

James C. Scott on *mêtis*

James C. Scott sobre la mêtis

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Abstract

James C. Scott's *Seeing like a State* offers an account of socially relevant know-how that is characteristic of successful lived-in ways of social order, which he calls *mêtis*. In this paper, I examine Scott's ideas on *mêtis* and raise some questions about cases wherein the need for *mêtis* is not easily met, drawing from various cases in the field of disaster studies.

Keywords: *mêtis*, social know-how, applicability of knowledge, social science, disaster risk reduction (DRR)

Resumen

La obra *Seeing like a State*, de James C. Scott, ofrece una descripción del saber-cómo socialmente relevante que caracteriza a los modelos de orden social vividos con éxito, a los que denomina *mêtis*. En este artículo, examino las ideas de Scott sobre la *mêtis* y planteo algunas cuestiones sobre casos en los que la necesidad de *mêtis* no se satisface fácilmente, basándome en diversos ejemplos del ámbito de los estudios sobre desastres.

Palabras clave: *mêtis*, saber-cómo social, aplicabilidad del conocimiento, ciencias sociales, reducción del riesgo de desastres (RRD)



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1. Introduction

The late James C. Scott has developed, in *Seeing like a State* (1998), an account of what makes social orders work or fail. This account hinges on a certain conception of practical knowledge, which he calls *métis*, which puts in question the applicability of theory and top-down approaches to the organisation and improvement of society. According to Scott, top-down planning lacks the richness that characterises lived-in efforts to organise society. While developed independently of the philosophical literature, Scott's proposal suggests a distinction that is in many ways similar to Ryle's (1949) famous distinction between *knowing-how* and *knowing-that*, and suggests that something like this distinction is relevant to our understanding of society and to the ways in which we should understand the role of science in society. It may be worthwhile for philosophers who are interested in the way in which society works, or how it can be improved, to take heed of these ideas.

In this paper, I give an overview of Scott's proposal, emphasising the matter of the applicability of theory to practice, and suggest some ways to take these ideas further, if we consider some issues that Scott does not fully address (this is the itinerary I follow in the next three sections). In particular, I explore some concerns that arise when we examine research in fields, such as disaster risk reduction and management, where the concern arises of how cultures that already possess traditional know-how are sometimes challenged by ongoing issues that seem to outpace their ways to provide solutions.

2. *Métis*, unplanned order, planned order

According to Scott (1998), the schematic nature of real functioning social orders is distinct from that of top-down designed or planned social orders. The latter must have a schematic order to function as planned, but they lack multifaceted, real knowledge and understanding. The theoretical nature of planned and designed order necessitates standardisation in functioning in order to operate and maintain order, but it lacks the very human elements of improvisation, adaptability, and transformation that arise through the everyday experience and interactions that offer understanding and knowledge. Any large scale social processes and events would be much more complex than can be theoretically imaginable and conceivable. Thus, the thinly formulaic oversimplifications that are stringently imposed through state power are bound to be cases of social failures, as they are grossly inadequate to generate a functioning community or city.

The example Scott uses to illustrate this thought revolves around the processes of production that depend on a host of informal practices and improvisations, which are almost never codified or taught from manuals or guidebooks. By following these formalised codes meticulously, the process of production can be greatly slowed or even halted, as the codes in manuals are rarely ever drawn up in conjunction with the human factor that tests for trial

and error in functioning and thus gains practical know-how, which then leads to optimal functioning for desired results:

In the long work-to-rule action against Caterpillar, the large equipment manufacturer, for example, workers reverted to following the inefficient procedures specified by the engineers, knowing they would cost the company valuable time and quality, rather than continuing the more expeditious practices they had long ago devised on the job. They were relying on the tested assumption that working strictly by the book is necessarily less productive than working with initiative. (Scott, 1998, 310-311).

Actual successful work processes depend heavily on informal gained understandings and improvisation in a very hands-on mode of work. Similarly, Scott views simplified rules for organised social order, such as cities, villages or collective farms, as grossly inadequate for the purposes of creating a functioning social order. This is so because the simplified rules are akin to the manual or guidebook rather than the practical, real and varied forms of complex knowledge required for a variety of social situations and orders. Greatly simplified social organisation designs tend to fail in a similar pattern to ultra simplified designs for the natural environment, which is undoubtedly a complex, functional, dynamic and almost constantly changing context. This culminates in a type of reductive social science, which he pushes back against, as he cannot see formal schemes of order being at all tenable without the invaluable practical knowledge that these systems have routinely dismissed.

According to Scott, informal practices, improvisations and adjustments akin to ‘tweaking for the best outcomes’ can never be codified. This is the practical knowledge that one gains from participating in or doing an activity rather than theorising about its performance. These ideas are tightly woven within Scott’s ideas of states that endorse the imperialism of high-modernist, designed, or planned social order, which he makes the case against because the hegemonic planning mentality excludes the vital roles of local knowledge and know-how. He strongly makes the case for practical knowledge, know-how, informal processes, and improvisation in encountering uncertainty, giving practical case study examples (USSR and Tanzania in Chapters 4-5) of authoritarian solutions to social order that inevitably fail due to the exclusion of indispensable knowledge that lies embedded in local practice. Looking at cases of indigenous technical knowledge that rely on an accumulation of different parts or signals indicates the complexity of situations requiring more than a simplified, single observation or a universalist scientific term.

While making the case for practical knowledge, informal processes, and improvisation when facing unknowns, Scott attempts to conceptualise the nature of this type of practical knowledge that sharply contrasts with knowledge built deductively. In so doing, he uses the

term '*mêtis*' from classical Greek, which translates as the knowledge that can only come from practical experience. A typical translation of '*mêtis*' into English as 'cunning' or 'cunning intelligence' (Detienne & Vernant, 1978) is not fully accepted by Scott (1998, 313) as he uses the example of Odysseus to show how the term encompasses much more than a 'cunning intelligence' alone: "While not wrong, this translation fails to do justice to the range of knowledge and skills represented by *mêtis*". Odysseus was praised for possessing *mêtis* in abundance and having made extremely good decisions based directly on his stock of *mêtis*. This range of knowledge and skill sets represents the accumulated and acquired intelligence, vitally required to respond to dynamic and sometimes rapidly changing natural and human contexts. Odysseus's capacity to understand, and his possession of the ability to successfully adapt in the face of constant shifts in contexts, situations and environments, were the underlying factors that led to his ultimately being able to outwit both human and divine adversaries. As this required a considerable amount of *mêtis*, so too does all human activity, to greater or lesser degrees.

Scott seeks to conceptualise these skills by examining in further detail how they are created, developed and maintained and to examine if there is any relation to formal epistemology, which he views as a valuable collaboration. Some skills, such as those employed by Odysseus, require an adaptation to the physical environment, much like sailing, flying a kite, or riding a bicycle. These skills are acquired through training and coordination that comes with repeated practice, experience, and further understanding based on actions to build the capacity to understand and make adjustments accordingly. These activities require participation directly in the activity itself and practising of the skills to be learned, rather than a reliance on theoretical insight, thus rendering both teaching and learning a hands-on and engaging experience. Even basic competence is often grasped through practice, understanding, and experience:

One powerful indication that they all require *mêtis* is that they are exceptionally difficult to teach apart from engaging in the activity itself. One might imagine trying to write down explicit instructions on how to ride a bicycle, but one can scarcely imagine that such instructions would enable a novice to ride a bicycle on the first try. The maxim "Practice makes perfect" was devised for such activities as this, inasmuch as the continual, nearly imperceptible adjustments necessary for riding a bicycle are best learned by having to make them. Only through an acquired "feel" for balanced motion do the required adjustments become automatic. No wonder that most crafts and trades requiring a touch or feel for implements and materials have traditionally been taught by long apprenticeships to master craftsmen. (Scott, 1998, 313-314).

To become an expert, however, the practitioner would have to possess experience under many different types of conditions and environments, much like Odysseus: “If your life depended on your ship coming through rough weather, you would surely prefer a successful captain with long experience to, say, a brilliant physicist who had analysed the natural laws of sailing but who had never actually sailed a vessel.” (1998, 314). Scott goes on to offer the examples of specialists who deal with emergencies and disasters as having *mêtis* due to their having to operate in precarious environments requiring rapid response that is decisive in order to both limit damage and save lives. Although there are rules, guidance and safety procedures and protocols that are taught, each situation or accident is undeniably unique, and one has to understand it correctly and then adapt the basic knowledge to suit the particular circumstances; “half the battle is knowing which rules of thumb to apply in which order and when to throw the book away and improvise.” (1998, 314).

These are skills that evolve over time and with each newer problem that is presented that requires a mixture of experience and inspired improvisation. Unlike the completely routine and predictable sorts of work that does not require much thought beyond a straightforward application of a rule book or manual and that is performed in a static and unchanging environment. Work such as that performed by a minor clerk, which is highly repetitive, can often be simplified and done without any high risk factors involving complex decision-making, while firefighters, rescuers, paramedics, disaster recovery teams, or doctors in emergencies etc. cannot simplify their environments to make it somehow suitable to apply a cookie-cutter solution to every single situation. These examples speak strongly in favour of the contextualisation of knowledge and know-how for application across a variety of situations and environments that have to be responsibly tailored for each unique context, in order to minimise damage and increase the chances of saving lives in high risk and high-stakes situations. Applying a simplified rule or guidance across the board in any of these high risk fields is counterproductive to achieving these goals in high-stakes environments that vary. These are not predictable, routinely expected environments that can be systematically ordered in advance of acting, unlike the clerk who might be able to control and order the situation down to the minutest of details.

Scott goes on to further explicate how *mêtis* also applies to human interactions rather than only to humans and their physical environments. He cites examples of complex human activities that require adjustment according to the movement, values, desires or gestures of other people, such as during boxing, wrestling, and fencing. These sports rely on the rapid decision-making and real time adaptability to an opponent and their actions, which in turn requires instant responses. It not only requires responses to actions but skill in feigning certain moves that evoke responses to gain the upper hand over opponents in contests and competitive sports. There are also cooperative activities requiring similarly instant decision-

making and rapid responses, such as dancing or live music that showcases practised responsiveness which is borne out of essential experience. Some sports combine both aspects, competitive and cooperative *métis*, as done in soccer playing, where team collaboration and a strategic competitive edge over opponents are simultaneously needed. While training can seem generic, facing varied opponents poses unique challenges.

By surveying these cases of *métis*, Scott draws on some common features regarding the nature of *métis* and where it is relevant. “*métis* is most applicable to broadly similar but never precisely identical situations requiring a quick and practiced adaptation that becomes almost second nature to the practitioner.” (1998, 315-316). In gaining the skill sets required for *métis*, there may be rules, but *métis* is still only acquired through practice of the activities themselves. The gaining of experience and understanding required to develop a knack or feel for the activity is often garnered through types of formal apprenticeships. *Métis* cannot be simplified or watered down into deductive principles that could be transmitted through book learning. Those attempts would be unsuccessful because the environments are so complex, diverse, and non-repetitive that Scott concludes that “formal procedures of rational decision-making are impossible to apply. In a sense, *métis* lies in that large space between the realm of genius, to which no formula can apply, and the realm of codified knowledge, which can be learned by rote.” (1998, 316).

The essence of *métis* is knowing how and when to apply rules in a suitable situation and context. Much like the dinghy/tugboat that guides larger vessels through local ports or harbours, the *métis* gained is local and situated to a particular place and is thus a highly contextualised skill. While the open sea is seen as a more abstract area utilising more general skill sets. Contextualised knowledge is particular and can only be acquired through localised practice and experience. Thus, the practice and experience present in *métis* is almost always local, or every instance where particular skills are applied requires specific adjustments for local conditions. This points out the gap between generalised knowledge and situated knowledge. “Every general knowledge that is actually applied, then, requires some imaginative translation” (1998, 318). Scott offers a few examples in this regard, wherein having knowledge of looms to a consummate degree still does not translate to a successful operation of each and every loom, especially if one takes a particular loom which has its unique peculiarities in design and operation etc. He does not see it as preposterous to speak of the art of one loom, or one river, one tractor or automobile, because they would all require fine-tuning of the ability and experience for successful operation or navigation. This ability and experience is *métis*, which is necessary to positively and successfully improve the outcome and the odds in particular contexts.

A mechanical application of generic rules that ignores these particularities is an

invitation to practical failure, social disillusionment, or most likely both. The generic formula does not and cannot supply the local knowledge that will allow a successful translation of the necessarily crude general understandings to successful, nuanced, local applications. The more general the rules, the more they require in the way of translation if they are to be locally successful. (Scott, 1998, 318).

Scott offers a final analogy to clarify the relationship between *mêtis* and generalised knowledge, where he emphasises that *mêtis* is not just specification of local values i.e. temperature, rainfall etc. in order to apply a generic formula to a local context. Rather, *mêtis* or local knowledge is probably best learned through the consistency of daily practice and experience that leads to successful application and outcomes:

Like serving a long apprenticeship, growing up in a household where that craft is continually practiced often represents the most satisfactory preparation for its exercise. This kind of socialization to a trade may favor the conservation of skills rather than daring innovation. But any formula that excludes or suppresses the experience, knowledge, and adaptability of *mêtis* risks incoherence and failure; learning to speak coherent sentences involves far more than merely learning the rules of grammar. (Scott, 1998, 319).

The relationship between *mêtis* and *techné* is then explored. *Techné* is universal in contrast to *mêtis*, which is contextualised and particular. *Techné* is settled knowledge, such as maths, geometry, and laws of physics, and is considered verifiable. Universality means that the *techné* type of knowledge can be taught as a formal discipline in almost its entirety, which encapsulates theoretical knowledge that may not have any practical application. "Finally, *techné* is characterised by impersonal, often quantitative precision and a concern with explanation and verification, whereas *mêtis* is concerned with personal skill, or "touch," and practical results." (Scott, 1998, 320). Here the description of *techné* as codified knowledge is clearly made where the knowledge can be documented and taught, but cannot explain how it comes into being; nor can it by itself add to the knowledge, whereas with *mêtis* the knowledge is characterised by transient situations that can also be ambiguous and without precision or calculation. Scott notes how this fits with the recurrent theme of Western philosophy and sciences, including social science that attempt to 'mathematise' systems of knowledge by aiming to reformulate knowledge for deductive rigour, and to bracket or ignore the aspects of uncertainty:

Only by grasping the potential achievement and range of *mêtis* is it possible to appreciate the valuable knowledge that high-modernist schemes deprive themselves of when they simply impose their plans. One major reason why *mêtis* is denigrated, particularly in the hegemonic imperium of scientific knowledge, is

that its "findings" are practical, opportune, and contextual rather than integrated into the general conventions of scientific discourse. (Scott, 1998, 323).

The current system simply cannot account for *métis* as a type of knowledge on equal footing with *techné*, which remains the preferred system of knowledge, albeit with several shortfalls and unanswerable questions. Whereas for *métis*, its litmus test is the practical success, i.e. the successful outcome from its application. If the application works well, is effective and can remain so repeatedly for this purpose, the practitioners may not be so concerned with the inner workings, definitions or ins and outs of cause and effect. "Their intent is not to contribute to a wider body of knowledge but to solve the concrete problems they face." (Scott, 1998, 324). Thus, the aims of these systems of knowledge are different, with *métis* dependent on exceptionally keen and astute observation and immersion in the environment, often without reliance on outside experts, but instead making decisions rooted in one's own local knowledge and experience. This does not necessarily refer to individual knowledge though, but instead to a whole community that has amassed a body of knowledge that individuals alone could likely never do. Communities of individuals have a direct stake in the outcomes of their keen observations because they are heavily reliant on the successful result. "Unlike the research scientist or extension agent who does not have to take her own advice, the peasant is the immediate consumer of his own conclusions." (Scott, 1998, 324). This highlights the ingredients of practical knowledge, which is a pressing need, sometimes a matter of life and death. Nevertheless, even the aspects of *métis* that resemble rules and that are transmitted through these rules are actually only the codification of practical experiences, as no forms of production or social life could function solely through formulas, and without *métis*. Moreover, these skills and experiences could not be reduced to formulas that a complete novice might immediately be able to use in a way that produces a successful outcome.

What has proved to be truly dangerous to us and to our environment, I think, is the combination of the universalist pretensions of epistemic knowledge and authoritarian social engineering. [...] When schemes like these come close to achieving their impossible dreams of ignoring or suppressing *métis* and local variation, they all but guarantee their own practical failure. (Scott, 1998, 340).

Universalist claims are often inherent in the pursuance of rationalist knowledge, which does not seem to allow for any other forms of knowledge, nor any room to afford practical knowledge a place on its own terms. *Métis* is far removed from this imperialism because it makes no claims to universality and is thus a pluralistic, non-quantifiable way of knowing. Scott acknowledges, rather than overlooks, the irreparable, enormous damage this has caused to persons, communities, and livelihoods, especially when colonial modernisers ruthlessly wielded power to transform populations they thought were 'backwards' and in desperate need of 'instruction' (Wisner, Gaillard & Kelman, 2012; Gaillard, 2021).

3. On the applicability of knowledge to practice

Scientific, academic and institutional knowledge is currently produced within disciplinary and institutional silos. This knowledge is largely theoretical, and although there might be elements of field research, it is extremely limited in scope, reach and time frame for there to be any resultant longer term, sustainable impacts for anyone other than the researchers undertaking the research. Moreover, the methods used, and the knowledge gained from research findings, are expected to be applicable the world over in the broadest sense, across time and place and all contexts. If research results are not reproducible elsewhere or not applicable in every context, this becomes questionable and unfavourably looked upon, unlike reproducible studies, experiments or theoretical proposals, doctrines, and policies that are heralded as ‘impactful’. However, the true measurement of impact often depends on who is measuring it, and for what reasons. Often research impact, or the impact of academically produced knowledge, is measured by how many peer-reviewed, high-ranking journal articles one is able to publish and have read, downloaded, and cited by other academics in their own publications. Journal metrics, reputable institutional affiliation(s) and cite-ability are some of the most prominent indicators of ‘impact’ to attract and gain funding for further research, and the cycle often continues with the research and generation of academically acceptable and reputable knowledge. While one may not see (m)any issues with this knowledge generation and dissemination cycle, from the perspective of impact, it is rather narrow and limited to the individualised academic and institutional sphere. Only recently has there been an interest and leaning toward possible or projected ‘real world impact’ of academically produced knowledge. Funding bodies are now asking researchers to think of and outline how their research might have a more practical, rather than simply theoretical, use and potential application. This, more often than not, proves to be a quagmire of its own, as unrealistic expectations are sometimes placed on what could be achievable in very limited time frames within which a proposed research project is to be funded, conducted, concluded and findings or knowledge disseminated far and wide. Moreover, there are expectations of pursuing newer research topics, in newer contexts and geographic locations, rather than a continuation of research trajectory and a building upon initial connections to a particular place. Real world impact that goes beyond the academic silos of knowledge acquisition and dissemination requires a considerable amount of time, energy and resources to nurture and build upon, especially because the real world is an open social space rather than a siloed ivory tower.

Further, while theoretical knowledge might be acceptably well-ranked by academic standards, attempts to apply theoretical knowledge to practical contexts often fall short, as considerations under theoretical circumstances and conditions often vary considerably from the practical context and the necessary considerations therein. This model of ‘knowledge transfer’ from academic, scientist, or institute expert to others who are not peers but potential ‘end users’ has been recognised as a top-down mechanism of feeding the findings of research, often theoretical knowledge, to others in non-academic contexts for expected practical use

(Wisner, Gaillard & Kelman, 2012). While there are several weighty issues with the top-down approach to knowledge generation and dissemination, it seems that there is an even greater divide and gulf of difference between theoretical knowledge and practical knowledge, especially knowledge for use rather than the purposes of enlarging the knowledge stock or literature. Much of theoretical knowledge remains squarely within academia and scientific journals, often untranslated from the scientific jargon of specialist language for publication standards. As a result much theoretical and scientific knowledge remains unused (for example, in the immediate aftermath of earthquakes (Datta et al., 2018)).

Practical knowledge requires generation from within the practical context itself. This often translates to knowledge generation being led by practitioners rather than theorists, for it is rare that theorists have adequate or ample practical training, experience, understanding and knowledge to draw from. Expertise often lies in one realm or the other, simply because establishing knowledge bases within either the theoretical or practical context requires qualification or apprenticeship, and experience in that particular context.

Rarely, then, is theoretical knowledge able to suffice by itself in raw form or in combination with other types of knowledge for practical application. It requires several adaptations and reiterations to account for contextual factors, trial and error style testing to ascertain if any of the proposed knowledge is workable for achieving practical goals, or having an impact for others. Essentially, there ought to be a redesigning of the way knowledge is generated, which should be done together, cooperatively rather than the top-down system. I have set out an elaborate discussion of this weighty subject matter elsewhere (Ramkumar, 2022, 2025a, 2025b).

4. Beyond Scott

Scott has set out, through several examples and case studies, what he thinks *métis* or know-how encompasses, and what it is definitely not. There are some questions that could be raised that may arise naturally in accordance with some of the examples discussed.

Scott uses the example of emergencies etc. (1998, 314) from the perspective of on-the-ground personnel or practitioners within the fields of disaster risk management and disaster risk reduction. This refers to a specific part of a much larger context of both research and practice, which comprises stages, such as preparedness, action, etc. during a natural hazard or disaster and postdisaster or recovery efforts (Wisner, Gaillard & Kelman, 2012). For example, within the disaster risk management and disaster risk reduction areas of specialisation in knowledge and know-how, Scott highlights very specific knowledge gained through the tackling of a series of issues and acquiring unique experience and understanding. This case shows how *métis* is gained and used by practitioners who know when to use rules and when

to throw out the rule book, as they understand the context sensitivity for suitable application of *métis* to achieve the desired outcomes. The field of disaster studies and mitigation is broad, diverse, and dynamic, and although Scott's explication of what *métis* is does include levels of dynamism and change, it remains unclear as to what extent. *Métis* in Scott's disaster related examples still seems to rely on building up a stock of knowledge through rules, experience, understanding, application, and reliably achieving desirable outcomes. Moreover, the stock of knowledge or pool of know-how is not just individual but communal in nature, wherein people with a direct stake or part in the outcome(s) or end results all contribute to the pool of know-how, making it far greater than an individual's input could be alone.

What of high-risk hazard or disaster cases where there are no previous yardsticks, situations, or contexts to draw past experiences and understandings from and no built-up stock of *métis* to apply and thus rely on? With a rapidly changing climate comes newer and unprecedented climate risks and related issues that were not encountered at all or to the magnitude, scale, and/or severity experienced before. Furthermore, these issues and risks are also now encountered within some newly at-risk contexts that may not have had any history of experiencing such hazards or risks before. As a result, there is no stock of traditional or indigenous knowledge to draw from in these areas, and no know-how to be passed on to those actively facing these issues. What is one to do in such circumstances, and how might Scott propose tackling these issues? There seems to be a juxtaposition between the slow building up of generational and intergenerational indigenous and traditional knowledge that includes often tried-and-tested know-how, such as that indicated within the agricultural examples that Scott provides readers with, and the need for rapid and dynamic know-how. This dynamic knowledge would also have to be reliable if the stakes are so considerably high that they are choices that could result in life or death. However, where is the scope to test such knowledge if it is needed so urgently, and when and where could testing possibly take place? Disaster and hazard contexts seem to be a little different from the agricultural contexts of *métis* generation and application in this regard. Moreover, Scott's focus tends to lean more on the response efforts of rescuers, medics and other such personnel. However, such responses are only part of the hazard and disaster process cycle, which also, for example, includes preparedness. How would the element of preparedness for hazards and possible disasters perhaps situate itself in Scott's perception of know-how and *métis*, rather than the focus on response alone? What kinds of practical knowledge are appropriate for this?

Preparedness contains elements of knowledge and know-how that are not tied to a predictable or accurate place, or exact context and location but is instead based on broad estimates that may lie within a rough range, such as the occurrence of earthquakes and related hazards within the region of and along the Pacific Ring of Fire. It is not possible to predict the exact location or details, such as date, time, or magnitude of hazard occurrence. Nevertheless, being situated within proximity to the Ring of Fire means that one is situated in a

seismically active zone, often characterised by multi-hazard risks, such as volcanic activity, earthquakes, landslides, tsunamis and so forth (Bryant-Tokalau, 2018; Kumar, 2020). These are some ‘knowns’ among a series of several ‘unknowns’ (Barnett, 2001), which is still reason enough to try and gain knowledge of how to prepare for these hazards rather than focus solely on the responses of rescuers, medics, and aid workers etc. to the hazard(s) faced. Again, each context would require a tailor-made, specific preparation plan that is workable in the given location and can provide the desired results of minimising hazard risks and increasing chances of survival, often through very practical means or actions (Bryant-Tokalau, 2018). This is not a clear-cut case of *métis*, nor does it rule out *métis* being used in some circumstances, especially those that have historically experienced similar hazards and have developed traditional knowledge and know-how in dealing with them. However, how would one account for intensely rapid (i.e. at much faster rates than before) rising sea levels on small islands in the Pacific ocean, for example, especially if this is an unprecedented and new risk faced by certain islands and local people? (Barnett, 2001). What kinds of practical knowledge are appropriate and applicable for facing this issue? Are there any means by which these types of issues faced can be dealt with from the perspective of know-how when no one really knows or understands how? What if there is no knowledge that one can bring to the table, no background and no experience? Yet preparation for these contexts, known and unknown situations, and the associated risks are vital to survival (Bryant-Tokalau, 2018). There is definitely a dire need for *métis*, its application, and a hopefully successful outcome. However, if *métis* has not had the time to form and be generated in the traditional sense set out by Scott, then how to approach these issues associated with the distinct lack of know-how?

Another case study to illustrate this point is the recent desertification of historically arable agricultural areas in countries such as Madagascar, which are due to anthropogenic climate change (Tadross et al., 2008; Weiskopf et al., 2021). Madagascar has lost significant forested habitats, which has led to an overall increase in the vulnerability of communities, the island’s biodiversity, and unique ecosystems to climate change (Hannah et al., 2008). In this case, the outcomes experienced were not solely the result of any changes made or negligence, etc. by local agricultural communities in the south of the island. Rather, the shift in usability of the land is a combination of several factors that are not in the direct control of local agrarian communities. Drastic changes in global weather patterns, unseasonal rain, droughts, and unpredictable periods of warmth or the lack thereof etc. are not factors that can be easily controlled on a large scale:

Agricultural stressors vary regionally due to the variety of climatic conditions across the island. For example, drought is a significant issue in southern Madagascar, whereas flooding is more of a concern in the eastern part of the island [...]. In 2010, Madagascar adopted a national policy against climate change that

aims to reinforce national resilience to climate change, reduce national vulnerability, and develop approaches for low carbon emissions (Weiskopf et al., 2021, 2).

Madagascar is considered one of the countries most vulnerable to the adverse effects of climate change (Rakotoarison et al., 2018), thus requiring urgent adaptation measures. Adaptation refers to the management of the effects and outcomes of climate change where possible, as these are emerging and dynamically evolving issues. *Métis* prizes itself on being flexible and adaptable, yet one is left wondering about the limits and parameters of this adaptability and flexibility in application to some of the cases wherein there simply is no yardstick, are rather unprecedented, and an unfamiliar, almost alien, territory for people who have resided in these contexts for generations. The stock of *métis* that they have collectively relied upon historically seems largely out of date/place in facing the new frontiers imposed by uncontrollable elements and thus requires reassessment to ascertain its usefulness under the current circumstances (Weiskopf et al., 2021). If the historic stock of *métis* can no longer be applied to achieve the optimal and expected outcomes that were once possible, how to transition that change and transformation to achieve a state of know-how? Will this simply be a case wherein local communities have to start from scratch each time there are unknowns and factors beyond control? One may inquire if their historic stock of *métis* could possibly be ‘moved’ and applied elsewhere. Will there be a repetition and reverting to the technocratic paradigm stance of recommending that local people simply up and leave areas of risk and seek ‘safer’ locations that may not even provide for their needs? Relocation out of areas of ‘risk’ has long been recommended by experts, some who were not in touch with the everyday lived realities of the communities that are often accustomed to live in these areas for several reasons, rather than solely facing risks. Nevertheless, it seems that the parameters of flexibility and adaptability of *métis* does not necessarily extend to being ‘moved’ elsewhere so easily or verbatim because *métis* is generated in a very context-sensitive manner, taking into account local factors and unique features of the environment, people, and situation. That is not to say that certain types of knowledge or elements thereof can never be applied across different contexts. However, Scott addresses this perspective, likening the type of knowledge that can be shared to be more mathematical in nature. This would refer to theoretical knowledge rather than the *métis* type of knowledge that is to be practically applied for the purposes of achieving particular outcomes.

5. Conclusion

These brief remarks should make clear that Scott’s conceptualisation of *métis* is relevant to several philosophical concerns about the way the social sciences should be conducted. By distinguishing between theoretical knowledge, technical knowledge and *métis*, we are able to better see and understand the dynamics of knowledge production, dissemination and usage in the context of modern social science (and perhaps the sciences overall). These practices

are, like other forms of social organisation, also the product of lived-in experience in trying to solve problems, and they require careful, sensitive consideration—especially in high-stakes disaster management and disaster risk reduction contexts.

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