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# Telling stories: Exploring the relationship between myths and ecological wisdom

#### **Abstract**

This paper proposes that "myths" and myth-making can provide a framework for not only capturing ecological wisdom within its specialist domains, but also transmitting it as actionable knowledge beyond the boundaries of those domains. It argues that understanding the relationship between myth and "wisdoms" can lead to a powerful process for thinking about ecological futures, which may be realized through a strategic process such as scenario-planning.

#### 1. Introduction

This paper pursues a question that was posed in an editorial on ecological wisdom by Wei-Ning Xiang, published in this journal. The question asked, "under what overarching framework, through what mechanism and exactly how" can the theoretical ideal of ecological wisdom "be materialized so that scholars and practitioners from the international community of landscape and urban planning are able to come out of their disciplinary, cultural, and philosophical silos to actively engage in the enterprise of ecological wisdom acquisition and application." (Xiang, 2014, p. 67). In developing one possible answer to this question, this paper also draws on Xiang's discussion concerning the nature of ecological wisdom itself, as highlighted in that editorial. As Xiang notes (2014, p. 67), ecological wisdom comprises two aspects. It "connotes both sophia ['theoretical wisdom'] and the Aristotelian concept of phronesis (practical wisdom)." Thus, in terms of its theoretical dimension, ecological wisdom is a "peculiar form of ecological domain knowledge", comprising "evidence-based ideas, principles, strategies, and even approaches". In turn, it must also be actionable and practicable. As Xiang points out, the relationship between these two aspects of ecological wisdom—the domain knowledge and the practical knowledge—raises challenges for implementation: "How can the ideas, principles, strategies, and approaches of ecological wisdom become (more) actionable and practical – efficacious, effective, and efficient – in informing the contemporary practice of landscape and urban planning in the presence of deep urban sustainability challenges?" He proposes a form of social learning lifecycle (similar to that proposed by Schwartz & Sharpe, 2010; p. 45 for the acquisition of practical wisdom).

Bringing these questions and discussions together, this paper explores the nature of ecological wisdom in more detail, examining what kind of relationship might be constructed between its two aspects; and, building on this inquiry, what kind of mechanisms might be engaged to bring together not only scholars and practitioners, but also a broader set of participants, in order to develop ways of acquiring and applying ecological wisdom. The paper proposes that "myths"—as both phenomenon and process—can provide a framework for not only capturing ecological wisdom within its specialist domains, but also materializing and transmitting it as actionable knowledge beyond the boundaries of those domains. In making this argument, this paper first (Section 2: "Myths and Environmental Knowledge") explores the nature and role of myth for individuals and communities, establishing the fluidity and multiplicity of myth. Next, in Section 3: "Aristotelian Wisdoms" it examines what is meant by "wisdom", using the Aristotelian categories of theoretical and practical wisdom. Section 4: "Myth and Wisdoms" then brings these two approaches together,

arguing that myths may offer both categories of wisdom, which brings them into alignment with the definition of "ecological wisdom" given above. The cases examined illustrate how myths shape action, and how indigenous knowledge is part of the theoretical and practical wisdom that myth encompasses. How and why myths are so influential is then examined in Section 5: "Stories and *Phronesis*", which draws on cognitive approaches to narrative to explore the power of stories. Finally, in Section 6: "From Myths to Scenarios", this paper suggests that scenario-planning offers a mechanism for creating new myths, which not only facilitates the integration of multiple myths from different stakeholders, but also draws on a range of disciplines and types of expertise.

## 2. Myths and environmental knowledge

Humans instinctively employ processes of narrative-building to create stories that make sense of the world around them (Geertz, 2011, p. 10). In this paper I want to focus on one particular type of story-telling: that is, myths. These "socially powerful traditional tales" (Buxton, 2004, p. 18) comprise or create narratives of shared meaning for individuals and communities. I am therefore using "myth" to refer to conscious narratives that are told and retold (and so using this term in a way that is related to, but fundamentally different from, the "deep stories, the collective archetypes—the unconscious and often emotive dimensions of the problem or the paradox" that are identified by Inayatullah (2004) in his methodology of causal layered analysis). I aim to show that myths of this kind can be understood as being crucially interrelated with ecological wisdom.

Ample anthropological scholarship demonstrates how numerous cultures use myth narratives to express their relationship with the environments in which they live. Thus, Descola (2013, p. 132), gives, among others, the example of the Amerindian peoples, who "in their myths and in their daily lives as well... do not regard what we call culture as the prerogative solely of humans". As he goes on to describe, these myths were often dismissed in the past either as illogical or as metaphorical, but certainly not expressive of intelligent engagement with reality. However, these criticisms failed to comprehend the insights that these myths provide into the perceived relationship between humans and their landscape, its animals and plants, and the ways in which the content of these myths may be understood to shape daily interactions between these elements. In turn, the kinds of stories that a culture tells as its myths—encompassing its values and principles—are decisively shaped by the territory in which they are created. The myths of ancient Greek communities provide an example. These narratives reflect a distinctive landscape: mountains and caves are the homes of gods and nymphs; the rivers of this landscape are often deities; and, of course, the sea is the home of gods, nymphs and monsters that might rescue sailors, or lure them to their deaths. Greek myths also demonstrate how landscapes and human communities were closely interrelated. Sometimes these relationships are revealed through genealogies: for example, the first generation of Spartan kings (as reported by the second-century CE writer Pausanias) included a number of royal figures whose names—Eurotas, Taygete, Sparta, Lakedaimon, Amyklas—were also the names of places in the territory of Sparta (Calame, 1987, p. 155).

This integration of environmental with social and political knowledge can be understood as a means by which a community could assert ownership of its surrounding territory. The stories that Greek communities told about ancient connections between land and family legitimized their current claims. But other more complex stories can be seen to have evoked more intricate relationships between local people and their landscapes. For example, there are myriad stories of young women who—fleeing from the threat of attack—become identified with an element of the surrounding countryside: some, like Glauke (a local princess seeking a cure for the pain inflicted by the drugs of the vengeful sorceress Medea) throw themselves into fountains which then take their name (Paus. 2.3.6). Some, like Peirene, who was overcome by grief for her son Kenchrias (who had been

accidentally killed by the goddess Artemis), themselves become springs (Paus. 2.3.2). The young Titaness Asteria experiences a double metamorphosis: pursued by the god Zeus, she jumps in the form of a quail, and then, in some versions, becomes an island—first that of Ortygia, then the island of Delos (Apollod. *Bib.*1.2.2 and 1.2.4; Athen. 9.392; Hygin. *Fab.* 53; Callimach. *Hymn. in Del.* 37; Serv. *ad Aen.* iii. 73; Hes. *Theog.* 409-11; and see Pind. *Paean* 7b.43-52 with *Paean* 5.40-42). Such a bird metamorphosis also occurs in a myth told about the daughters of the giant Alkyoneus: they throw themselves into the sea after their father is killed by Herakles, and are turned into kingfishers by the sea-nymph or goddess Amphitrite (Suda s.v. Alkyonides).

Because of the ways in which these ancient stories have been transmitted—distilled and recorded by mythographers, ancient and modern—it is easy to think of them as unchanging narratives. However, in their original formulation at least, myths are rarely static or singular. There may be local variations of individual myths, in particular in their oral form. Ancient writers on myth sometimes note how they have selected a particular version from among several available to them. For example, the first-century BCE writer Diodoros Sikulos, 5.62-63, in his telling of the story of the origin of the cult of the goddess Hemithea at Kastabos, mentions how (trans. Oldfather, 1935, adapted) "many and various accounts have been handed down regarding her, but we shall recount that which has prevailed and is in accord with what [those who dwell near her temple] relate".

Sometimes these stories vary more widely and significantly. For example, in recording the stories told about the founding of the city of Kyrene in north Africa by settlers from Thera (now modern Santorini), the fifth-century BCE historian, Herodotos, famously offers his readers two versions. He notes how the two communities that he visited—the Therans and the Kyreneans—described the mandate of their founder, nicknamed Battos, quite differently. Thus, in the version that Herodotos heard told by the Therans, it is the Theran king who is originally instructed by the oracle at Delphi to found Kyrene, and he delegates it to Battos. In contrast, in the Kyrenean version, the oracle commands Battos directly, thus creating a direct relationship between founder and gods, which is unmediated by Theran authority.

As well as varying between locations, myths change over time: they may relate events outside time, but their own creation and telling is, crucially, highly responsive to contemporary events. As an example, the myths that have come down to us concerning the genealogy of the rulers of ancient Sparta reflect, not historical reality, but rather an ideological assertion. The genealogical account rather justifies the division of the territory of the Peloponnese, and is likely to reflect the political situation of the second half of the sixth century and the first quarter of the fifth century BCE (Calame, 1987, p. 177).

These examples suggest that in considering how traditional stories of myth are socially powerful, we need to think of them as more than simply distillations of abstract values. Instead, myth-making should be understood to be a fluid, creative process, which reflects practical, social and political concerns. This leads to the question of what kind of knowledge myths can be said to comprise—and in what ways this knowledge may be described as "wisdom".

## 3. Aristotelian wisdoms

The concept of wisdom, in particular "practical wisdom", is popular in current management discourse (e.g., Flyvbjerg, 2001, Halverson, 2004 and Nonaka and Toyama, 2007). It originates in the concept of *phronesis*, which the fourth century BCE philosopher Aristotle elaborated in his *Nicomachean Ethics* (*EN*; translations Rackham, 1961; unless otherwise noted). In book six of that work, *phronesis* is one of five kinds of knowledge that we might gloss as "wisdoms", which Aristotle

offers in an analysis of the nature of man's epistemology (*EN* 1139b). The other four are *episteme*, *techne*, *sophia* and *nous*: briefly, translated as "scientific knowledge", "craft", "theoretical wisdom", and "understanding", respectively (translations of these terms, Reeve, 2013). Aristotle's discussion of these types of wisdom occurs in the context of an analysis of how to live well: these wisdoms are all ways "through which the mind achieves truth, in affirmation or denial".

In part because of the ways in which these terms tend to be translated, it is easy to see these wisdoms as occupying very different, even opposing, areas of knowledge. For example, *sophia* may be opposed to *techne*, as theory is opposed to practice. However, what may appear to be clear categories to us are interrelated in Aristotle's account. Thus, Aristotle notes, *sophia* is used to describe men who are highly skilled in practical activities (*EN* 1141a). The example he gives is Pheidias, who was a sculptor in the fifth century BCE, and the creator of the statue of Zeus at Olympia, one of the seven wonders of the ancient world. Although Aristotle is rather dismissive of this type of wisdom ("In this use then Wisdom merely signifies artistic excellence"), the observation does illustrate his larger point about the different dimensions of *sophia*. Someone who possesses *sophia* knows "not only the conclusions that follow from his first principles, but also [must] have a true conception of those principles themselves" (*EN* 1141a): that is, he must be able to put them into practice. Similarly, we find that *sophia* involves possession of both *nous* and *episteme* (*EN* 1141b), because it is necessary for someone to know first principles (obtained through *nous* or understanding) and then to exercise reason (*episteme*).

We can begin to see why Aristotle judges *sophia* to be "the most perfect of the modes of knowledge" (*EN* 1141a). Nevertheless, Aristotle does continue to explain that those with wisdom often lack *phronesis*, that is, the wisdom that allows them to exercise good deliberation. *Phronesis* is involved with "the affairs of men" as opposed to "a knowledge that is rare, marvelous, difficult and even superhuman" (*EN* 1141b). *Phronesis* brings virtue and deliberation together (*EN* 1106b21-23): "it is about having the right feelings at the right time on the right occasion towards the right people for the right purpose and in the right manner". We might compare a strikingly similar insight from the modern organizational theorist Russell Ackoff, who described wisdom as "the ability to perceive and evaluate the long-run consequences of behaviour", and who, like Aristotle, drew attention to the importance of experience for developing this faculty ( Ackoff, 1999).

In his discussion, Ackoff emphasized the faculty of "judgment" inherent in wisdom, and this is also a particular concern of Aristotle. The philosopher cites Perikles (the renowned fifth-century Athenian general, who guided the Athenians through the early stages of the Peloponnesian war), as an example of a man who exercises *phronesis* in political settings. Aristotle notes that men like him are deemed prudent because "they possess a faculty of discerning what things are good for themselves and for mankind, and that is our conception of an expert in domestic economy and political matters". The faculty of discernment brings to light an almost aesthetic component of *phronesis*, that is, a capacity, trained by experience, to recognize in a moment what is the right decision (Eidinow and Ramírez, 2012).

## 4. Myth and wisdoms

Of these Aristotelian categories of wisdom, the cosmogonic authority of myth at first sight seems most closely related to *sophia*. It appears to comprise the kind of theoretical knowledge that shapes, that is the very stuff of, a culture's worldview: "[Myths] embody and explore the values, not just of individuals, but of social groups and even whole communities" (Buxton, 2004, p. 18). However, even though myths may be characterized in this way, nevertheless, their successful transmission within a culture is rooted in three key aspects that can be argued to bring them closer in character to the

wisdom of *phronesis* as described above: they are practical, they provoke action, and they shape our perception of the world. In this section, I will explore the first two aspects; the third aspect will be clarified in the section that follows.

Even though they may often describe the activities of gods and monsters, many myths are, fundamentally, concerned with the affairs of men, and intricately related to practical aspects of the material world. To illustrate this argument, we can move away from ancient myth to draw on a set of stories recorded by Michael R. Dove (1993, pp. 17–18) in the Meratus Mountains of Southeastern Kalimantan (comprising the major portion of the great island of Borneo, and now part of Indonesia). These tales, told by the rainforest-dwellers in the hills above Martapura, relate how men who have found really large diamonds of great worth eventually suffer as a result. The stories relate how the finders of such stones are unable to sell them through their usual channels; instead, larger social and political forces become involved, with little benefit to the original finder. These discoveries, then, act as sources of social dissonance; they reveal the political and economic inequity of society; they estrange the finder. The stories, as Dove explains, contain and transmit practical insights about the seductive but dangerous nature of such apparent wealth, which can be interpreted as offering an approach to thinking about the question of resource development in tropical forests.

As Dove notes (1993, p. 18) the lesson of these stories "applies to much of the resource development in the tropical forests. The more successful the development is, the more likely is it that external political and economic forces will become involved, and the less likely is it that local inhabitants will be able to retain control (given a non-democratic political tradition such as exists in Indonesia). The reverse is also true: resource development by local peoples that is encouraged by the outside world, and that is left in the hands of the local people, is almost by definition likely to be development that is of less interest to the outside world and less successful for the local people themselves." Dove argues that these tales suggest that, rather than adding to development opportunities for forest peoples, policies need to focus on taking fewer of the existing opportunities away. This example illustrates how some myths may be seen not only to encapsulate cultural knowledge, but also to convey practical, experiential aspects of the material world.

A second example shows how myths can be seen not only to evoke, but also to provoke action. It also illustrates the multiplicity of myth, and the problems that this may present. We have seen above how the stories told by the Spartans described and justified ownership of their expanding territory. The process of development of these myths in an oral society is likely to have taken place over years. But in our media-rich modern environment, this process of creating or reshaping myths—and the impacts that this can have—can occur relatively quickly. An example is found in the account given by Sandra Pannell, among other scholars, of the myths that have impacted on the relationship between the local people and the ecology of what became in 1980, Komodo National Park, Komodo island (and thanks to Helen Burley, who drew this case to my attention).

Parnell explains that the local people of Komodo believed themselves to be related to the Komodo dragons. The myth they tell relates how the beautiful spirit woman Putri Naga appeared to a man, Najo. They had twins: the first was a Komodo dragon, the second was a human. These are the ancestors of the local people (the Ata Modo) and the Komodo dragons on the island, so man and dragon are kin. As a result, whenever they caught food, the local people would leave the dragons a portion (Pannell, 2013, p. 55). This feeding of the Komodo dragons continued in one way or another until relatively recently: thus, when the Park was developed, the Rangers would feed the dragons. This was done as a tourist attraction, but it also satisfied the traditional requirements outlined in the local myth.

However, in 1995, the Park passed into a new management arrangement (the Indonesian National Park Authority, PHKA joined forces with The Nature Conservancy [TNC], a US-based, private environmental organization) and a new vision of the Park was developed. This focused on the protection of the biodiversity of the Park. Hunting and, in particular, fishing was banned, on the grounds that the human population was depleting these natural resources. Scholars have analysed how this "new myth" has restructured perceived relations between the different inhabitants of the area: Maribeth Erb (2012, p. 20) notes how "The construction of a history of Komodo island by various scientific experts has attempted to erase the place of the human communities on the island, marginalising their claims to the place and their rights to make a living there." And Pannell (2013, p. 57) draws attention to how "Malthusian scenarios of unchecked population growth and dramatic resource depletion pivot upon the construction of local people as both ignorant and immigrant."

The alternative scenario, created by TNC and the Park's management authority of how the local people should inhabit the landscape "attempts to rewrite the long human occupation and economic history of the Park", creating "an ahistorical landscape" (Pannell, 2013, pp. 57–58). The Komodo dragons are now seen as part of a nature that must be saved from humanity, rather than living alongside it. The feeding of the dragons has therefore been stopped, and, it is argued that, as a result, the number of animals is dropping (Pannell, 2013, p. 60). But this is only one example of the local impact. As Pannell describes it (2013, esp. pp. 55–61), TNC and the Park's management authority have a particular worldview, involving specific conceptions of the roles of man and nature and their interactions. Erb (2012, esp. p. 20), in turn, highlights how "conservation in the present century is emerging as a very complex issue"... and "These complexities... entail situations where differences in understanding and outlook meet, and create a feeling of dissonance for local actors."

These brief examples illustrate how myths may bring together the abstract cultural knowledge of a community, encompassing and communicating important values and principles. In this way, they resemble the Aristotelian theoretical type of wisdom called *sophia*. But they are also intricately related to practical, experiential aspects of the material world—not only describing, but also generating action—and this associates them with practical wisdom, or *phronesis*. As these examples illustrate, these wisdoms are to be found in indigenous communities, as well as in communities of scholars or practitioners; the knowledge and knowledge systems of indigenous communities are crucial resources for supporting global cultural and biological diversity, as well as for maintaining resilience in confronting complex socio-ecological challenges (see Bohensky and Maru, 2011, citing Maffi, 2001 and Maffi and Woodley, 2010). However, these examples also suggest the difficulties of integrating indigenous and scientific knowledge systems (see the analysis of Bohensky and Maru, 2011): a problem we return to below.

## 5. Stories and phronesis

We have seen how myths resemble *phronesis* insofar as they are practical and provoke action. In this section, I want to turn to the question of the third aspect raised above, exploring how and why myths are so powerful by asking how they shape our perception of the world. In thinking about *phronesis*, Aristotle describes the capacity to recognize "what is right" as involving an intuition like that used in mathematics (NE 1142a24-31). It is not a process of deduction or inference, but one of recognition or acknowledgement (see Eidinow & Ramírez, 2012; pp. 33–35), and it can be trained over time. The power of myth may operate in a similar fashion.

It seems that myths are powerful, in part, because we reference the information they convey without going through a process of rational analysis. In looking at the power of propaganda in WWI, for example, Holman and Kelly (2000, p. 11) have argued that "the acceptance of myth, far from being an exercise in brainwashing the masses... is rather a complex process in which the individual, and eventually the collective, 'allows' through the suspension of rules of the rational mind, the displacement, even the usurping, of the original meaning, and a type of 'new' meaning to come into being." As they argue, the acceptance of propaganda is not the introduction of new meaning, but draws on existing meanings, and transforms them; it achieves this through a process that "functions in a 'poetic' way, in a process akin to the functioning of poetic metaphor".

This analysis introduces an aesthetic element into our consideration of the power of myths: in order to appeal to an audience, the stories myths tell must align with some existing story structures. The process, in both cases, is not a form of reasoning, but is instead processed through non-rational associative faculties; it draws on existing cultural frameworks to create coherent, ordered sequences in particular and recognizable patterns. The operation of this process has been addressed in studies of the functioning of metaphor, which examines how we combine elements of existing metaphors across different "domains" to create new meanings (see Turner, 1996 and Fauconnier and Turner, 2002).

But it seems that the experience is not just mental, it may also be physical: recent research explores our physiognomic responses as we imagine our own and others' actions, and it suggests that when we listen to narratives, we begin to "rehearse" the possibilities they offer: "actions are represented in the central nervous system, and that these representations may be emulated covertly or overtly in a number of ways, including by the observation of the behaviour of others. These representations can also be activated by imagining one's own actions as well as those of others" (Decety and Grèzes, 2006, p. 5; see also Bolens, 2006, pp. 11–19). The day-to-day experience of engaging with different stories helps to develop our understanding of the theoretical wisdom of our culture (whatever that may be) and means that we "rehearse" practical situations. My suggestion is that this may also help to train our faculty to recognize "what is right"—at least according to culturally specific aesthetic considerations.

We can go further, and suggest that this faculty can be trained for particular disciplines, as research on the aesthetic dimensions of deliberation demonstrates. For example, Ramírez (2008, p. 191) has argued that clarity and sense are engendered by focusing on aesthetic dimensions; as he notes, research from cognitive psychology and neurobiology suggest that "aesthetic forms of knowing precede other forms and shape how these other forms of knowing operate". He draws attention to research that has highlighted the role of aesthetics in, for example, the interpretations of law made by US judges (Schlag, 2002; cited in Eidinow & Ramírez, 2012, p. 37). The idea that there is an aesthetic, and yet practical, dimension to engaging with stories brings us back to *phronesis*, and helps us to refine the notion that the exercise of practical wisdom involves an "intuition" that enables an individual to identify the action that "seems right" in any particular context.

## 6. From myths to scenarios

This paper has argued that myths are purveyors of wisdoms in the plural—both *sophia* and *phronesis*, theoretical and practical wisdom. Because they are able to communicate this range of insights, myths may provide a suitable framework, and myth-making a suitable method, for the acquisition and application of ecological wisdoms.

However, the cases introduced above also throw up some crucial difficulties and even caveats in how we approach myths. In particular, there is the importance of being aware of, and working with, a plurality of myths. One of the strengths of the story-telling form is that it allows for many different versions to be told. As work in cognitive literary studies has argued, engaging with stories can create "an environment in which versions of what it was like to experience situations and events can be juxtaposed, comparatively evaluated, and then factored into further accounts of the world (or a world)" (Herman, 2009, p. 151). The power of myths for developing wisdoms lies precisely in their potential for both flexibility and multiplicity.

But the need to bring together a variety of myths also recalls the problem of the integration of knowledge systems alluded to above. Bohensky and Maru (2011) have emphasized the importance of "reframing integration as a process in which the originality and core identity of each individual knowledge system remains valuable in itself, and is not diluted through its combination with other types of knowledge". This paper ends with the suggestion that one possible mechanism for facilitating such a process of reframing may be found in scenario-planning, an approach that is specifically designed to draw together different perspectives (see, for example, Schwartz, 1996, Wack, 1985a, Wack, 1985b and Wilkinson and Eidinow, 2008). As such, it also offers a method for the generation of "new myths" to facilitate the formulation and transmission of ecological wisdom. This aspect may, in turn, also provide a response to the question raised at the very beginning of this paper: that is, how a community of scholars and practitioners from a range of disciplines can come together to develop actionable ecological wisdom. Scenario-planning not only aims to encompass a variety of perspectives, but, it also explicitly draws on a variety of disciplines.

This suggestion builds on the observations of Xiang and Clarke (2003), who reflect on the role of scenarios in land-use planning. As that paper makes clear, scenario-planning facilitates the creation of new myths, or "future histories" of particular environments. In particular, scenarios can achieve "bridging" and "stretching" (2003, pp. 887–891): that is, on the one hand, they have the potential to encapsulate and transmit new information and insights, developing shared mental models between participants ("bridging"); on the other, they may also take them beyond the current limits of their conceptual and practical information and assumptions ("stretching"). The authors highlight some of the key aspects of good scenarios: as stories, scenarios can engage our imagination, with what Xiang and Clarke call "informational vividness" (see 893-5), engaging the emotional interest of scenario users. They have an "ergonomic design", that is, they offer participants a coherent and relevant sequence of possible futures to contemplate (and, as noted above, they may also offer readers a form of physical and mental experience of the things they describe). And, finally, they offer "plausible unexpectedness" (2003, p. 891): by allowing participants to work with the expectations of all of those involved, scenarios offer the opportunity to rehearse alternatives—in particular the different perspectives of other stakeholders.

# 7. Conclusion

We return to the questions with which this article started: first, what framework would enable the theoretical ideal of ecological wisdom to be materialized so as to become actionable; and second, how can a community of scholars and practitioners from a range of disciplines come together to engage with, acquire and apply ecological wisdom.

This paper has suggested that one answer to the first question lies in recognizing the role and power of myths that communities tell about their environments. It has argued that myths materialize ecological wisdom insofar as they can encapsulate and transmit not only *sophia*, abstract theoretical ideas, but also *phronesis*, the practical wisdom that generates action. As the examples above have

shown, myths have the potential to shape a community's ecology, not only through that community's interaction with existing or traditional stories, but also by means of new stories that it creates and/or brings to bear. In particular, as a community develops new myths, it is essential that it realises the value and variety of existing or alternatives stories and ensures that they are fully integrated; any community seeking to develop ecological wisdom must encompass indigenous information, as well as the knowledge and expertise of scholars and practitioners. Finally, this paper has suggested that scenario-planning may offer a mechanism for creating new myths, one that both facilitates the integration of multiple myths from different stakeholders, and which also sets out to draw on the expertise offered by a range of different disciplines. In offering these ideas, this paper hopes to contribute to the development of the idea of "ecological wisdom" as "by nature, ethical, inspirational, and yet still practical capable of inspiring and empowering people to figure out 'the right way to do the right thing in a particular circumstance'" ( Xiang, 2014, p. 67, citing Schwartz & Sharpe, 2010; p. 5).

#### References

Ackoff, R. (1999). Re-Creating the Corporation: A Design of Organizations for the 21st Century. Oxford: Oxford University Press.

Bohensky, E. L. and Y. Maru (2011) Indigenous knowledge, science, and resilience: what have we learned from a decade of international literature on integration? Ecology and Society, 16 (4), 6.

Bolens, G. (2006). The Style of Gestures: Embodiment and Cognition in Literary Narrative. Baltimore, ME: Johns Hopkins University Press.

Buxton, R. (2004). The Complete World of Greek Mythology. London: Thames and Hudson.

Calame, C. (1987). Spartan Genealogies: The Mythological Representation of a Spatial Organisation. In J. Bremmer (Ed.) Interpretations of Greek Mythology, 153-186London: Croom Helm.

Decety, J. and Grèzes, J. (2006). The Power of Simulation: Imagining One's Own and Other's Behavior. Brain Research: Social Cognitive Neuroscience 1079, 4-14.

Descola, P. (2013). Beyond Nature and Culture. Janet Lloyd (trans.). Chicago: University of Chicago Press.

Dove, M. R. (1993). A Revisionist View of Tropical Deforestation and Development. Environmental Conservation 20 (1), 17-24, 56.

Eidinow, E. and Ramírez, R. (2012). "The Eye Of The Soul": Phronesis And The Aesthetics Of Organizing. Organizational Aesthetics, 1 (1), 26-43.

Erb, M. (2012) The dissonance of conservation: environmentalities and the environmentalisms of the poor in eastern Indonesia. The Raffles Bulletin Of Zoology, 11–23.

Fauconnier, G. and Turner, M. (2002). The Way We Think. New York: Basic Books.

Flyvbjerg, B. (2001) Making social science matter: why social inquiry fails and how it can succeed again, Cambridge University Press, Cambridge.

Geertz, A. (2011). Religious Narrative, Cognition and Culture: Approaches and Definitions,' in Geertz, A. and Sinding Jensen, J. (Eds.), Religious Narrative, Cognition and Culture: Image and Word in the Mind of Narrative. Sheffield: Equinox Publishing.

Halverson, R. (2004). Accessing, Documenting, and Communicating Practical Wisdom: The Phronesis of School Leadership Practice. American Journal of Education 111, 90-121.

Herman, D. (2009). Basic Elements of Narrative. Malden: Wiley University Press.

Holman, V. and Kelly, D. eds. (2000). France at War in the Twentieth Century: Propaganda, Myth, and Metaphor. New York/Oxford: Oxford University Press.

Inayatullah, S. (2004). The Causal Layered Analysis (CLA) Reader. Theory and Case Studies of an Integrative and Transformative Methodology. Taipei: Tamkang University.

Inayatullah, S. Causal Layered Analysis: Poststructuralism as Method. In Metafuture.org. (http://www.metafuture.org/articles-by-sohail-inayatullah/causal-layered-analysis/). Accessed 21/11/2014.

Maffi, L. (2001) On biocultural diversity: linking language, knowledge, and the environment. Smithsonian Institution Press, Washington, D.C.

Nonaka, I. and Toyama, R. (2007). Strategic Management as Distributed Practical Wisdom (phronesis). Industrial and Corporate Change 16, 371-394.

Oldfather, C. H. (1935) Diodorus Siculus: the library of history, Vol. iii, Loeb Classical Library. Harvard University Press, Boston, MA. Pannell, S. (2013). Nature and Culture in a Global Context: A Case Study from World Heritage Listed Komodo National Park, Eastern Indonesia. In S. Brockwell, S. O'Connor and D. Byrne (Eds.), Transcending the Culture—Nature Divide in Cultural Heritage: Views from the Asia-Pacific Region (Terra Australis 36), 53-63. Canberra: Pandanus Books. Originally published in Pannell, S., 2006, 17-45.

Rackham H. (1961). Aristotle, The Nicomachean Ethics. Cambridge, MA: Harvard University Press.

Ramírez, R. (2008). Scenarios that Provide Clarity in Addressing Turbulence. In R. Ramírez, J. W. Selsky, and K. van der Heijden (Eds.), Business Planning for Turbulent Times: New Methods for Applying Scenarios. London/Sterling, VA, 187-206.

Reeve, C. D. C. (2013). Aristotle on Practical Wisdom: Nicomachean Ethics VI. Cambridge, MA: Harvard University Press.

Schlag, P. (2002) The aesthetics of american law. Harvard Law Review, 115, 1047.

Schwartz, B. and K. Sharpe (2010) Practical wisdom: the right way to do the right thing. Riverhead Books, New York.

Schwartz, P. (1996) The art of the long view: planning for the future in an uncertain world. Doubleday, New York. Turner, M. (1996). The Literary Mind. Oxford/New York: Oxford University Press.

Wack, P. (1985a) Scenarios: uncharted waters ahead. Harvard Business Review, 63 (5) (1985), 72–89.

Wack (1985b) Scenarios: shooting the rapids. Harvard Business Review, 63 (6), 139–215.

Wilkinson, A. and Eidinow, E. (2008) Evolving practices In environmental scenarios: a new scenario typology. Environmental Research Letters, 3 (October–December) (2008)

Xiang, W.-N., and Clarke K. C., (2003). The Use of Scenarios in Land-use Planning. Environment and Planning B: Planning and Design 30(6), 885 – 909.

Xiang, W-N. (2013). 'Call for Abstracts: Doing Real and Permanent Good in Landscape and Urban Planning: Ecological Wisdom for Urban Sustainability.' Dujiangyan International Symposium on Ecological Wisdom for Urban Sustainability, October 17-19, 2014.

Xiang, W-N. (2014). Doing Real and Permanent Good in Landscape and Urban Planning: Ecological Wisdom for Urban Sustainability. Landscape and Urban Planning 121, 65-69.