work and those that are less successful; and to understand the cases in their local and regional contexts.

Growing out from the MA courses and the summer university course, four MA theses have been defended as part of the CEU Cultural Heritage

Studies Program (Gigauri 2018; Manaila 2021; Manukyan 2022; Satbayeva 2022). One more is scheduled for defense in May 2024 (Leca 2023). These theses utilize OpenHeritage concepts and methods in cases both within and beyond the EU: Armenia, Georgia, Kazakhstan, and Romania. OpenHeritage university partners were involved in evaluating these MA theses. Since these graduates are young professionals in their home countries, supervising such theses is an important means of disseminating OpenHeritage results and of impacting professional discourse in various countries and regions.

3. Lessons learned about knowledge transfer

Bridging the international OpenHeritage research project with higher education courses was highly insightful and beneficial for all parties. The project enabled us to use case studies to introduce the most up-to-date knowledge in the classroom, while members of the global student body raised issues and represented perspectives that contributed to the research, and indicated directions that the OpenHeritage model may explore in future.

Transferring the results of a high-quality research project into a classroom setting turned out to be a two-way street. The classes served as a testing ground, and demonstrated the limitations and room for improvement of the models developed in OpenHeritage. For instance, our global student body immediately pointed out that these models were Europe-based and Europe-oriented, and often inapplicable beyond the EU without significant adaptation (if at all). A non-European context, introduced to the class by the students, allowed us to reflect on the transferability of the OpenHeritage models beyond the EU area. These reflections and examples were later shared with the OpenHeritage consortium members, and helped in fine-tuning our models and policy recommendations.

The project deliverable confirmed our hypothesis, that: higher education is a significant and impactful channel of dissemination for OpenHeritage. The MA theses applying the OpenHeritage framework in countries outside the EU brought important results on the applicability of concepts and the transferability of models into a policy context that is fundamentally different from the EU along the axes developed in the Policy Typology (Mérai

et al. 2022). For example, the analysis of AHR practices in Kazakhstan demonstrated that, in a political system different from Western democracies, bottom-up initiatives also play a crucial role in revitalizing heritage, and in building heritage communities and funding frameworks that ensure its sustainability, but with a different ownership model, cooperating more successfully with the private than the public sphere (Satbayeva 2022). These conclusions also have implications for some EU Member States, where national policies do not favor or else provide insufficient stability for bottom-up AHR projects.

Participation in a large, international research project enables us to bring the most cutting-edge concepts and approaches to the classroom through case studies. Teaching with cases allows students to put themselves in the shoes of AHR project managers, understand their decisions, and design different scenarios. Such a perspective contributes to their deeper understanding of the implications of the policy context on practices and the operation of the policy cycle in general. Since students can teach and learn from each other through the cases they bring to the classroom, teaching with cases makes the knowledge of the whole class, not just the instructor, available to the students.

Site visits and meetings with practitioners are powerful teaching tools, but the experience during the COVID-19 pandemic also showed that the case study method is adaptable for online teaching with good results. This experience broadened our understanding of the applicability of various transfer tools (Mieg 2022). The online model can be adapted to thematic courses and for different course formats, as demonstrated by the summer university course and the single-session presentations at other universities.

The course materials inspired several students to frame their MA theses by applying the models and approaches identified in OpenHeritage. This type of interest, and the feedback on the courses, demonstrated a need to broaden the perspectives and apply the OpenHeritage model outside Europe. This need should be answered at a broader scale, since higher education is one of the most significant means of knowledge transfer, targeting future professionals from all over the world.

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KATARZYNA SADOWY

Found in translation: Challenges of translating recommendations from an EU-funded project

Abstract

This chapter discusses the challenges of translating a document that resulted from international cooperation within the EU-funded project, OpenHeritage as a case study for a broader goal, namely presenting difficulties and compromises which occur in an international cooperation when a need arises to translate documents and recommendations. The goals of the project included the transfer of good practices between cooperating countries. For that purpose, it was decided that one of its outputs, a "Transferability Matrix", should be translated into the language (Polish) of a project partner. The matrix document deals directly with the potential and means of implementing new models for adaptive heritage re-use (AHR); as such, the challenges encountered in its translation themselves illustrate the difficulties inherent in knowledge transfer. This chapter discusses both the linguistic and practical aspects of the translation process, including questions concerning the accuracy, character, and usability of the translated text. It also presents socio-economic aspects of embedded attitudes, which require special attention for the translation to be acceptable and useful for its intended readership.

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1. Introduction

Ludwig Wittgenstein famously said, in Tractatus [Wittgenstein 1922], that "the limits of my language mean the limits of my world" and "what can be said at all can be said clearly, and what we cannot talk about we must pass over in silence". Challenges and barriers to clear and exact translation of documents bring further arguments to the broad discussion, which has been present for a century, concerning the rights and wrongs in these statements. The challenge is particularly present in translation: Can something that was expressed clearly in one language be expressed as clearly in another? What difficulties and solutions apply to various texts?

This chapter discusses the process of translating a document produced by OpenHeritage, an EU-funded project within the Horizon 2020 Programme. The document was originally written in English, which was also used for internal communication by the international consortium members,[1] in all documents addressed to the European Commission, and on the official project website [www.openheritage.eu]. Native languages were used on the ground while working with national and local stakeholders. Some documents were therefore translated into native languages for working purposes.

The Transferability Matrix (TM) document discussed here is one of the project's final outputs, and its translation into a native language (in this case Polish) should serve to further dissemination, beyond the group of stakeholders already involved. Translation of the Transferability Matrix document was found to be challenging, and therefore offers a good starting point for lessons on that very topic of transferability. The text was translated by a consortium member, a researcher with experience of translating texts for working purposes and for the general public. The text was also edited (shortened) for dissemination purposes, aimed at administrative representatives and practitioners. The translation was prepared in a traditional manner, without using machine-translation as a basis; however, for the purposes of the presented analysis, the text was also translated using artificial intelligence (AI) platforms, namely DeepL (whole text), and Microsoft and Google translations (fragments).

The presented challenges refer to the twofold nature of a translation. First, they encompass strictly linguistic aspects, such as language purity, accordance with the officially accepted lexicon, and the character of a native language – its nature, and "natural sound" of the phrases and terms used. Secondly, the findings refer to the problems of translation and transferability encompassed in the various models of

1 The consortium comprised researchers and practitioners from Belgium, Germany, Hungary, Italy, Netherlands, Poland, Portugal, Spain, Ukraine, and the UK.

heritage management to be transferred, upscaled and/or otherwise used, which are present in some countries (and languages) but hitherto absent in others.

2. Transferability matrix – role of the document in the project and beyond

Although focused on the OpenHeritage Transferability Matrix, the present analysis also includes findings from the process of working in both English and Polish throughout the duration of the project.

The OpenHeritage project[2] aimed to identify and test best practices of adaptive heritage re-use in Europe, which further served to develop "inclusive governance and management models for marginalized, non-touristic heritage sites". The project encompassed Observatory Cases (sites where AHR practices were present, which were analyzed but not involved in direct actions of the project). Experimental solutions were tested in six Cooperative Heritage Labs (CHLs). The project involved a broad range of stakeholders: communities, local businesses, local and municipal administrations, crowdfunding and crowdsourcing mechanisms [OpenHeritage].

EU-funded projects bring together researchers and practitioners from various countries, collaborating on chosen topics for the duration of a project, communicating and expressing themselves in a common working language that in most cases (including the OpenHeritage project) is usually English. In smaller working groups or unofficial situations, members of the consortium used other shared languages (e.g., German, Italian, Polish) in speech but rarely in written form. The Grant Agreement, reports for the European Commission (and relevant correspondence), and deliverables including recommendations and working documents were all written in English and understood uniformly by all members of the multinational team. Several (probably most) scientific papers presenting the project findings have been (or are planned to be) published in English through international academic journals

2 OpenHeritage: Organizing, Promoting and ENabling HEritage Reuse through Inclusion, Technology, Access, Governance and Empowerment, received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 776766.

and publishing houses. However, the implementation phase and handing over the project's outputs to the stakeholders who should benefit from them (public administrations, civic organizations, local entrepreneurs, etc.) required translation to local languages.

A Polish partner (OW SARP, Polish Architects Association, Warsaw Division) was responsible for one of the Cooperative Heritage Labs, involving various stakeholders constituting a heritage community: representatives of the public sector (at municipal and district levels), non-governmental organizations, cultural institutions, artists, and local entrepreneurs. Several local activities and events were held in Polish. The exception was the international conference Informed Cities [Informed Cities 7] and online webinars [Footprints 1 and 2], which were held in English. During the local meetings, debates, and workshops, several good practices were presented in order to support the heritage community in its efforts to re-use the sites in innovative but heritage-driven ways [PragaLAB, Made in Praga]. Some of the documents created by the consortium as deliverables were also translated to Polish for working purposes (not published, but shared with the stakeholders during workshops and similar events).

The Transferability Matrix purports to present "mechanisms that promote and also those that hinder the transferability of good practices and policies" (Amendment to the Grant Agreement), and is intended to [Mieg 2022, p. 11]:

- serve as a systematic overview of the mechanisms, good practices, and policies in adaptive heritage reuse, based on the findings of OpenHeritage;
- help anyone who wants to implement adaptive heritage reuse in a specific case (a city, activists, a site owner) to access the findings of OpenHeritage and apply them in a model-like way.

The Transferability Matrix is translated into Polish, to be published on the CHL's website in 2023. This chapter presents the reasons for such a translation, and the difficulties and limitations resulting from it.

3. Transferability matrix – role of the document in the project and beyond

The European Union is a unique endeavor in many ways, including its linguistic character. Multilingualism is one of the EU's fundamental principles and reflects respect for the cultural identities of its members [European Council 2008 and 2014]. The EU supports multilingualism and has 24 official languages [European Union 2012][3]. As guaranteed by the EU Charter of Fundamental Rights: "EU nationals have the right to use any of the 24 official languages to communicate with the EU institutions, and the institutions must reply in the same language" [European Union 2012, Art. 41]. Furthermore, members of the European Parliament, when speaking in Parliament, have the right to use any official language, which is why the sessions as well as the meetings of the European Council and the Council of the European Union are interpreted into all official languages [European Union 2012]. In comparison, NATO uses two official languages (English and French), while the United Nations uses six (Arabic, Chinese, English, French, Russian, and Spanish). English remains the most commonly spoken foreign language amongst European citizens (38%), with French and German spoken by 12% and 11% respectively as a main foreign language. English is the most popular foreign language in 19 of 25 EU Member States in which it is not an official language [Europarlament]). France, Germany, and the UK (prior to Brexit) were in favor of reducing the number of official languages, but met with strong opposition [Michałowska-Gorywoda 2001].

At the same time, cooperation requires the use of a common language, and the EU strongly supports language learning, including through lifelong learning processes. Despite the multilingual principle, some languages are used much more often as working, procedural, or core languages. In 2006, 72% of original acquis communautaire (i.e., the accumulated legislation, legal acts and court decisions that constitute the body of European Union law that came into being since 1993) were drafted in English, 14% in French, less than

3 In 2023: Bulgarian, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Irish, Italian, Latvian, Lithuanian, Maltese, Polish, Portuguese, Romanian, Slovak, Slovenian, Spanish, and Swedish.

3% in German, and almost 11% in other EU languages and translated into all official languages by the Directorate-General for Translation DGT) [Gibová 2009]. This leaves the majority of official EU languages "unprivileged".

Due to the number of official and working languages, translations constitute a significant challenge, in terms of the skills, time, and funds necessary to convey the legal and explanatory meaning of several documents, recommendations, and speeches. The perpetual choice between faithful versus understandable translation become even more acute when applied to official documents as well as innovative programs. Furthermore, several EU publications in English, French, or German were also written by non-native speakers; further translation requires both a profound understanding of the subject, fluency in the original language of the document, and above-average skills in the use of the native language. Such a combination is uncommon, resulting in final documents featuring so-called Eurospeak (or eurobaillage in French, Eurowelsh in German, euromowa in Polish), a rigid and unfriendly form of language characteristic of European technocrats, or eurocrats [Michałowska-Gorywoda 2001].

The challenge of "European translation" – that is, the translations of any document resulting from the specific character of the EU and consequent cooperation between Member States, their institutions, and citizens – has been widely discussed [e.g., Dollerup 2002; Szul 2007; Druzenko 2009]. The number of relevant papers increases as the number of texts grows. This chapter examines a specific case from an EU-funded project that is one of many, so the problems shown represent a fragment of a broad and important question. It applies not to official EU documents, which require linguistic purity and must be "legally watertight", with guaranteed terminological consistency [Gibová 2009]. Yet, it reflects several ambiguities present in such translations. On one hand, the translation discussed here may employ greater licentia poetica in order to convey its message in a way most suitable for its readership. On the other hand, legal and official documents are understandably more rigid, and this characteristic cannot repel readers as such. Recommendations, working documents which should simplify the lessons from good practices,

must be user-friendly and easily understandable, even attractive. So, the translation becomes in itself either the tool of transferability or the obstacle to it.

4. Linguistic challenges of the translated "Transferability Matrix"

The first obstacle presents itself already in the title of the document. In English it is clear, unequivocal, and concise; In Polish, it is necessary to look for the descriptive expressions, as there is no word that conveys exactly the same meaning as *transferability*. Instead, it is necessary to describe "a possibility to transfer" (*możliwość przeniesienia*), and comparison of these two English expressions illustrates the loss attached to the translation, both in clarity and elegance. One online dictionary replaces the word *transferability* with a phrase comprising eight words and edited in a manner difficult to understand for a Polish speaker. Even when understood, it sounds linguistically incorrect [Diki Słownik, *Transferability*]. In some working documents or on websites, the word *przenoszalność* is used, but it is not yet officially accepted in the Polish Dictionary [SJP, Przenoszalność], nor is it widely understood by the general public. It even can prompt critical comments from internauts, and was called "sloppy" or "an effect of a misguided creativity" [SJP, Przenoszalność; Encyklopedia Lesna, Przenoszalność]. However, some researchers have used the term, going beyond the officially accepted limits of the language [Sołtysiński 1985; Sobczak 2020; Zawadzka 2021]. The situation is similar for the adapted word *transferowalność*. The latter has been more widely used in research on finance; so on one hand it is already more embedded in Polish, but on the other hand it is connected with different aspects of economics than those present in the "Transferability Matrix". Furthermore, the word *transfer* in Polish has a strictly financial meaning, while *przeniesienie* (which could be applied to all other meanings of the English *transfer*, including that encompassed in the TM) is hardly used for the purposes of the TM. It is associated more closely with the physical transfer of objects or to psychological terms. It is therefore necessary to use, at least to some extent, other words which in English would mean to *copy*, *follow*, or *use as an example*.

The term "matrix" can be translated more straightforwardly as "*macierz*", yet it is used much more seldomly in everyday language than its English counterpart. In Polish, *macierz*, with the same meaning as "matrix", is used mostly in academia and has no such connections, for example, to the mass-culture film "*The Matrix*", which in Poland is known under its original title. Also in the film dialogues, debates about the film, and everyday mentions of it, "The Matrix" (a superficial reality in which society exists) has been known in Poland as Matrix, used as a loanword. *Macierz* would sound to the public either too scientific or, even worse, could bring to mind, even subconsciously, the second meaning of the word in Polish, which is an old-fashioned term for *homeland*. Another Polish word, *matryca* was used in the discussed translation. It is more suitable, but has a strong engineering connotation.

This seemingly trivial problem has, in fact, a significant effect on the translated document. The translated version loses elegance and modern character, and becomes superficial and unattractive. Such uninspiring language is often called *Newspeak* (*nowomowa*), after the official language in Orwell's dystopian autocratic state [Orwell 1949]. The term was often applied to the party-controlled Polish media prior to 1989, and so its application to European documents presents a minor yet troubling example of distancing the local/native community from a broader/European community. It has, of course, also a connotation to the aforementioned *Eurospeak*.

The Polish word *dziedzictwo* (*heritage*) is of lesser concern, but was nevertheless an issue for the Polish team throughout the entire project. As heritage practices in Poland focus mostly on the conservation and preservation of listed monuments, the word is usually connected with this expert-driven and highly administrative process [Veldpaus, Fava, Brodowicz 2019]. It is rooted in rather traditional than modern approaches, contrary to the aims of the OpenHeritage project. In European documents and literature written in English, a broader sense of heritage, especially one connected to the Faro Convention [Council of Europe 2005], is much more present and evokes more innovative and contemporary approaches than does *dziedzictwo* in Polish.

English documents and projects often use attractive names for crucial elements of the analysis and implementation. In OpenHeritage, there were Observatory Cases and Cooperative Heritage Labs. It is symptomatic that

such terms – which are user-friendly and self-explanatory in English – are also difficult to translate. As is often the case, it is necessary to either propose alternative names that are better embedded in characteristics of the native language or to use uncomfortable but more faithful counterparts. During the project, the Polish team did not use any Polish version of *Observatory Cases*, but, when necessary, spoke about good practices and recalled the English version of this element of the project. Regarding the Cooperative Heritage Labs, it was decided that simplification of the terminology would be most appropriate, and the team called them simply *Labs* (*lab, laby* in Polish in plural) or *Heritage Labs* (*laboratoria dziedzictwa*), dropping the Cooperative element from the term but adding explanatory description on a working basis. Most often, when referring to specific CHLs, their specific names were used (e.g., the name PragaLAB for the CHL in Warsaw, a name that was specifically created for this initiative).

Another word that is generally difficult in Polish translations, and important for the project and "Transferability Matrix," is *governance* (used 70 times in the TM). As stated in the TM, it "stands for the political function. This is about social framework conditions (…). These can be formally regulated in a political system but can also consist of the (informal) exercise of power or corruption." [Mieg 2022]. However, in Polish it is often translated in various documents as *zarządzanie*, equivalent to *management*. As a result, AI-supported translations also most often proposed this word, while in certain cases (e.g., *integration governance*) the AI suggested no relevant proposition and so left the original word unchanged. *Governance* also has several meanings in English, and difficulties in translating it to other languages (not only Polish but also German, for example) have also been a topic of scientific consideration [Szulc 2019]. The OpenHeritage text includes sentences that use both the terms "governance" and "management", the differentiation of which usually is omitted in the Polish translation.

5. Practical challenges of the "Transferability Matrix" translation

The goals of the project encompassed broadening knowledge but – even more importantly – applying new solutions to long-existing problems. The solutions referred to institutional, ownership-driven, and financial aspects. The Transferability Matrix presents paths for introducing new models and tools in countries and cities where they are hitherto absent. Therefore, some models and tools have as yet no counterparts in Poland – either in language or practice. The following examples of ownership models can be presented:

- Heritable building model,
- Community Land Trust,
- Regulations of the Commons model.

The Community Land Trust (CLT) model is present in an Anglo-Saxon institutional environment and, from the UK and US, also started to be implemented in Belgium, France, and the Netherlands. The primary goal of a CLT is the control of prices and rents of real estate assets in order to increase the economic security of local communities. Long-term leases (up to 250 years) protect sites from speculation and market-driven price increases. Various governance systems are all based on the principle of the control exercised by local inhabitants and experts [Mieg 2022, p. 21]. Heritable building right, present in Germany (*Erbbaurecht*), is also a form of long-term (often up to a century) control over a property through a lease that enables building affordable housing or workplaces. It is a way to allow the public sector to retain ownership of a plot of land but without the sole responsibility for investing in it. Public administrations cooperate with tenants, negotiating and putting into contract the use and way that the site will be developed, thus even controlling the future of socially important endeavors and blocking the possibility of commercialization of sites [Mieg 2022, p. 22]. The Italian model for control of the commons refers to "common goods" used for "civic use" as described in the Constitution, and is therefore strongly embedded in the national institutional framework. Interestingly, the general concept has been adapted and implemented on the local level, through introduction of local regulations. These allow communities or organizations to manage spaces, both public and private, for the common good [Mieg 2022, p. 23].

The difficulties of translation resulted from the economic and institutional situation in Poland. Until 1989 in the socialist state, legal regulations regarding space and real estate markets were politically driven and embedded in the dominant role of the state (and governing political party). Public ownership did not discriminate between the national and municipal; legal separation of entities (e.g., state-owned factories, water resources, infrastructure, etc.) was superficial. Private ownership of residential assets and companies, as well as agricultural land existed, although the share was significantly lower than in the Western countries in the 1970s or 1980s, as well as in Poland since the 1990s. Although subsequent privatization has not been as overwhelming as in some other post-socialist countries [Clapham et al. 1996; Hegedüs & Tosics 1994], it painted a very sharp black-and white image in national and local policies. The line of differentiation was drawn between the private and public sectors, with very little space for more complex models of ownership, investment, and cooperation. Therefore, the difficulties involved in translating the TM are twofold. First, it requires very detailed explanation of the processes. The TM provides informative explanation and very well-chosen cases serving as best practice models for adaptive heritage re-use based on the specific models. During the translation, however, it seemed necessary to add more information that might help to overcome initial uneasiness or even rejection on the part of readers. After more than 30 years of transition, it is still difficult to introduce into discussion any models other than straightforward public or private ownership and the resulting responsibility of the owner for investment.

Heritable building models serves as a good example. During Poland's centrally-planned economy, the specific institutional framework was used to differentiate between the owner and the investor. This was often the case for housing cooperatives, which had a specific status: the land was publicly owned, but a long-term lease contract was signed with the cooperatives. In return for the use of the land, they were responsible for investment and also held other civic responsibilities (e.g., some cultural or educational activities for residents). Such a model brings to mind the German framework, and in fact has several similarities to the German institutional concept. In Polish, it is called *użytkowanie wieczyste*, usually translated into English as *perpetual usufruct*.

Current scientific literature and legal discussions focus on the transformation of existing perpetual usufruct contracts into full private ownership (which is already in place in 2023 for residential properties). The regulations regarding *użytkowanie wieczyste* are expected to become non-existant, yet there are plans to implement another model, *prawo zabudowy* (*building right*), which would apply to both public and private land,[4] embedded in the logic of Austrian, German, and Swiss legal solutions [Szymczak 2014; Pogorzelec 2020]. It is therefore necessary for the translation to decide if, how, and in relation to what these existing Polish terms (*użytkowanie wieczyste* and *prawo zabudowy*) would be used.

The phrase *Community Land Trust* is often used not only in Poland but also in other languages in its original language, accompanied by explanation of the concept and associated regulations. For example, some texts in French propose the French version of the term as explanatory, but also use the original English name or else the more flexible and less offensively English acronym CLT [Une Seule Planete; Jablon 2014]. It would be possible to propose a Polish version while retaining the original in the text, but that seems to serve little purpose at the current stage and might even be misleading for readers who would like to refer to other documents concerning CLT. If the model becomes more widely adopted in Poland it might gain a local name, but it is also possible that the original name will prevail, as in several other instances of the newly introduced concepts and models.

The term *Commons* also poses some difficulties. In Polish, it is necessary to be more specific and to clarify whether the author means "common space" (usually equated with the term *public space*), "common ownership", or "common good". Again, several words can be problematic and still connected – at least in the minds of some stakeholders – to the socialist state, in this instance the despised phrase "Common means belonging to no one" (and therefore also no one's responsibility, which is the exact opposite of the idea in question).

4 "Perpetual usufruct," constructed during the centrally-planned economy, referred only to publicly owned land.

6. Conclusions

Certainly, innovative solutions and newly created knowledge cannot and should not be "passed over in silence" in non-English-speaking countries. The analyzed case shows that in international cooperation there are two parallel processes. One encompasses broadening the scope of knowledge, introduction of new concepts (economic, cultural, and others), and implementation of new models and lessons learned through good practices from other cities and countries. Another process is related to the broader limits of a language, finding new ways to explain new ideas, introduction of new terms, and giving new meaning to words that are already used. These two processes occur simultaneously, accompanied by trials, faults, successes, and errors common to the experimental phase of any form of progress.

The translation process described in this chapter had many similarities to the cooperation with stakeholders during the OpenHeritage project, and to the Warsaw Cooperative Heritage Lab (PragaLAB) activities in general. It involved constant balancing between the use of the original terms – that are often well-embedded in the literature and practice of English-speaking countries or groups (e.g., researchers) – and the need for clear, communicative, and linguistically correct explanations (without slipping into the shaky ground of Newspeak). Undoubtedly, it also describes a step in a longer journey, and the language proposed for the document in question will also evolve over time as it is used and adapted for future needs and activities.

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