PROGRAMMING

Programming urban transitions in practice

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I am a programmer. Like the software tinkering type, I am tasked with supporting and hacking out thematic content and strategic relations for JPI Urban Europe. The latter is spelled out Joint Programming Initiative, so fortunately it makes sense to be a programmer in that context. But programming means research and innovation funding and support means not only serving the community of practice with calls for funding, but also to shape opportunities and an ecosystem in support of the programme's objectives. The main objective is to support urban research and innovation to tackle the societal challenge of urban transitions and transformations towards sustainable – and livable – urban futures. In Europe and around the world. These types of programmes with thematically oriented calls for funding are not uncommon in national contexts. The European Union (EU) also puts a lot of emphasis in *Horizon 2020*, the current Framework Programme (2014–2020) that specifies EU research and

innovation support and funding, on calls, and somewhat less emphasis on programming. Although there are some transnational programming environments coordinated by it such as ERA-NET Cofund actions,[i] European Innovation Partnerships (EIPs) and European Institute of Technology (EIT) networks. Beyond Europe, the Belmont Forum is a similar outfit to JPI Urban Europe. However, the so-called public-to-public (P2P) transnational character is somewhat of a hallmark for the JPIs.

Joint Programming Initiatives were borne out of the European Research Area (ERA) along with a plethora of other and European Commission driven instruments (such as the ERA-NETs, European Innovation Partnerships (EIP), European Cooperation in Science and Technology (COST)). This type of action was set up to enable European countries, primarily EU member states but not restricted to these, to cooperate transnationally with national programming funds around societal and grand challenges. Drawing on the Lund Declaration from 2009, this cooperation would be challenge driven (Lund Declaration 2009). JPI Urban Europe is thus a member states' initiative on tackling the grand challenge of urban transitions to sustainable and livable cities and urban areas.

Although the approaches to how the challenges each JPI tackles varies among JPIs, they are to be articulated in a *Strategic Research and Innovation Agenda* (SRIA). It is literally a script and in analogy with the software programmes. It lays out why, what, and how. Hence, this is also where the programming gets more "joint" in terms of the member states signing off (and a blessing by the EC) to the main objectives and approaches it presents.

Programming dilemmas?

JPI Urban Europe recently updated its SRIA to outline challenges and approaches for beyond 2020 (see JPI Urban Europe 2019). This chapter draws on experiences of situations typically occurring in and around the drafting of this update.

The drafting of this agenda was a "difficult doing" when it comes to thematic content in sustainable urbanisation. Not for the writing itself. But for the kind of programming JPI Urban Europe set up as its ambition: to tackle sustainable urbanisation co-creatively and transdisciplinary.

It would have been easy to simply commission a couple of renowned professors and have a text that outlines the state of urban sustainability transitions and what priorities we should aim our programming at beyond 2020. Easy, but probably not very sensible. It would certainly be scientifically interesting. Unfortunately, this approach does not get us very far, since any single type of actor group affected by urban developments (a "stakeholder") of course filters and molds these matters according to their perspective. Science, in a clumsy and blunt categorisation of a set of specific knowledge practices, is in this sense not exceptional. Even if the types of knowledges generated by scientific approaches to research does aim at a specific kind of robustness beyond rhetorics. The point here is that if anything, all types of stakeholders are exceptional. And, of course, programmers filter and mold too! But to simply present the current and (probably) coming urban societal challenge in a framing made by only one of these groups to all the others does not shape the grounds for much traction.

It is a bit like the proverb, popularised by Al Gore and others:

If you want to go fast, go alone;

If you want to go far, go together.

JPI Urban Europe needs to make the SRIA make sense for more actors than research and policy. We found out, during the SRIA process of consultations, that in order to "go together," a dilemma-driven approach may be the best way to identify and construct thematic priorities. The dilemma-driven approach in the JPI Urban Europe-understanding is that dilemmas are commonplace tension gradient spaces, a bit like the "paradox-vaults" Bornemark (2019) devised to explore tensions by practical philosophy. Furthermore, they are essentially wicked issues, which means there is no high ground of facts to simply short-cut the way to resolve dilemmas.

The overall argument on the usefulness in proposing to programme the thematic priorities would be that JPI Urban Europe aims at creating knowledge and evidence for urban transitions and acknowledge that it has to consider dilemmas as competing targets and strategies due to the complexity of urban matters (cf. e.g. Amin & Thrift 2016). Hence, dilemmas are also identified and somewhat outlined in the SRIA in order to highlight the need for (policy) action and to address such issues through programmed activities, partly in calls for research and innovation, but also through dialogues across stakeholder groups to deal with different interests, and so on. Thus, the calls are focusing on main transition pathways and call for research and innovation to address the related dilemmas, critical and cross-cutting issues to move forward.

In order to describe how this works, I would like to show some of the settings where much of this work is done. These are four vignettes functioning as snapshots of the typical policy and research settings where the dilemma-driven approach is supposed to work. Through the notion of *programming*, this chapter will be an autoethnography of sorts. That is, this short reflection on how urban sustainability is a

difficult doing which seems to require, in the case of research and innovation programming – particularly transnational programming – a dilemma-driven approach to shape communication lines between more or less loosely connected urban related fields, issues, sectors, or silos. In line with this, the chapter concludes with the last vignette that is a reflection on academic knowledge practices as exemplified by the setting where the papers this book initially draws upon were presented and examined.

Typical situations for agenda setting

There are at least three working environments I keep returning to in my everyday practice of programming, out of which the main bulk revolves around translating policy and strategic lines into operational matter in JPI Urban Europe. Apart from typical institutional and conference centre style meeting spaces, and of course my own office space in Stockholm (well, actually just a borrowed desk in an "activity based office landscape"), not to mention the "mobile office" by working anywhere I can, such as on trains, in airports, and in airplanes. The latter type of working spaces are not very specific for this line of work. There is some sense of work being done in relatively even proportions among these spaces, but it is also laptop work and less human face-to-face interaction. Rather, I want to highlight a couple of the more specific ones. One such working environment here: a EU Committee of the Regions plenary room. The other a "grey meeting room" at the Directorate General (DG[ii]) Research and Innovation. Both types are located in Brussels. I single these two spaces out since they evoke something of the policy-maker everyday knowledge practice space. The third and fourth type are more conventional academic conference and seminar situations.

Vignette 1: A high-level policy conference setting

In the plenary, everyone is focused on the "panel" with the chair (see Figure 1). The space is designed to centralize the chairperson that (supposedly) directs and moves the exchange. Of course, a funneling of perspectives, literally and cognitively, is intended, towards the leader or the chief of the day. This is also supported by "protocol." It is a part of the protocol not "mattered" by spatial attributes. Almost ritualistic, it is not a place for too much creativity on the spot. It is for reporting and negotiation on (usually) known positions. Challenges, such as where to find knowledge and solutions to European economic growth and regional development, are typically elaborated. Someone may question statements delivered from the "stage," mostly in a very diplomatic tone and choice of phrasing. Rarely do we hear statements or articulations challenged per se. Discussions turn more by implicit statements between the lines, like code, like encrypted messages that mean very different things to those "in the know" and those who are not. Being in the know is of course a main point of this part of policy development and negotiation. For instance, it is almost customary to avoid talking about "problems," and problematic issues are consequently re-coded as "challenges," something which renders the policy practice a positive outlook rather than wallowing in the negative, so to speak.

Vignette 2: the policy-makers' meeting room

The European Commission (EC) meeting rooms are typically called something like "7.A149" and they are rather grey rooms usually without windows (see Figure 1). Although some of these meeting rooms have windows to the hallways, where the walls are also grey, but the windows somehow lightens or "airs" up the meetings. You see other people walking and working outside. Inside the meeting room, the grey of

the walls is actually accentuated by one or two A2 posters highlighting one or the other policy action line and intensely red chairs are placed around the table. Otherwise, these meeting rooms is a type of meeting rooms common in the DG Research and Innovation at Frérè Orban, Brussels. They are located in the heart of the building floors with two parallel hallways on each side in order to make the staff offices have windows with daylight. These are about 20 meter long and perhaps six meters wide, with tables in a U-shape. So you feel oddly distant to the other side, even if it is rather close. Usually, EC staff seems to place themselves on the one side and external people on the other. These meeting rooms are also much more focused on powerpoint presentations on screens than the plenary kind. Talks revolve around things in the making, about ambitions and activities, about policies and action lines that may or should connect to or even support each other. The bureaucrats' braids of intricate schemes and plans for implementation. Usually these talks are, in my experience, more informal and outspoken yet still tends to dodge conflicts and friction.

<Figure 1 about here> Photo (left) taken at the JPI Urban Europe Policy Conference 2019, in the plenary room of the Committee of the Regions, EU. Photo (right) shows

a typical meeting room with the EC Interservice Group on Urban Development; both settings are located in Brussels. Source: Jonas Bylund.

Vignette 3: An academic conference panel

Another common but slightly more contrasting kind of setting is a typical research conference session. Or perhaps not entirely conventional in terms of how we are seated in the particular sample here. We sit in a circle. Perhaps rather in an ellipsoid and on swing chairs with wheels. It is a roundtable session, but without a table. The session's panelists are mixed with other participants. Even if this physical-material-bodily organisation of sessions is not uncommon today, it is a stark contrast to both the Brussels' plenary and grey room presented above. The session is to discuss "whither urban sustainability" with the Association of European Schools of Planning's (AESOP) community of practice.

A huge turnout, there are many participants in the room. There seems to be a vigorous interest in the questions posed for the session around whether urban sustainability has been outmoded. Many of us also somewhat primed by the conference keynote that took place two hours earlier, where the Science and Technology Studies researcher John Law spoke of the political implications of "mistranslations" between actor groups.

Jonathan, the round table initiator, provides a brief introductory remark, the panelists follow with five minute opening comments. Then the one and a half hour go by swiftly as in almost a blink of an eye. As the session moves along, there is a very engaged but polite atmosphere. I realize I forgot to turn on the *GenderTimer*, a tool that allows to measure the share of speaking, which would have been interesting to

document the proportion of talking time between women and men. The discussions

turn around criss-crossing issues related to the overarching concern on how to

research contemporary urban sustainability, such as application and bid-writing

tactics (of course, my ears even more sensitive/keen to these things!), to reflections on

the academic practice of sustainability. As an aside, I also note that there is less talk

framed around urban specifics, which may indicate the planetary concerns with

current urbanisation have come to the point that most societies are considered almost

as synonymous to urban life? Reflections are also articulated on topics such as

planning studies' sense of what planners actually do when they do "sustainability," on

the more radical and less utilised parts of the Brundtland Report, on the impasse of

ecological modernisation as the operationalisation of Brundtland, and the

whereabouts of Agenda 21 nowadays. To my ears, however, two main positions

develop out of the panel's and the participants' statements and comments (I will leave

these for now and return to them further below). The session ends less by conclusion

than by calls for continued reflection and networking on these matters.

The typical settings slightly reflected

The three settings described above are important to understand in terms of how very

differently their dialogues and debates are cultivated. That is, important for

programming in the field of urban research and innovation, since they also refract

what is one of the main difficulties in doing urban programming today – at least in the

Europan context. It is difficult because of the fragmentation of sectors, issues, and

policy lines, which at times are driven by almost incongruent urban imaginaries,

logics, and knowledge practices.

The first two types of settings – i.e. the policy oriented ones – usually generate quite incoherent discussions. There are more diverse kinds of details and aspects proposed to the overall line or concern under discussion. Generally, the practice revolves more around testing what can be added and integrated to a document or action line in a policy, and what can be deduced, its congruency to existing policy, how to move it along, or what can be inserted to make it move in a new direction. When urban matters are handled in these two kinds of spaces, they come with different urban imaginaries, different entry points to this imbroglio represented or articulated. Some actors search for the larger and more comprehensive view, some actors seemingly assume they already have it. All are of course in favour of sustainable urbanization – somehow.

What we also often see or – perhaps better – experience in both these settings is the archipelagic sense of urban development. It is archipelagic since both in transnational and most national policy, as well as in research and innovation, fields and frontlines issues are clustered in a non-symmetrical way that looks a lot like smaller and bigger islands clumped together with varying distances between them.[iii] It is asymmetrical in that the fragmentation is not even, clusters have more or less connectivity in between them. The policy lines discussed concerning or relating at times more or less to urban sustainability are rarely shaped or articulated by "urban studies" scholars. Even if integration and systemic approaches may be an explicit desire, there are still strong gravitational wells that seem to generate sectoral outlooks and issue clusters. In other words, it seems the actors here talk a lot more about transitions in various fields or sectors, and struggle with the (perhaps) knee-jerk reaction to want to see "the urban" as a more clear-cut sector, which it typically overflows…

A main complication here, to quote Ranciére, lies in the un- or semi-recognised "disagreement":

> Disagreement is not the conflict between one who says white and another who says black. It is the conflict between one who says white and another who also says white but does not understand the same thing by it or does not understand that the other is saying the same thing in the name of whiteness. (Rancière, 1999: x)

Because of the urge to avoid friction, someone may talk about "urban planning" and why it needs this or that support or this or that de-regulation; and not realising the multitude of understandings of what urban planners actually do. I have heard high-level policy actors in plenary panels characterize urban planners as the ones simply "drawing stuff on maps." Others as the ones managing urban development projects. Some as the strategic economic growth mediators. Some conceiving them as simply a (national and EU) policy implementation function. And so on. Of course, these different senses of "whiteness" matters when policies and funding in different sectors and along different urban logics are crafted.

The academic situation also deals with the urban archipelago of imaginaries, but (not surprisingly) in a more reflexive manner. However, a main difference is the manner in which it welcomes and seeks friction between positions. Which means that it typically revolves around debates on differing ontological strategies. Although the academic roundtable session described in the vignette above gathered participants more or less from planning studies and urban studies, hence somewhat aligned on certain baseline issues such as "what is the 'urban'?" or "what do planners actually do?," the more open contestation also highlighted different ontologies in how these

baseline issues are understood. A kind of assemblage of standpoint theories emerges, that in some cases tries to assimilate and conquer others, in others efforts to test ideas and offer possible ways to refurbish them, etcetera. Various academic sessions and conferences do show different balances between these practices.

As mentioned above, a case in point was the two positions that emerged in the roundtable. Between what I rather quickly labeled "centralisation" and, also hastily labeled, "emergings-in-practice." Centralisation revolves around a "scientific" way to go about and shape strong leaders, or even *a* strong leader, to drive sustainable urbanization. What seems to be needed, according to this position, is a new master narrative and charismatic person that can be used to align us all to realise urban sustainability. Emergings-in-practice, a more networked approach and open to variations on the sense of sustainability as a platform, seems to argue for the need and practice of urban sustainability as a plastic notion that connects, but does not cover. It is more of taking at face value how urban sustainable development has developed both in practice and in academic fields.

Now, in terms of the role of dilemma-driven approach in programming, the latter seems important to me, since I draw upon the practices experienced in the first two vignettes, the policy settings. Because of the archipelagic character of issues and approaches in sustainable urbanization, there seems less use for, let alone resources to, re-centralize and shape a new unitary urban paradigm.

Programming dilemmas

We are like sailors who on the open sea must reconstruct their ship but are never able to start afresh from the bottom. Where a beam is taken away a

new one must at once be put there, and for this the rest of the ship is used

as support. In this way, by using the old beams and driftwood the ship can

be shaped entirely anew, but only by gradual reconstruction. (Otto

Neurath quoted in Cartwright et al. 2008: 191)

The main challenge for a practitioner in this landscape of fragmented urban

imaginaries seems to be programming for urban research and innovation with the aim

of promoting sustainable urbanization. That is, how to shape and move forward

support and enabling activities for sustainable urbanization or the *UN Agenda 2030*

Sustainable Development Goal (SDG) 11.

But to achieve these goals – i.e. how to programme urban research and

innovation in a challenge-driven way? – it makes less sense to simply restate them in

a call and programme environment, since they are typically manifested differently in

different places. An interface is required to translate the particular challenge

characteristics for urban stakeholders into e.g. a call. That is, "challenge-driven" is

more than the opposite from "blue skies" or curiosity-driven approaches. Working

with challenge-driven research and innovation does not exclude curiosity, quite the

contrary. But it has to do with power issues in terms of who are invited to actually

take part in and frame the challenge. Ideally, it is the so-called problem owners, those

directly affected by the issue, the concern, the problem that should be given adequate

room to articulate what the challenge looks like.

For sustainable urbanization, this is many times translated into a call for city

authorities (usually simply "cities" in policy jargon) to explicate what they need and

what obstacles they face in realizing sustainable urban areas, the logic presumably

being that the territorial administrative authority also enables them to represent a city

in its operative urbanity, so to speak. In practice, city authorities usually deliver cogent problems and issues as priorities, at times with the help of research or consultancy, but not seldom at contradiction of national research and innovation or other societal policy (such as those concerning e.g. migration) or in divergence with urban research fields' focus.

Urban sustainability as a *societal* or grand challenge, then, to elaborate the EU line on challenge-driven programming, was a call for policy and research and innovation systems to understand the challenges that European societies face. These challenges were to be understood less in rigid thematic categories, and more along how these challenges actually criss-cross sectors, thematics, disciplines, silos, and so on in various ways, and for European national programming and EU programming to align to better tackle them together. An important part here, to boost this inter- and transdisciplinary approach, was the call for affected actors, problem owners as well as potential "solution providers," to mutually engage through coming together and co-creating challenge specifications, as well as suggestions for how to tackle them. Thus the Lund Declaration called upon EU member states to move beyond the rigid thematic focus in research and innovation cooperation and to "focus on the grand challenges of our time":

> Identifying and responding to Grand Challenges should involve
> stakeholders from both public and private sectors in transparent processes
> taking into account the global dimension. (Lund Declaration 2009: 1)

Ten years after the Lund Declaration, the JPI Urban Europe, a transnational programming collaboration which is borne out of this line as well as the societal challenges pillar in Horizon 2020, drafts its second agenda – SRIA 2.0. The dynamics

in urban research and innovation and policy debate settings by this time, roughly outlined above, made us realize that integrated urban thematic priorities (as in the SRIA 2015 and in line with the Leipzig Charter) still made it difficult to connect or "invite" a broader, more inclusive set of actors, stakeholders, and publics into the programming. Extensive public and open consultations, national consultations, when drafting the SRIA 2.0 was pointing to different types of friction, disagreement, and conflict: between academic communities, between innovation "genres," between city representatives and policy makers, between civil society representatives and industry, between thematic islands in the urban archipelago of issues, sectors, and disciplines. What to do?

My colleague put the daring question "-what if we treat the thematic areas as dilemmas instead of thematic priorities?" The idea was that it would be very difficult for us to synthesize the both divergent and "mixed-up" issue understandings that were articulated in the consultations. Rarely was there a clearly formulated "mobility issue," "energy issue" or "social issue." More importantly, such a synthesis would just be yet a standpoint and position among many other. Furthermore, what much of the consultations showed was a lack of trust among actors – particularly arguing other types of actors got it wrong or were on the wrong track. It was also, in different manners, suggested that the main reason why issues are not tackled was that other actors refuse to proceed in the correct "white" – to use Rancière's example – fashion.

The reason I thought the dilemma-driven approach was daring was not because phrasing these challenges as dilemmas is a particularly new thing. It actually builds upon classic planning craft in terms of understanding complexities and conflicts in urban development. (I am still a bit confounded as to "why didn't I think of this before?," instead it was my colleague with no planning or urban studies

background who thought of it.) The idea also resonates quite well with what in science and technology studies and political philosophy has been explored as "issue oriented" approaches and agonistic democracy (see e.g. Marres 2010).

If we now revisit the vignettes, they showcase at least two very different but connected ways of handling dilemmas in urban sustainable development. Both tend to keep them at arm's length. The first, the policy setting, does so with some difficulties around the conflicts and frictions involved. Why? It is centralized and usually riddled with power games, but with a fear of conflict. The other, academic research, may perhaps revel, or even wallow in dilemmas and complexities. But to some extent it also cops out by tending to quickly take sides. In planning studies and urban studies at least, there are better and worse sides, and dilemmas are not necessarily seen as trade-offs. Apart from this, the more important aspect that differentiates the two types of knowledge practices is perhaps the approach to conflict. And this difference is not necessarily a bad thing, since it shapes an affordance for agony on the policy side instead of antagonising too much; and it still enables research to put pressure and test relations, explore complexities, and fulfill the commission to reflect upon issues, provide suggestions on ways forward as well as potential challenges along the suggested pathways. It is a division of labour at times perhaps forgotten on both sides, when researchers expects the policy side to follow the researcher logic of practice and vice-versa. Of course, for *both* sides, bringing in other stakeholder expectations in this makes it quite cumbersome.

In the SRIA 2.0 drafting, the dilemma-driven approach was developed to reshuffle conventional lines and issues a bit:

> In its simple definition, a dilemma means having to decide between two or
> more alternatives that seem equally desirable or undesirable. However,

dilemmas may also mean difficult situations where the path taken is not

clearly beneficent and the need to compromise continuously appears. In

other words, typical implementation, transition, and innovation situations.

… urban transitions and sustainable urban development usually involve

many different (sub)targets, which often result in a set of strategies or

actions pursued in parallel or disconnected from each other. While some

targets support each other, others conflict across administrative

departments, sectors, or societal groups.

In an interconnected and hyper-complex urban environment in constant

motion – practitioners and strategists oftentimes encounter dilemmas

rather than simple problems with an easy fix readily available off the

shelves. (Wrangsten & Bylund 2018)

What the dilemma-driven approach is intended to inspire is to take seriously and to

dare fragmentation, nudge interfaces, and invite connectivity by grounded and

warranted assemblage layers. To be congruent with a "post-foundationalist" view and

ontology and the urban setting and its subjects as multi-epistemological and plural

knowledge practices. A bit like what an inquiry into 21st Century urbanism – what

urban studies does *during* transitions, to support rebuilding the ship at sea.

Interestingly, not all – and particularly among researchers – harbor the intuition we

use to suss out the frictions and connectivities: some actually hand back or propose

typical research questions that run along sectoral lines, does not really pick up the

wickedness, or they simply "revolt" against why two (or more) "incongruent areas"

are pitted together by the JPI Urban Europe staff.

The dilemma-driven approach is important from a methodological point of view as well in that it serves to unsettle any given (or taken) distinction between "resources" and "subject matter." Looking at urban transition issues from a dilemma point of view hence means that your instruments and tools to survey, and perhaps remedy, are not necessarily innocent. In this respect, dilemma-driven is even closer to standpoint theory, in the sense that it is an effort to support open approaches and dissuade arrogant "God's eye views" on urban challenges, and moves away even more from technocratic responses to challenges (a type of response even a challenge-driven approach may succumb to).

IV – A new hope

The challenge of programming in the field of urban research and innovation for sustainable urbanization is fraught with hypes, superficial victories while many of the "heavy" issues remain untackled to a large extent. Hence, the dilemma-driven approach was developed also with the hope that we can now pursue and programme more of the issues that are "hard to reach," a way to "step up the game" (cf. de Jong et al. 2018). Since to do this, more inclusive and less scapegoating approaches are required. So, one of the reasons for us to develop the dilemma-driven approach is to increase the stakeholder or simply actor connectivity.

This connectivity has been made conscious over the last decades, more and more in policy, in science and technology studies, in urban transitions/studies, in urban and regional planning, at least partly thanks to the broad adaptation of the idea of "the Anthropocene." Stakeholder engagement has made a general impact, if not in urban development craft and everyday practices then at least in its discourse and

visions. Some of the main reasons for this are that a) it is relatively well accepted that technocracy did not get us very far; and b) the types of societal challenges we are facing are too complex for a single-set solution. And we are currently not just witnessing the proliferation the typical highly scripted "citizen dialogues" of planning, but also ambitions to find ways for allowing more diverse set of actors present their point of view and perspective on challenges. This is what then shapes a substantial challenge-driven innovation, one that may be well suited to tackle the UN Agenda 2030 Sustainable Development Goals (Kabisch et al. 2019).

From a programming point of view, a challenge-driven approach means that public actors take a lead to support co-creation among a diverse set of actors as well as transnational collaboration to tackle and shape innovative ways to deal with the complex and many times wicked issues in today's societies. In order for these issues to be categorized as a "challenge," they need to show a critical need or problem in society at large and defined by the problem owners themselves drawing on their everyday practices. New business opportunities and markets are expected in the wake of this convergence of resources and innovativeness. In other words, the "tradition" of the challenge-driven approach underpins what in the coming EU research and innovation framework programme *Horizon Europe* is called 'missions' (cf. Mazzucato 2018).

In terms of programming, these missions are somehow 1950s style innovation management re-cycled. It still means that commercial entrepreneurs are not the heroes as the myth that dominated many contemporary Western societies has proclaimed since the 1980s. Mazzucato makes a very good point: an overwhelming part of the risk in innovation has always been on the public side. The commercial side do not really have any business models for radical innovation or systemic transitions.

If we take into account the current experimental ethos in local urban policy and planning, development, etc. for various aspects of sustainable urbanization, then at least I could re-imagine my job as part of the an urban transitions mission. Hence, there is a good argument why we should again let the public money and research and innovation do the cutting edge stuff, the risky stuff, etc.

So, that is a kind of conceptual European transnational policy setting where urban sustainability and the challenge faced in programming for sustainable urbanization is to be found.

What is required for transdisciplinary settings to work?

This programming environment hence points to the need for transdisciplinary ways of working, in the sense that "the system" is not a linear conveyor belt between so-called basic research over applied to "uptake" at the end of the line, but rather a landscape of concurrent knowledge practices processing and ecologizing – where science is but one type of family in the biome, so to speak. This leads us to the second occasion and actually the main reason for this chapter, as a reflection on some aspects of the difficult doing of programming sustainable urbanization research and innovation, is the *Difficult doings: investigating the challenging practice of sustainable urban developmen* research workshop held in Cambridge, April 2018. It was organized mainly in the context of the project *Organizing sustainable cities*, which was a transnational research project to gauge how sustainability is actually used or practiced in contemporary urban planning and development work. However, there were also trace elements of the project *Decode* which was a transdisciplinary project with the

objective to develop knowledge practices suited for sustainable urbanization. The workshop mingled the two projects as well as external guests from both practice (such as myself) and research. Papers were presented by project participants and practitioners were invited to give talks about their challenges in and around urban sustainability. In other words, a transdisciplinary setting.

Vignette 4: a transdisciplinary workshop

The point of the Cambridge workshop was, in my understanding, to enable a dialogue between academic researchers and practitioners in urban policy and planning, with a specific emphasis on how dilemmas in urban sustainable development are actually handled in everyday settings. As the invitation phrased it:

> There are innumerable academic studies of sustainable urban development. However, surprisingly few of these actually take a "view from practice", based upon the concrete and practical challenges of the everyday work experience of those who are tasked with realizing such ambitions.

In terms of transdisciplinarity, there was an ambition to at least open the gates. The Cambridge workshop was set up also with a less explicit intention by the organizers, to find a tentative answer to the question of what is required for transdisciplinary settings to work. As noted below, it was not very clear to what degree any of the papers were actually generated in a transdisciplinary mode, however, the point was for the workshop itself to be such a setting. Nonetheless, there was some kind of chiasm between two types of reflections on an area which was more of one of the types of actors' "backyard," so to speak, built into the workshop from the beginning.

The workshop was a seminar in the sense of a space set up to test propositions on the world (the urban planners' practical worlds). Participating in the role of practitioner, I was asked to put the academic papers to trial on their relevance to my practical world. That is, it was not quite transdisciplinarity in the sense of "generating and creating together" but rather something like kneading and processing prototypes already designed, even if the materials in some of the papers were generated through the bona fide transdisciplinary circumstance of the Decode project.

Further, it is certainly possible that the researchers and the practitioners gained some kind of transdisciplinary added value out of each other in their encounter. The more troubling issue may rather be around how the academic researchers work with their materials to shape academic currency. That is, their orientation towards having a bearing on debates and research frontiers that are not necessarily familiar ground for urban planning practitioners, and hence does not indicate relevance to the latter? From this point of view, one requirement for making transdisciplinarity work and for researchers to produce more "relevant" knowledges does not really hinge on the setting of collaboration per se but rather in the steering of academic thinking and writing towards the community's established output channels and validation practices, and the settings where academic debates are both fueled, nourished, and turned over, that is: particularly, academic journal publishing.

One example: the *Urban Transformations Journal* was created with the objective to provide transdisciplinary researchers (and practitioners) who work on sustainable urbanization an outlet to translate these knowledges into "academic currency" in the system. The project is to secure the journal as a high impact academic outlet, with the aim of increasing the workability and, over time, the critical

mass of transdisciplinary approaches and hence support this community of practice's competitiveness in academic evaluation procedures (for funding and positions, etc.).

Secondly, more inside the setting in question, another requirement may be simply not to write papers but rather to find other ways to formalize collaborative knowledge-making across the borders, so to speak. Academic writing can be very effective at conveying a precise meaning, just like electric cars are very effective today as long as you have the infrastructure set up to support it. Without the infrastructure, outside the road system way out in the woods or deep in some jungle, it is not moving very well. Academic text certainly has that infrastructure in the academic system and to some degree in higher level policy making. But in many other no less knowledge-intense areas, text is not always the best way to move and explore with, as it simply cannot avoid the reductionism and absolutism of fixed wordings..

So, one difference here in the fourth vignette is between on the one hand an interactive transdisciplinary setting that works among a diverse group of actors, and on the other hand, how academic research later on debriefs or reports, and writes up the results. Perhaps, the knowledge practice(s) around a specific type of text is here a more central problem than any deeper differences between how academics and practitioners otherwise think? Maybe this is too speculative. But this is a line of thinking that commonly pops up in my line of work and the settings this work takes me through. Having not been active as a university researcher for the last five-six years, a self-reflection related to this – when *writing* this piece – is how slightly estranged this type of writing is for me now. Moreover, that the kind of text is most of the time very different in and around the practitioners, business, and civil society actors. Of course, text in a very general sense is in heavy use among practitioners to manipulate and shape the bits and pieces they need to keep on "worlding" the way

they do – a policy is usually a bit of text, maybe some tables and figures.

Nevertheless, it is rarely the long-read and usually it is in bullet list compositions

(even when there is no bullets, the same near-telegramese rhythm is usually present).

Transdisciplinary settings require new protocols?

Hence, and remember that this reflection comes from the programming point of view,

maybe the requirements to make transdisciplinary settings work (well) has to do with

protocols? What my reflexive hang-up on text above perhaps points to is the role of

protocols to work well with framings in transdisciplinary practices? Academic papers

come with a protocol. Knowledge practices for the Anthropocene may however

simply require different protocols to optimize knowledge sharing, learning, and

impact. For instance, look at Bruno Latour's work with exhibitions to jointly explore

intersections in current knowledge practices and how the AIME project was set up as

a platform with capacity (in some respects developed during the course of the project)

to deal with more varied types of materials – visual, audio, theatrical, etc. – in a co-

creative exploration of Modernity. These still need handles and anchoring points, but

may it be that the academic text is not necessarily the best suited tool for this?

I used to take a position that it is not the researchers that should have to

"dumb-down" their communication, it is the receivers – public administration and

civil servants mainly – that have to step-up. I kind of still agree, but also have had to

recognize elements as to why this competence upgrade seems so difficult. So, here are

a couple of requirements for the new protocols as a departure point – to which we

may add more later on.

Firstly, civil servants rarely use single research project "findings." Rather, I suspect, they make use of a critical mass of statements, claims, and findings (academic as well as other types) regarding an issue and may at times highlight one or two references to make a proposition "evidence based." Secondly, at the same time, in many parts of Europe, there is a blatant under-capacity in public administrations. They are generally severely under-resourced. There are many competent staff who are skilled in their areas of expertise. They simply do not have the resources of time or staffing, and further lack the mandate to move across silos or domains to actually act transversally on issues in the manner that urban research and innovation proposes (and many civil servants see with their own eyes) as critical. This goes for high-level policy making and implementation as well as for local urban governance and planning practice. What we see are burnouts by those that try to engage beyond the typical checkbox-bureaucracy forms in public organizations. This situation is further exacerbated by an increasing projectification, that is, processes and actions are increasingly circumscribed in time as one-off actions rather than being integrated in the everyday bureaucratic practices, among public administrations. Particularly when it comes to how they are allowed to join transdisciplinary explorations and actions to tackle sustainable urbanization, this not very helpful.

Many of the papers presented in the Cambridge workshop seemed not to have observed this, been touched by it, or somehow noticed this condition. A condition which is not always politically favorable to talk about in contemporary Europe. Although in the practical settings, the policy conferences, the meeting rooms, policy debates and workshops with stakeholders, and not least very much commented upon in the JPI Urban Europe consultations for SRIA 2.0, this public sector capacity issue

runs like a red thread. And when we raise the issue cautiously, the response is generally a massive support for this concern.

So for the programming work with JPI Urban Europe and the practice settings and exchanges I traverse, much of the Cambridge papers' view on "practice" is as if they are watching a house and try to talk about what's going on inside by merely looking at what is on the outside, maybe talking to the stray inhabitant that ventures outside. For transdisciplinarity to really work, they will probably instead have to try to muster the courage of walking up to the house, knocking on the door and asking, "how do you really do? can I have a look inside?"

Endnote on swarm intelligence in the programming environment

> Yet the city is still set within a world of ruptures between the world and
> humans that cannot be gainsaid and especially an assumption that
> resources will continue to be forthcoming on a planet that is being drained
> of its goodness. (Amin & Thrift 2016: 70)

It could have been worse. But still: policy-makers want a recipe, a best practice, a map. Academics want to be clever. And at times it seems everybody wants someone else – the programmers? – to do the job.

How to tackle this daunting task? In this regard, perhaps the cultivation of "swarm intelligence," as Anders Bergmark at *Färgfabriken* in Stockholm use to call it and to hopefully steal it away from the current military uses, may be fruitful. Swarm intelligence is when there is a vision but all concerned actors does not fall in line, so

to speak. All have their own agendas, sometimes overlapping, sometimes with friction between each other, yet they collectively work towards realizing the vision. In this sense, it is not the place to ask whether the vision is realistic. And yes, there has to be reflexivity and non-linear movement involved – that is part of the collective exploratory work. Still, what may be crucial is to support communication lines in-between actors or issues. Could swarm intelligence, a distributed cognition that includes not-always-congruent agendas and with some friction between desires, help us shape this common world? The together-go, the common trajectory of urban sustainable transformations? With directionality and without succumbing to romanticized pipe-dreams of "self-organization" touted as excuses for de-capacitating our organizations, settings and people? Could the programming and funding a collective thinking and working-through of dilemmas help us focus on rebuilding the ship at sea?

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[i] "The European Research Area (ERA) is a unified research area open to the world and based on the internal market. The ERA enables free circulation of researchers, scientific knowledge and technology." <https://ec.europa.eu/info/research-and-innovation/strategy/era_en >

[ii] A DG is a policy area department in the European Commission.

[iii] I borrow this metaphor from Michel Serres, who used it to characterise the science and research, and its disciplines and fields' interrelations. The metaphor is a useful contrast to the sciences' rational and reductionist self-image of a hierarchical tree as well as the metaphor commonly used to critique knowledge intense practices as working in siloes. The archipelago does not necessarily evoke such well-balanced images and may hence enable better gauged understandings of the power games involved in policy-science exchange.