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Learning from Each Other: Why and How Business Schools Need to Create a 'Paradox Box' for Academic-Policy Impact

Beech Nic., Mason Katy, MacIntosh Robert. and Bartunek, Jean

Katy Mason
Professor of Markets and Management
Lancaster University Management School
Lancaster, LA1 4YX

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As the 'impact agenda' continues to gain prominence internationally, a key challenge is enabling academics and policymakers to interact. Business schools in the UK, New Zealand and Australia have come under increasing government pressure to deliver impactful research and address the world's Grand Challenges and, in so doing, transform society, economy and environment. Within academia, we have recognised an ethical position that if we could contribute to such change then some of our resource and effort should be focused in this way, to bring the benefits of our research to the world of policy and practice and to gain insights about the use and potential direction of our research. Yet academic cultures and the everyday practices of Business Schools act to keep 'outsiders' out: conferences, learned societies and academic journals remain inaccessible and impenetrable to those responsible for making and implementing the policies that our research might hope to inform. With a focus on academia and policymakers, we argue that there are significant cultural impediments to achieving impact and that it may not only be difficult to blend academic and policymaking cultures, it may even be counter-productive. In this expository essay, we suggest an alternative: establish a learning zone in which key cultural rules are suspended (not 'solved') and groups can contribute input and extract learning insights *as if* they were collaborating with shared understanding, when this may only partially be the case. We explore the theoretical grounds for a new kind of learning zone by examining the barriers and contradictions that currently impede academics and policymakers learning from each other. We present the 'paradox box' as a framework which offers a way of coping with embedded contradictions without having to eradicate them. Given that one size is unlikely to fit all, we offer a set of design principles for devising paradox boxes.

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There have long been calls from within academia to make our research more relevant, engaged, collaborative with practice and impactful (Bartunek, 2011; Pettigrew, 2011; Van de Ven, 2018; Haley, 2021; MacIntosh et al., 2021). In 2019, the UK government made £5.3bn available to its primary HEI research funding body UKRI, while the National Centre for Science Engineering and Statistics estimate the US government made US$656bn available for research and development. Of course, only a fraction of this spending supports business and management research. Even so, the impact and influence of our research remains much less than it could be and this deprives businesses, organizations, and society more generally of the potential benefits management research could offer. Further, it deprives researchers of the considerable value and stimulation of grappling with messy reality. Impactful and influential research is hard to do and training in the relevant techniques and methods is generally insufficient but we suggest that the real impediment is cultural. There are differences between the home-cultures of academia and policymaking which include insolvable contradictions. Our focus is therefore on the conundrum of needing to interact across incompatible cultures between academia and policy makers. Our expository essay (Neal, 2017; Vince and Hibbert, 2018) proposes a novel way of working which overcomes rather than solves the problem of learning from each other.

We set out three cultural incompatibilities between academia and policymaking which we regard as the heart of the problem. These are: (i) the epistemologies-in-use (how knowledge, evidence and rigour are framed), (ii) the production and use of knowledge objectives, and (iii) the rules of identity and belonging to the home-culture.

By rethinking the interaction between academics and policymakers through a learning lens, we propose a way of enhancing the learning between the parties in order to enable actions as if they were culturally compatible. The crucial phrase here is '*as if*'. That is, unlike much of the literature we are not proposing that academics and policymakers should strive to achieve the characteristics of full cultural engagement. Rather, we argue the need for valuing difference between participants who remain absorbed within their own home-cultures, whilst also suggesting the need to act in a learning zone in which there is a suspending of normal rules. We argue that this is both desirable and feasible.

Our analysis draws on theories of expansive learning (Engeström, 2001; 2018), trading zones (Galison, 1997) and liminality (Turner, 1967) to develop the idea of a learning zone which we term a 'paradox box'. We propose this as complementary to established theoretical work on enhancing impact. The paradox box learning zone is one in which the creative risk is taken that 'the other' will reuse or even misuse your knowledge and that there is no guarantee of fairness or exchange, but rather a letting-go of one's valued-knowledge. This is a liminal and risky activity and therefore needs to be managed with insight and care. We suggest that it would be valuable for Business Schools to develop the skills of building and managing paradox boxes and we aim to contribute both to the theoretical understanding of impact and to a practical way of improving interaction and practical learning between academics and policymakers.

In summary, our provocation is this: much thinking has gone on about how to have impact, but little, if any, has explicitly explored it as a learning process between cultures. Framing the quest for impact in this way enables an alternative approach which reconceives the problem and invites a different way of acting: neither knowledge-transfer nor fully engaged research, but the establishment of a facilitated, episodic, liminal learning zone.

The Heart of the Problem: Cultural Incompatibilities between Academics and Policymakers

Academic and policymaking cultures operate in strongly self-reinforcing ways. They could be regarded as communities of practice (Lave and Wenger, 1991) which people join, develop their ability to perform and to know, and increasingly become acknowledged by the community as full members. In order to achieve this there is much tacit learning (Leonard and Sensiper, 1998) as people learn through participating in the practice of the community. So, for example, although there are now short courses and mentoring to help, academics fundamentally learn about publishing by the activities of writing, submitting papers and learning from reviews, and policy makers learn by making speeches, answering questions in public settings, giving interviews and working on policy papers. These participatory ways of learning are deeply rooted. They form a narrative structure in constructing an identity in the home-culture – the list of successes on people's CVs and the list of failures from which we can learn and by which we can be haunted. Haley (2017; 2021) highlights incentives and membership structures which operate to maintain position and distinction within the academic culture. In their survey of business and management academics, 45% of respondents rated impact on policy as important but the top audience for research was clearly identified as other academics with policymakers in third position behind top managers. It is telling that the top indicators of scholarly impact were reported as articles in top-tier journals and citation data, followed by scholarly books and research grants with articles in practitioner-oriented journals some way behind. This is no surprise because as Sutherland (2017) shows, the supposedly objective measures of place of publication and citations play a very significant role in how academic careers are managed, notwithstanding significant doubts about reliance on such measures (Haley, 2021), for example in relationship to gender (see, Winchester and Browning, 2015). It seems clear that to be a successful academic, i.e. being in a promoted position and in a preferred school, networking, sponsorship and top-tier publications matter significantly. Indeed, they are also inter-related (see, for example, Haley, 2019). Our ancient culture means that achievements in knowledge creation which are highly regarded by our peers influence what we can wear (our robes), where we can sit (our chairs) and who should listen to us (our students who aspire to being bachelors and masters). The consequence of this is that

knowledge production is highly valued when it conforms to the norms of top-tier publication (Haley, 2021) in making a theoretical contribution, moving the field forward and being recognised by the expert community. Undertaking this work is often a vocation, one which comprises more than a full-time job and one which therefore limits how much time and intellectual energy academics can spend learning about, or being novices in, other cultures.

The culture of policymakers (including politicians) is no less demanding. It incorporates constructing identities and relationships which define careers and the ability to make a difference which is the key to success. As Sorrentino and Augoustinos (2016) show, politicians' words and actions are open to constant scrutiny and reinterpretation and there are significant dangers for those who do not fit into party and career structures. Peer-esteem is important, but voters feature even more strongly in the sense-making of policymakers, not least because polls and elections make and break careers. Lenz (2012) has explored the relationship between policy and voting and found that, in the main, voters do not judge politicians by their policy stances, but the reverse, voters first decide whether they like a politician and subsequently think positively about their policies, passing judgement on their perceived performance in delivery. The implication of this is a need to construct and maintain an effectively attractive persona from which to build recognition and approval from voters. Learning in the role is not only cognitive, but emotional, personal and incorporates the 'whole person' (Illeris, 2014). This task is made harder by the reality that time in office can be very limited (perhaps an extreme example being Industry Secretaries in the UK at one time lasting on average 1.6 years (Riddell, 2011)). Policymakers are therefore acutely aware that they need to make a difference and a short timescale within which to do so. It is not necessarily a requirement to have relevant background expertise or experience meaning that many also face a steep learning curve.

One way of thinking about difference in the learning settings of academia and policymaking is to draw on Activity Theory, which is the approach Engestrom (2001) takes in his development of the conceptualisation of Expansive Learning. In this context academic research and policymaking can be regarded as activity systems. Activity systems involve a community, in which people's identities

relate to the community and the activity (such as policymaking or knowledge production), defined roles (and the division of labour), producing 'knowledge objects' (the encapsulation and transmission of knowledge, for example through academic papers) and an 'object of knowledge', which differs from the knowledge objects in being the purpose towards which the activity system is oriented (such as developing an academic discipline). Identities, roles and objects are defined by the community in relation to their culture. Engeström (2018), follows Bateson (1972), in seeing learning as being not only the '*what*' of an activity, but also the '*how* it is done around here'. People have both content and cultural learning as they exhibit the 'right way' of doing things, hence claiming and displaying their membership of the community. For Engeström (1987), learning is fundamentally collective and develops knowledge, technologies, artefacts and rules of operation which knowledgeable members of the community enact as part of their profession. While Engestrom develops a comprehensive and complex theory, in this paper we abstract and refine a subset of elements which, for us, directly impinge on the effectiveness of impactful research. These are, first, the rules or implicit theories of knowledge production and use: how the culture decides what counts as knowledge that is rigorous and valued, that is, their epistemologies-in-use. Secondly, what is produced as knowledge objects, the artefacts, physical and virtual representations and the mechanisms by which knowledge is recorded or 'encapsulated' and how it travels and can be translated into new settings. Thirdly, the social-psychological setting of knowledge production and use. Who a person is being, their identity, when engaged in the activity system, and how they establish and maintain belongingness to their community by knowing the right things, asking the right questions and performing the right identity as a knowledgeable person. Lastly, and distinct from the knowledge objects is the object-of-knowledge, that is the shared purpose towards which the community is working in the activity system. This is highly significant for the community because it is part of their definition of who they are, who their main audience is, what they are doing and how they do it. This activity system orientation is represented in figure one, adapted from Engestrom (2018).

Figure One: A culture of knowledge producer-users as an adapted activity system
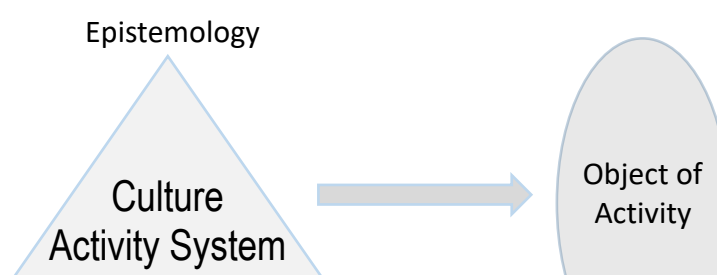
In this essay we draw on two sources of empirical inspiration. Collectively we have ninety years of experience working at the boundaries between academia, policy and practice during which we have conducted many research projects and worked at the heart of Government. Our process in composing the ideas for this essay involved over twelve months of structured discussion to use pre-existing data and critically reflect on our own and each others' experience (Hibbert, 2021). In order to challenge, develop and refine our ideas we interviewed seventeen very senior policymakers from the UK. Our interviewees included several previous secretaries and ministers of state and eleven very senior academics holding leading positions in universities and learned societies around the world. The interviews typically lasted between 60 and 90 minutes and were transcribed. Whilst this is primarily a theory-led exposition, we will illustrate our observations using extracts from these interviews. We derive three key observations (O_n) of the cultural incompatibilities between academics and policymakers: the epistemologies-in-use; the knowledge objects produced and used; and the requirements of cultural identity and belonging which militate against collective understanding and action. We use these cultural incompatibilities as a starting point to build our proposition for an alternative vision of a learning zone.

O_1: There are incompatibilities in the cultures' epistemologies-in-use.

The epistemology-in-use links the assumptions that the culture has about knowledge to the function that knowledge plays in their culture. Although those embedded in cultures in general spend little time debating what counts as knowledge and how it is discovered/produced, epistemological assumptions are revealed in the normalised language and rules that are applied (such as what counts as a 'sound' or 'rigorous' method) and in the practices of discovery/production and use (for example, what the required basis is for making causal generalisations and inferences). In our experience, it is not that academics care about quality whilst policymakers do not. Rather, the object of knowledge (its purpose) differs and each has different audiences to convince: on the one hand fellow policymakers

and ultimately voters, and on the other fellow academics. Thus, what counts as 'quality' looks different in each setting. For example, in considering economic growth, academics may have produced models with carefully controlled assumptions and claims, dealing with multiple factors and variables. Whereas for policymakers:

> *"Economic growth in itself can take a while to be felt. But the one currency that politicians immediately go to is jobs, job creation. It's such an easy way to communicate them to the wider electorate."* (Policymaker 5)

This difference results from the epistemology-in-use. Because the nature, origin, and scope of knowledge is different in each culture, different epistemic justifications are invoked. One academic revealed the "shocking" contrast of epistemologies-in-use when describing a request to present to a policy audience:

> *"...so at a conference I would present for 15-20 minutes and I'd spend most of that saying what I had done and the implications of those findings theoretically. And that might be on a three-year project..... But, when I was asked to input into a policy thing on innovation I was given one slide and five bullet points to communicate 10 years work – and with no real understanding of their context...."* (Academic C)

A policymaker working with academics reflected on the same problem from a different viewpoint:

> **"***... we do these deep dives for ministers. They typically take two weeks, sometimes longer. We don't really have so much time so it's about getting guidance from a few academics and getting the headlines and just showing the minister a kind of knowledge map about an area so they can pick and mix."*
> (Policymaker 4)

In both cases, the production of knowledge has to be 'good enough' for the use to which it is being put. The epistemologies-in-use neither need to be fully understood by the other, or even accepted as a

quality threshold, rather each had to trust the other to work with their own thresholds and norms in order to make knowledge valuable across the academic-policy cultural divide:

> *"when we were developing [national initiative] with [name], we needed to*
>
> *know about the research that had been undertaken for the [international equivalent]*
>
> *program ...even though that research wasn't published in a 'top journal'."*
>
> (Policymaker 1)

Another policymaker explained:

> **"[academics are]** *operating at the theoretical frontiers of their discipline [but]* **…** *it's*
>
> *bloody useful for us locally to have at least a couple of economists at the local University*
>
> *understand something about the local economy"* (Policymaker 5).

That is, in a policy setting, local economic analysis, despite being published in an unranked journal is judged to be valuable research because it was useable, providing local (but small scale) insights unlike the more generalizable and broadly-based research that might be published in top journals. It was not that policymakers were unaware of differing perceptions of quality, but that their epistemological rules value clarity and a situated, timely version of knowledge over what academics would call precision:

> *"I actually think academics deal in precision as much as the evidence base allows*
>
> *them to. Public perception is that policymakers deal on the back of a fag (cigarette)*
>
> *packet, and obviously those things are very, very different."* (Policymaker 6)

Academics and policymakers may not deal in, or even discuss, the quality norms of each other's home-culture, there is some expressed concern for the other to operate with good quality knowledge:

> *"There's a lot of desire for evidence [in policymaking], but do people [policymakers] understand what good neutral evidence is, versus, you know, just rapid-fire Google evidence?* (Policymaker 7)

In sum, the first cultural incompatibility revolves around the scope, depth, methodology and time available to develop knowledge in the two cultures. Both have to be rigorous and convincing for their own audiences, but what counts as convincing in one may constitute highly problematic/unusable knowledge claims for the other. Given this, there can be a real concern that, for example, a highly superficial extract of 10 years' academic work might be misrepresented and inappropriately used in the midst of a two-week policy deep dive which may not be conceptualised as "deep" at all by the academic concerned.

O₂: The cultures make and consume incompatible knowledge objects.

Within the framing epistemologies, the two cultures produced different and often incompatible knowledge objects. For academics, knowledge objects include journal/conference papers, slide decks and presentations. For policymakers, it is policy notes, reports and speeches. These are not always accessible or even recognisable as valuable outputs to the other's culture. For academics, the knowledge object in their home-culture did not translate well into a policy setting:

> *"[in papers or presentations] I would start by situating my research providing the background and justification for what I did and why."* (Academic A)

This information would be considered *"a waste of time"* (policymaker 7) for a policymaker wanting to focus on outcomes or recommendations in the presentation of any knowledge object. This is perhaps not surprising given the importance Vygotsky (1978) attributes to the mediating role of knowledge objects in any learning process. The discourse of a culture can act as a collation of knowledge objects, with the language of a given culture seeming impenetrable to those outside:

> *"...I have had my theoretical language called jargon by policymakers. But one man's jargon is another man's bread and butter ..."* (Academic B)

"…I can use simple language sure; but then a key part of the insight is lost. It's so easy for people to think they know what you're talking about because you're using familiar language. You don't know how it's going to be read or used – and well, your reputation can rest on it." (Academic C)

Academic C's observation is revealing. It suggests that not only are the knowledge objects of one culture incompatible with another's, but also that academics worry about what happens to the knowledge they produce when it is picked-up and used by another culture. For a culture that values precision so highly, academics can find it hard release their knowledge into a culture that does not value precision in the same way (cf. Hutchins, 1990). When knowledge objects cross the boundary from one culture to another, they change their form through their use.

"*… when ministers are at the despatch box in Parliament and they get asked a question, they can't always get to their brief to find the fact or the percentage figure fast enough. … it's the anecdotes and the narratives that you can turn to….*" (Policymaker 2)

Part of the reason for this is that they are being used for different objects of knowledge or purpose. One policymaker told us:

"I've got twelve months, maybe two years to make a difference, to work out what to do, to put those changes in place and to measure real change – or I'm out. Academics don't generally get that." (Policymaker 3)

The differences in knowledge dynamics associate different meanings with practices. For example, policymakers experienced academics as "*evangelists*" for their theories (one form of knowledge object), but they were "*not prepared to stick their necks out*" and make practical propositions or give clear advice (another form of knowledge object) "*without all the baggage*". This expression to 'stick your neck out', illustrates the personal risk associated with knowledge objects crossing the boundary from one culture into another.

The forms that knowledge objects take are governed by cultural dynamics and norms. For both academics and policymakers, their production impacts on career, but in a cross-cultural encounter, these knowledge objects are often produced through incompatible value systems and timescales. For the academic part of the use of the knowledge objects they produce is to accumulate publications and citations over time, while in policymaking there is a need to mobilise knowledge quickly to make an impact in speeches and answering questions which build a reputation for 'getting things done' with their political party and voters. But when a policymaker wants to access a knowledge object across this cultural boundary, such incompatibilities become clear:

> *"I used to ask to see a journal behind a paywall and it would send the Department into meltdown,…who is going to pay the $25 to give me access to this article?"* (Policymaker 3)

Even when research was accessed, its pertinence could be limited:

> *"I've just read an [academic] paper…I mean it would be great for peer review with a handful of people of a similar ilk … but absolutely useless in terms of being able to have any impact whatsoever on policy."* (Policymaker 1)

In summary, in the context of different epistemologies and objects of knowledge (purpose), the cultures have developed effective means of producing knowledge objects that work in their own cultures, but which do not easily translate in value or use between them. There is clearly an interest, at least in a subset of each culture, in enabling knowledge to flow, but the nature of the such mediating objects is that they may not mediate well for practical (e.g. price and accessibility), temporal and risk-based reasons. For a policymaker there is a significant risk in moving too slowly and not making the knowledge object fit the argument being made. For the academic there is a significant risk in rushing data gathering and analysis and in imposing pre-formed opinions onto the data.

O$_3$: The requirements of cultural identity and belonging militate against collective learning.

In the two cultures, members have to invest significantly in gaining the skills, understanding the norms and achieving the required quality of outputs in order to identify with and belong to that culture. These investments are such that not only do academic and policymakers each work hard to develop a sense of home-culture identity, but this identity then works against collective action across these cultural boundaries. Yet, achieving engaged and impactful work has been regarded as a collaborative activity between academics and policymakers (Van de Ven, 2018) and this implies the need to establish shared aims and a sense of belonging in the collaboration (Trischler et al., 2019). Our experience suggests that a sense of belonging to a collaboration only occurs in small pockets of action, between a few individuals, but not at scale:

> *"The voices they [policymakers] trust are the voices they know, they try and create a bridge between those two worlds."* (Academic E)

We also found that belonging is sometime attributed to perceptions of a shared stance (or lack thereof) which can frame and influence the nature of the academic-policy interaction:

> *"I guess organizations like [names of corporate collectives] start with a slight advantage, which is they are broadly regarded as being right of centre. And of course, we've had a right of centre government for 10-11 years, whereas universities are broadly regarded as being left of centre."* (Policymaker 5)

The sense of the other, their priorities, expectations and the role that one is playing in the knowledge-generation process by the other, seem to militate even against an understanding of what an effective collaboration, might look like:

> *"Policymakers say I need somebody in to help with this. And then I'd say, well, you need to hire a fast streamer [such as a commercial consultancy] then, because you're not going to get that from a university in the way that you want."* (Policymaker 6)

Even when recognizing the value of policy impact, academics often struggle to balance the demands of the two cultures on their actions:

"if we're being used as a knowledge resource, it's very difficult to pinpoint … there is an opportunity-cost in terms of significant time." (Academic D)

The underlying paradox here is that while for Engestrom (2018) effective learning requires two groups to form shared objects of knowledge and knowledge objects, if academics and policymakers were to do this, they would undermine their own effectiveness. If policymakers adopted the methods and processes of academics they could not function in their own environment, and vice versa. In fact, to be effective in producing and putting knowledge to use from a collaborative setting, they must remain fully absorbed in their own culture. It does not benefit either, to be part of a continuous, collective culture with the other: the trade-off risks are simply too high. Failing to be a full member of the home-culture could mean that one's knowledge would be out of date or lack cultural usefulness, for example by failing to connect with emergent tacit trends valued by the home-culture. The requirements of full membership of the home-culture were fully absorbing in a range of ways. To be part of the culture people had to be 'highly present', in the gossip and aware not just of current developments but of where things were going to emerge next. This meant being extensively and deeply connected to peers and participating in formal and informal groups. The cultures are also fully absorbing in that to carry weight with one's peers it is important to have and to mobilise specialist know-how (e.g. winning grants or winning political debates) which requires time and practice. It is important to note that before considering each other, the cultures are already focused on other primary audiences. Politicians need to connect effectively to voters and constituents. Academics need to connect effectively to funding bodies, editors, conferences and deans.

In summary, for an academic or policymaker to be really effective, they have to be fully absorbed in their home-culture. Their time, focus, way of understanding and norms of being all militate against being part of a collective with the other culture. In other words, in order to generate an effective learning zone, academics and policymakers must be able to identify enough with it to know how to act, but that those actions should not prevent them being a full member of their home culture.

In the next section we explore theoretical insights which help us conceptualise a different form of engagement in the paradox box learning zone.

The Theoretical Grounding for a new type of Learning Zone

There are many models of impact in the literature which include, *inter alia*, enhancing knowledge transfer (de Wit-de Vries et al., 2019), alternative modes of research (Bartunek, 2011), combining rigour and relevance (Starkey and Madan, 2001; Adler and Harzing, 2009), knowledge exchange (Johnson, 2020), engaged methodologies (Van de Ven, 2018), co-design (Trischler et al., 2019) and practice-as-research (MacIntosh et al., 2021). These ways of thinking are often pitted against each other, for example, knowledge transfer models have been criticised for a hierarchical arrangement and separation between academics and policymakers (Beech et al., 2010). This issue has been addressed by proposing the alternative of knowledge exchange in which there is greater equity between the parties (Van de Ven, 2018). Despite the differences, there are certain commonalities in the problems identified including: dealing with ambiguities; mistranslations; incompatible expectations and the need for trust and established relationships. However, as Haley et al. (2020) point out, a focus on learning has largely been missing from the debate. This is an interesting omission because learning is a process which can directly address these problems.

We discern two main, often implicit, conceptualisations of learning in the impact literature. First, a knowledge transfer model in which policymakers learn from expert academics and second a co-production of knowledge model in which academics and policymakers collaborate. The knowledge transfer model can be represented by figure two in which the knowledge object produced by one cultural activity system is transferred to another which then applies it from their own activity system.

Figure Two: Knowledge Transfer from one cultural activity system to be applied by another
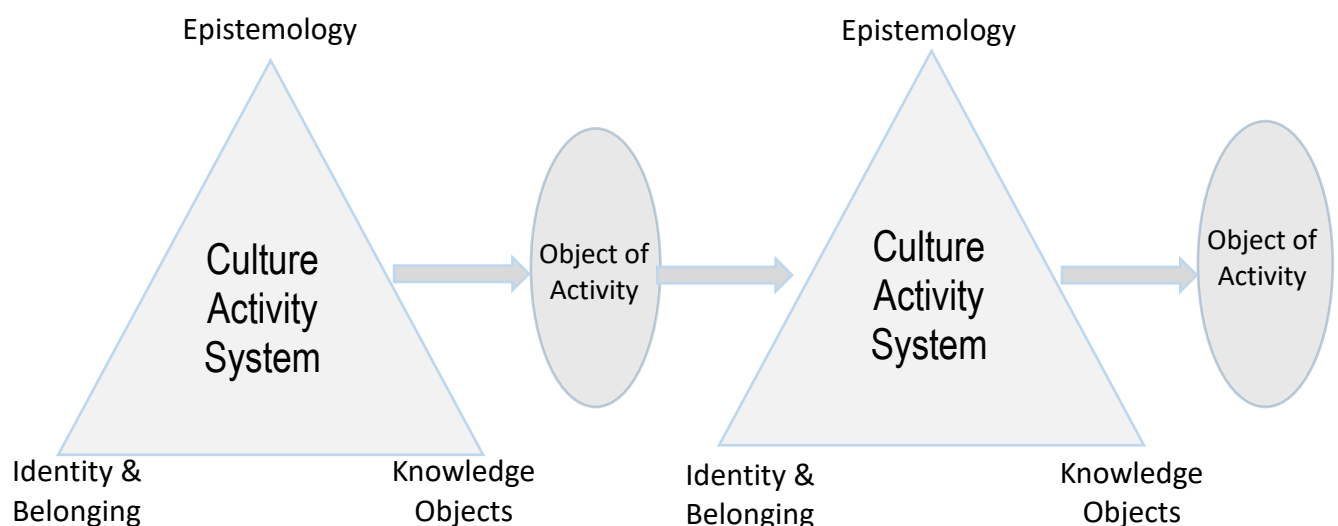
Our alternative model of knowledge co-production is based on the idea of the separate activity systems having sufficient cultural overlap and shared purpose in their object of knowledge, to both participate in producing shared knowledge objects equally meaningful to both, and in which both have an ongoing interest in their application. Figure three illustrates the model in which two cultural activity systems produce a single, shared knowledge object and outcome.

Figure Three: Co-production of a knowledge object by two cultural activity systems.
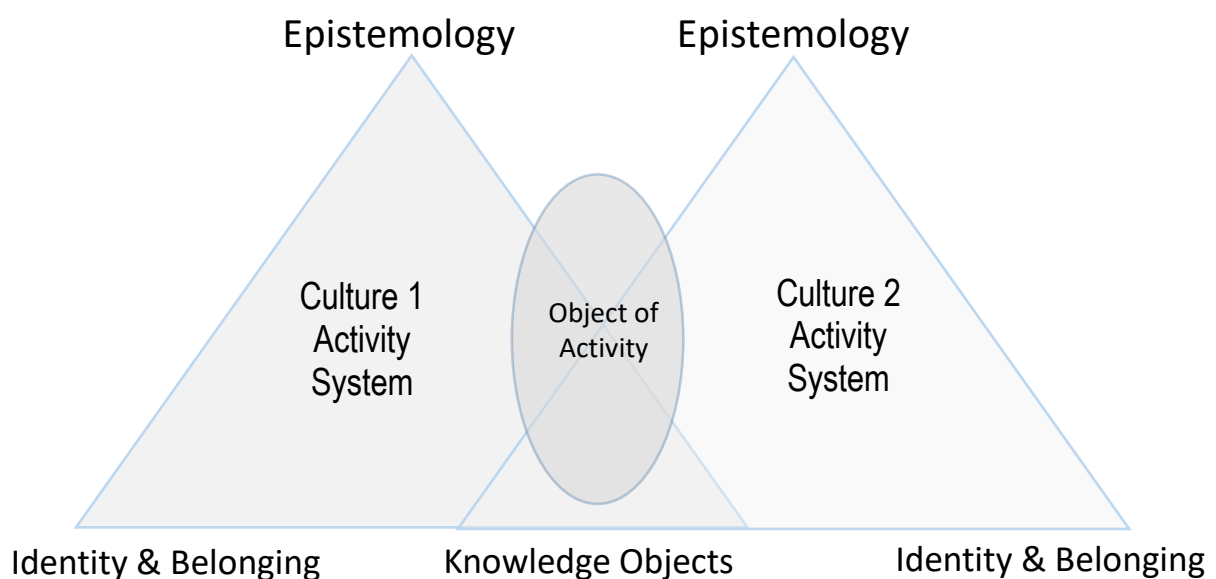
While it is possible for either to work, both have significant limitations. The knowledge-transfer model assumes that knowledge can be produced in a transferable form, at the pace needed in policymaking and in a useable configuration. In reality these needs are often unfulfilled (MacIntosh et al., 2021; Haley, 2021; Leyser, 2020). The co-production model assumes that it is possible to develop collaborative learning (Nokes-Malach et al., 2015) in which the parties share purpose, perspective and

process, but our argument is that cultural incompatibilities present on-going barriers to genuine collaborative learning. The nature of these cultural differences mean that the epistemologies, knowledge-objects produced and modes of identity and belonging to the home-culture are reflected in different purposes or objects of knowledge and the separate activity systems are self-reinforcing with repetition over time. Figure four illustrates the separateness of the different cultural activity systems.

Figure Four: Different Cultural activity systems producing objects of knowledge and knowledge objects that work for their own system, not that of the other.
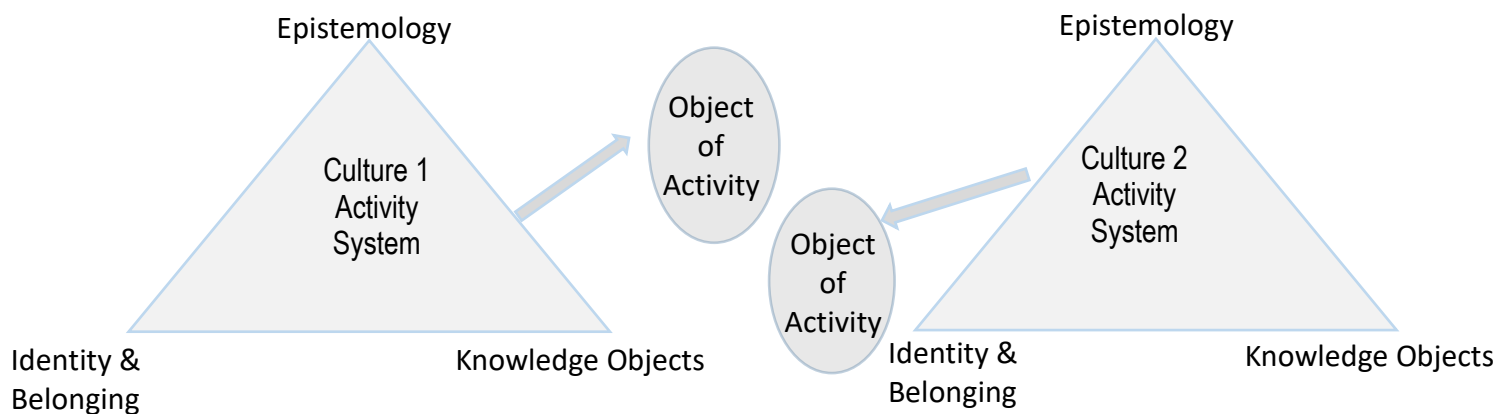
We do not see a 'complete solution' in the literature, but we believe it is possible to pick up inspiration for addressing the cultural incompatibilities and that is the purpose of this section.

Turning first to the cultural incompatibility of epistemologies-in-use, our analysis indicates that this is experienced as differences as to what counts as rigour, evidence and good quality work – fundamentally, what is persuasive in the home culture. Engestrom's theory of expansive learning can be regarded as a way of bringing different cultures together to elevate the nature of their learning and co-problem solving even when they have different frames for understanding the problem, based on their distinct activity systems.

Engeström, following Leont'ev (1981), rejects the idea of the individual as the primary unit of analysis in learning and focuses on interaction and collectivity, and so might be associated with the

'co-design' mode of thinking. However, his model is unusual in seeing contradiction and difference rather than agreement as being the main stimulations for learning. This is particularly the case in learning between activity systems, for example, when the protocols of hospital patient discharge and social care uptake of clients fail to coordinate leading to 'bed blocking' and patients/clients staying in hospital longer than needed. Engeström (2018) discusses an example of how hospital and social care activity systems were brought into a mediated process with each other to seek to solve the problem. Initially, both sides saw the problem from within their own activity system and cultural assumptions (Jensen, 2011), but through facilitated sessions they came to redefine the problem and to recognise their own role in the problem through having to recognise and internalise the cultural and activity system of the other. This led to a redesign of the interacting activity systems of discharging/receiving and in our design principles for a new learning zone we take an adaptation of Engestrom's model to frame design principles (rather than rules of operating). Extending Engestrom's work (2018), we see the potential for engagement not as an overlap between two extant activity systems, but as the creation of a third activity system which suspends the normal rules and activities of the originals and superimposes a new zone of learning and engagement.

The second cultural incompatibility is the production and use of knowledge objects. In Engestrom's theory the interacting activity systems produce overlapping objects and ultimately a new shared object. Similarly, in co-production models (MacIntosh et al., 2021) it is envisaged that the different parties will contribute to the production of one shared outcome. Galison's (1997) theory of trading zones inspires us to think differently about the notion of contribution in the co-production models. Galison (1997) studied the development of scientific knowledge and focused on the cultural differences between groups of theoreticians, experimentalists and instrument makers. Galison (1997; 2001) defined trading zones as the socio-material spaces where a common 'thin' language can be developed through the shared use of materials, practices, procedures and words. Trading zones can be used to enable learning across cultures and given his focus on exchange, Galison is closer to the 'knowledge transfer/exchange' type, however, his conceptualisation of exchange is significantly different to traditional ways of thinking.

In traditional exchange models the participants may commonly be expected to share ontological positions such that there is agreement about the nature and value of the objects being exchanged. By contrast, Galison, (1997; 29) depicts *thin descriptions* as means through which the emergent trading zone must avoid universal currencies of rationality or value, as actors benefit from bypassing presuppositions that there is any agreement to trade full significations (or thick descriptions) of the traded objects. That is, the trading zone supports an *incomplete* form of co-ordination:

> *"We may agree to the trade — we do not in any sense have to agree to the ultimate use, signification, or even further exchange value of the objects given. The only thing we have to come to accord about is their exchangeability. ... We strip away meaning and memory when we pass the object to a trading zone. ... And exactly that creation of regularized interactions and partially interpreted objects marks the trading zones of science." (p.32)*

Crucially, this means that the participants have to 'edit out' matters of importance from their own cultural perspective, or as Galison puts it, thin descriptions require actors to "leave stuff out" (2010:29). Galison uses the example of the exchange of a saltshaker for a statuette. The statuette may have a religious meaning for me while for you it is purely aesthetic. In order to make the exchange we do not need to agree on the meaning, but merely on the 'exchangeability' of the objects, that is, within our own cultures our rules enable us to interact in this way. These ideas contrast strongly with the collectivity envisaged in expansive learning theory, however, we argue that they can inspire a way of framing learning which is more practical and time-efficient for cross-cultural learning and gives us a way of conceptualising participation in a learning zone which can enable the equivalent of collective coordination without adhering to a shared social context. Whilst such shared context underpins the co-production learning literature (e.g. Fiorella and Mayer, 2015), we suggest that it is neither realistic or achievable in relation to the cultures of academia and policymaking beyond those who have this as their main activity.

The third cultural incompatibility is the home-cultural requirement of identity and belonging. The two cultures are both highly demanding of their members and require dedicated work and time to succeed. Haley et al. (2017) show that academics, to be successful, need to publish in particular journals and be cited heavily by their peers. This often entails singular concentration on a specific topic and building a network around that topic over many years. Policymakers have to learn a new brief, be attractive to voters, fit in with party and career structures and deliver observable performance within much shorter periods. Both cultures are 'paradigm-bearing communities' (Kuhn, 1970) in that it is through consistent membership that people can spot and work on topical controversies and also avoid the paradigm-breaking questions that are more often posed by outsiders and new entrants who bring a different perspective. Having an identity as a respected member of the home-culture is vital in influencing others not only by producing the right sort of knowledge objects and using them in the right sort of way, but also for being listened to, being able to win backing for an idea and for gaining sufficient air-time in the community's debating fora. For Illeris (2014) this is not simply cognitive connection, but is embodied, emotional and personal connection which mean that the participant's identity is (re)constructed by their membership of the home-culture.

Expansive learning (Engestrom, 2018) incorporates cultural change such that at the point of interaction there is a degree of identity reconstruction or what Ligorio (2010: 95) calls "innovation of the self". For Ligorio the combination of content-learning and self-learning occur in three forms of learning process: when a new position is introduced; when a position moves from background to foreground; and when two or more positions are combined. Wittrock (1974) envisages such learning as a process of combining meaning from such learning events with the learner's background, attitudes and experience. Fiorella and Mayer (2015) review a range of activities through which combining meaning can occur and these include learning by imagining, by enacting and by teaching. These approaches enable the learner to perceive and experience things differently by stepping out of the normal rules of their activity system. However, there are distinct disadvantages to identity reconstruction in which a person either joins the home-culture of the other because identity travel in

either direction means that the person cannot maintain the habitus, socio-cultural connectivity and nuance of being in the paradigm-bearing community. Consequently, their ability to influence and marshal support is reduced. An alternative is that participants become members of a hybrid community, but this runs the risk of detachment from both home-cultures.

The alternative we will propose in our design principles is one of temporary liminality (Beech, 2011). Liminality occurs when people are between two identity positions such as having been appointed to a new role whilst serving notice in another, older role or becoming engaged to be married. In most cultures, the contradictions (having psychologically but not contractually left a role) and emotional shift (loss and hope) in liminality are coped with through the use of reinforcing rituals (e.g. leaving parties, stag and hen nights, etc.) and often through formal and informal mentorship. In these times of transition, the normal rules are suspended and contradictions which societies normally eliminate co-exist (Turner, 1967) such that one can be both one thing and another, while also not really being either. Tolerance is enabled by rituals which provide an element of certainty in the beginning and end of the liminality. In our design principles, we accept that there is an influence on identity by risking stepping outside the home-culture, but unlike Ligorio's (2010) version of transformative learning, we see this as being temporary and episodic. In other words, for specific times or events, people can temporarily be in neither home culture, can connect while being different, and then return to the home-culture. This is central idea that underpins our design principle for the third incompatibility.

Table one summarises the cultural incompatibilities, the learning theories from which we draw inspiration and the consequent basis for a design principle for a new learning zone which enables people to cope with the incompatibilities.

Cultural Incompatibilities	Theoretical Source	Derived Insight
The Epistemologies-in-use frame knowledge production, value and use in incompatible ways	Engestrom (2018) conceptualises learning as activity systems. Expansive learning entails different activity systems coming into contact, recognising difference or conflicting and stimulating shared learning.	Our design principle is based on the idea not of overlapping activity systems as Engestrom envisages, but of a third activity system which can be constituted as a separate learning zone with its own rules of engagement.
The construction and use of knowledge objects militate against translation between the cultures	Galison's (1997) concept of thin descriptions in trading zones can be used to frame a form of engagement in which the parties do not need to agree on the meaning or purpose of objects, but only that they are exchangeable. Exchanged objects may be put to quite different uses in the culture of the acquirer.	Unlike Engestrom's perspective, we are not arguing for shared knowledge objects, but rather, like Galison, for ambiguous objects that can be reused in other contexts with new contextual meanings/significances. Our design principle is that the process may not be one of exchange as envisaged by Galison, but one of contribution in which participants provide resources which can be picked up and used by the other. In order to make this feasible – so that participants can spend time and intellectual resource on it, the act of contributing needs to be recognised and rewarded in the participants' home-culture.
The home-cultural requirements of identity and belonging militate against collective learning	Ligorio (2010) sees transformational learning as an 'innovation of the self' in which the self may be changed by becoming part of a new hybrid group formed between two activity systems.	There is a disadvantage to too much innovation of the self if the individual becomes less of a full member of their home-culture and so loses their ability to marshal support and innovate within their culture. Our design principle builds on the concept of liminality of identity to envisage a zone that people can enter and leave, adopting a different way of being while they are in the zone, which adds a facet to their identity but does not change their fundamental allegiance and belonging to their home-culture.

Table One: Theoretical inspiration for design principles to cope with cultural incompatibilities.

Design Principles for a learning zone between academia and policy: the paradox box

Contrary to a traditional view it is not enough just to "*bring people together and let the magic will happen*" (Academic C) and despite the fact that think tanks of various types have also been growing (Beech, 2020), as one policymaker put it : "*when I looked around for opportunities for academia to engage with politicians, there wasn't actually that much available*" (Policymaker 2). Although there are various mediating agencies, for example, in the UK, the University Policy Engagement Network offers a dedicated contact point for policymakers, and Go-Science is a government-established connection, when academics (including several we interviewed) have disconcerting experiences, they can hesitate to return and policymakers can experience this as "*academics remain reluctant to engage*" (Policymaker 9).

Very few academics or policymakers have the time or resources to make significant investment in working consistently or continuously with the other. If interaction is to be enabled on a broader scale than can be provided by, for example, short term policy fellowships, a different approach is needed. Given the insights above, we suggest that a new learning zone needs to have design principles which enable participants to step out of business as usual and to engage in a third activity system (cf. Gutierrez et al., 1999). The advantage of a third activity system is that it can be designed specifically to address the cultural incompatibilities identified above. Such an activity system will need its own orientation to epistemology, knowledge objects and identity and belonging, but each of these can be facilitated to be more radical than would otherwise be possible by having temporary, episodic arrangements.

These design principles need to address the contradictions and paradoxes which can stifle expansive learning when the collective of academics and policymakers need to both "get hidden agendas out onto the table so that action can be agreed as well as meeting the need to keep personal agendas private because otherwise agreement to act would be impossible" (Beech et al., 2004: 1313). Like

Engeström's (2018) lab or Gailson's (1997) trading zone which operate outside the home-cultural

norms, design principles are for a third activity system which connects members of the two cultures

without being part of their normative structure. We call it the 'paradox box' because it suspends focus

on contradictions which inhibit learning while also acknowledging contradictions as being intrinsic to

expansive learning (Engeström, 1995). The paradox box needs to include acceptance of unresolved

difference (Burnham et al., 2008) and skills beyond those normally developed in the existing activity

systems (cf. Araujo and Mason, forthcoming). Figure five illustrates our proposed approach, adapting

Engeström's model of activity systems to reflect the three categories we introduced above and to

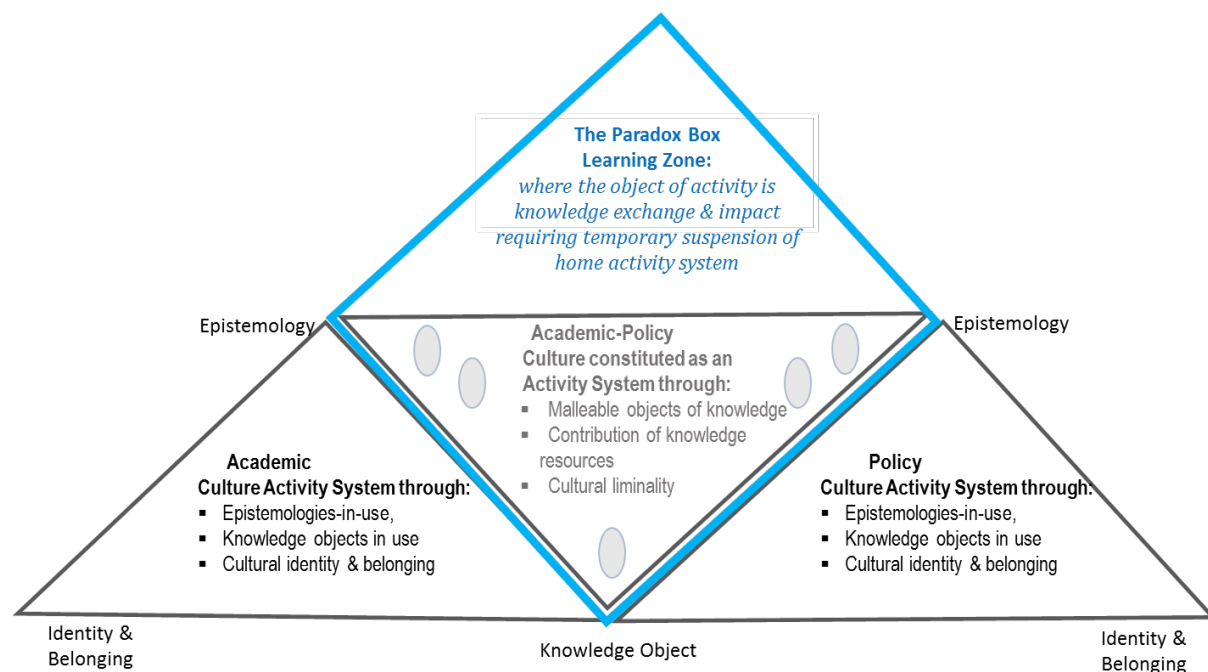propose a new activity where the object is contributing to meta-cultural learning.

The Paradox Box Learning Zone:
where the object of activity is knowledge exchange & impact requiring temporary suspension of home activity system

Epistemology

Epistemology

Academic-Policy Culture constituted as an Activity System through:
- Malleable objects of knowledge
- Contribution of knowledge resources
- Cultural liminality

Academic Culture Activity System through:
- Epistemologies-in-use,
- Knowledge objects in use
- Cultural identity & belonging

Policy Culture Activity System through:
- Epistemologies-in-use,
- Knowledge objects in use
- Cultural identity & belonging

Identity & Belonging

Knowledge Object

Identity & Belonging

Figure Five: Framework for the Paradox Box Learning Zone Design

Epistemologies are culturally defined rule-following activities (Wittgenstein, 1958). Rather than

either party adopting the epistemology of the other or producing a hybrid form, our proposal is for a

different way of suspending the rules in the way that we do when improvising or playing. Games and

improvisation are not rule-free, but establish rules outside the norm for the period that the activity

continues (MacPherson et al., 2021), with the players returning to normal cultural rules at the end of

the activity. Within a setting of a game, people can take on different identities, take actions dictated by the roll of a dice or the turn of a card and after the game return to the rules of normal life. When improvising in music, performers are 'composing in the moment' (Zack, 2000) but they do this on the basis of a well-rehearsed repertoire which provides them with resources that can be deployed, elaborated and adapted to the performance context. While group improvisations can be highly creative, they also have structure meaning that it is rare, for example, to have several time signatures and several keys, several genres in play at the same time. Thus, in the paradox box, participants can bring their rehearsed knowledge resources but agree to play with them in novel combinations, a process of imbrication rather than synthesis, and take risks with the meanings and assertions associated with them by others through the engagement. A crucial part of such improvisation is how participants pick up and use the contributions of others – often in unintended and previously unimagined ways. In other words, there is a malleability of framing and objects of knowledge (purpose) which enables new uses and applications to emerge because the knowledge has travelled outside the context of its construction and outside the normal rules of operation.

Some ground rules for creating knowledge in this improvisatory mode could include: valuing difference and not seeking to resolve it; having the purpose of supporting the others' endeavour in their home-culture by providing knowledge resources; be willing to aggregate and disaggregate ideas and evidence in novel ways; being willing to suspend judgement of the other and the self to encourage people to step outside their normal modes of interaction.

The phrase 'knowledge objects' can, perhaps, lead us to a 'solidity' or a commodification to the knowledge. However, Galison's (1997) approach introduces flexibility into the concept of trading as the object being traded has its value attributed by the receiver rather than the sender. In Galison's conception there is an exchange, but our design principle for the paradox box is that there needs to be a prior agreement that what the parties are doing is providing knowledge resources that might or

might not be identified as useful by the other party. Further, it is important to acknowledge that their value-in-use will be defined by the other. This needs careful facilitation as both sides will be likely to need to request some ethical boundaries to interpretation and use of the resources they contribute, and while it will be necessary to avoid 'all the baggage', it may be important to acknowledge sources and protocols of production. This has the appearance of an altruistic activity, and while there is often goodwill and a desire on both sides to contribute to making a positive difference, there are opportunity-costs and risks. Hence, our design principle includes that the participants need to be able to act *as if* they were being altruistic without this being entirely the case. This necessitates those in the home-culture to develop systems for recognising and potentially rewarding such contributions. For universities this may mean recognising time spent in policy engagement and counting achievements when considering appointment and promotion decisions. For policymakers it may mean engaging with voters (including students and academics) in grounded, evidential ways.

We have argued that Genuine collaboration in the theory of expansive learning may not be achievable or desirable in relation to policy and academia. In contrast, our design principle is that a temporary form of liminality may enable participants to occupy a place in a different zone, outside their home-culture but not inside a different culture. If this is to include an epistemology of improvisation, then most participants will need to be supported in adopting the new rules of interaction, indulging in expansive thinking and being supported to take risks they might not normally take. This can include being honest about political objectives and compromises, being open about areas of certainty and uncertainty in research findings and being willing to temporarily inhabit different ways of being. For Ligorio (2010) this can include foregrounding an 'I-position' that is normally background, or role-imagining into a different identity. This could include, for example, bringing journalistic thinking to bear in '*flipping the triangle*'. This might entail starting with a policy outcome or recommendation and then providing brief summary evidence, rather than the traditional academic approach of starting with the foundational theory and proceeding via methodology and findings to discussion and conclusions. Flipping the triangle means that the starting point is reversed with the succinct policy

message being to the fore such that the underpinning theory and/or methods might not even be mentioned. This may also be an interactive effort in which ideas are passed forwards and backwards. The parties could explain how their primary audiences impact on their activities and levels of risk taking. A summary of the design principles for the paradox box learning zone is given in table two.

Cultural Incompatibility	What is Needed to overcome Learning Challenges	Design Principles for the Paradox Box
Epistemologies-in-use	The ability to pick up knowledge from the other without having to lose one's own home-culture epistemology	As in improvisation, suspend normal rules and be more experimental and creative with what counts as 'knowledge', 'evidence' and 'rigour' Imbrication rather than synthesis
The construction and use of knowledge objects	Knowledge objects defined by the other Ability to let go of knowledge objects without concern for their limited or compromised use in a different epistemology	Suspend normal construction of objects e.g. 'flip the triangle' by putting policy implications first Focus on contribution, not exchange Explicit, and minimal ethical rules of knowledge-use in the other home-culture Incentives to be provided in home-culture
The home-culture requirements of identity and belonging	For participants to retain their ability to influence/status in their home-culture To be temporarily dissociated from the restrictions of normal home-culture identity For transitory connections that enable outcomes like collective learning	Facilitation of temporary liminality Support for acting outside norms Skills for creative learning outside the home-culture

Table Two: Summary of the paradox box learning zone

In order to put such a design into practice, it will be necessary to use educational skills in creating a social environment for risky and creative learning. The object of knowledge needs to be malleable in

order that it enables incompatibilities and paradoxes to exist but not impinge on the learning.

Malleability of purpose, knowledge objects and epistemology are necessary but tend to produce the

uncertainties and disconcertion of liminality. Therefore, facilitation needs to enable *legitimate*

liminality – people bringing expertise and standing from their home profession, but not being limited

to or by these. Facilitation also needs to address the ethics of engagement such that there is sufficient

trust that people are able to act *as if* they were in a collaboration. Legitimate liminality can be a form

of transformational learning (Ligorio, 2010) and so people need facilitation support not only for

cognitive learning but 'whole person' learning including emotion, experience of 'success' and

'failure'. In the absence of normal certainties, there is a need for process and structure which gives

sufficient confidence for people to be able to relax, improvise and be open to learning. Facilitation

also needs to overtly address what people take away from the activity and how this could translate

into suitable and meaningful reward in their home culture. Discussing this explicitly can feel awkward

but explicitness removes the need for participants to do this calculation in secret.

Conclusion: Why and how business schools need to create a 'Paradox Box' for academic-policy impact

We recognise that not all academics and not all business schools will want to invest time and effort in

achieving impact with policy. However, our starting point is ethical. If we believe that management

research can contribute to improving society, the economy and the environment, then it is incumbent

on us to place an appropriate level of collective effort into doing so. There are already many models

of how to achieve impact, so why should we consider the approach we have proposed here? There are,

after all, examples of knowledge-transfer and fully-engaged models working. Our contention is that to

work, these approaches either operate with a commodifiable knowledge object, such as a 'best

practice', a technique or a product (more typically found in other disciplines such as engineering or

medicine) or where there is a longitudinal, boundary-crossing collaboration. Both our experience as

researchers who have sought to deliver impact and our theorising of impact, suggest that this is not

practical for many academics or policymakers. Thus, if we want professional academics and

professional policymakers to be able to learn at pace and with the ability to influence, we believe a

different sort of learning zone is needed. Rather than an idealised, fully-developed, collaborative and

expansive learning we are arguing for a space in which interactions can take place *as-if* full

collaboration were happening. In proposing the construction of a learning zone that experts, fully

grounded in their home-cultures, can enter, contribute to knowledge outcomes in the other culture,

pick up insights of value and return to their own culture without losing momentum and resource for

their normal activities, we are trying to move debates about impact forward. Our proposal for a new

kind of learning zone is informed by the set of design principles set out here and which specifically

address the very cultural incompatibilities which otherwise inhibit learning and impact.

Unsurprisingly, the episodic, liminal, improvisatory, purpose-shifting approach we propose is

uncomfortable, risky, and, like all adventurous learning, subject to blind alleys and misfires. However,

as a community of management researchers, we have transferrable skills. This is an area in which our

educational skills can enable our research skills by designing learning events and creating paradox

boxes. It is our fervent hope that the principles outlined here might such design work.

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