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# Analogical Investigations

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## ABSTRACT

This response to *Analogical Investigations* concentrates on the legacy of Lloyd's polarity and analogy, other theories of metaphor, and relations between theories of metaphor and theories of nature.

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**KEYWORDS** Analogy; metaphor; multidimensionality; semantic stretch

## 1. Introduction

Geoffrey Lloyd's 'Fortunes of Analogy' [2017] is difficult to assess because it is a précis of the arguments of his recent book, *Analogical Investigations* [2015]. That ambitious book is itself a reworking of his first book, *Polarity and Analogy* [Lloyd 1996], from the distant standpoint of both a comparative perspective, primarily with China, and of an entire career. 'Fortunes of Analogy', and the book on which it is based, begin with the question of the powerful tools of investigation created by Western philosophy and science [Lloyd 2017: 236].<sup>1</sup> On one account, the core of Aristotle's concepts of science, especially the notions of definition, axiomatics, demonstration, and method have been fundamental to Western science ever since they were first articulated in the *Posterior Analytics*.<sup>2</sup> But how, Lloyd asks, should we evaluate the European legacy that in most cases was the first to develop these ideas and practices, especially since: 'most people throughout the world, and not just Westerners, probably assume straightforwardly that those tools represent an unqualified success, for have they not been responsible for most of the progress humans have ever made both in understanding, and in improving material welfare?' [Lloyd 2017: 237].

But, as Lloyd remarks, other objections are raised, including claims from cultural relativism, resistance to Western hegemony, and appeals to the destruction caused by technological 'progress' that is closely associated with the development of 'Western' science. Having posed the problem this way, Lloyd focuses on the tools of investigation (rather than their material results), and the nature of human efforts to both understand and control our environment. He focuses on the extended use of analogy in two related senses. His own investigation is analogical in the sense of being comparative. But he also argues that the the use of analogies, models, images, and similarities is all-pervasive

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<sup>1</sup> While I refer to Lloyd [2015], a review of that work is beyond the scope of the present discussion.

<sup>2</sup> De Jong and Betti [2010], Lloyd [2015: 51, 62–3, 68].

[Lloyd 2017: 237]. Here a first question arises. Even if the use of analogies, models, metaphors, and images is universal, how culturally specific are the particular kinds, or categories of analogies, metaphors, etc.?

## 2. Polarity and Analogy

In *Polarity and Analogy* [1996], Lloyd examined the roles of these two fundamental modes of argumentation in Greek thought from its beginnings to Aristotle, the founder of formal logic as we know it. Arguments based on polarity focused on the use of pairs of opposites as the basis for schemas of argumentation. Here, arguments are based on classifying or explaining things under a taxonomy of two opposite principles. Arguments based on analogy address similarities or connections, including inferences based on apprehended similarities. Here, the ‘analogues’ are likened to something else or assimilated to a common category. Lloyd [ibid.: 6–8] also refers to these two modes of argument and explanation as analytic and synthetic, respectively.

*Polarity and Analogy* is inherently comparative, but the comparative trajectory is framed in anthropological terms. Lloyd was particularly concerned to address claims about ‘pre-logical mentality’ and ‘archaic logic’ formulated by Lucien Lévy-Bruhl. These claims in turn influenced Francis Cornford’s [1912] *From Religion to Philosophy*, Bruno Snell’s [1960] *The Discovery of the Mind*, and contrary positions by Émile Durkheim [2008 (1912)], among others.<sup>3</sup>

In *Analogical Investigations* [2015], Lloyd extends the study of these modes of argument to include a sustained comparison with Chinese modes of argumentation, as part of what, he notes, should ideally be an investigation in every period and culture of the modes and manifestations of comparison in human reasoning, including its presuppositions on what is to be compared and contrasted. For example, it should be asked which particular analogies and polarities the ancient Greeks or Chinese focused on, and how they used them. Which are culturally specific, and what do culturally specific modes of analogy and polarity tell us about the ontological and ethical presuppositions of their authors? Finally, Lloyd notes that the articulation of similarities and contrasts, and the degree of cultural specificity of both analogies and polarities and the ontologies behind them, raises issues of the limits of human understanding and mutual intelligibility. Lloyd’s approach is to develop two ideas, which he describes as the multidimensionality of reality and the idea of ‘semantic stretch’ [2017: 240]. Multidimensionality reflects a plurality of accounts of a given reality. Lloyd proposes semantic stretch as an alternative to the linguistic dichotomy between literal and metaphorical.<sup>4</sup>

This discussion extends the treatment of these two ideas in Lloyd’s earlier work. He uses the term multidimensionality to explain the open-endedness of early Chinese and Greek cosmologies and world views [Lloyd 2004: ch 7, esp 76]. In *The Revolutions of Wisdom* [Lloyd 1987: ch 4, esp 174–9, 198, 208;] and *The Ambitions of Curiosity* [Lloyd 2002: ch 5, esp 123], he argued that an alternative to the dichotomy of literal and metaphorical is the view that any term can exhibit ‘semantic stretch’ between these two poles. He takes up the issue of the literal and metaphorical at length in the first chapter of *Demystifying Mentalities* [Lloyd 1990: 7–9], arguing that contrasts between science

<sup>3</sup> Lloyd [1990; 1999] also addresses these issues.

<sup>4</sup> He notes here that classical Chinese has no exact equivalent to metaphor, citing the alternative of a Chinese taxonomy of three modes of speech in the *Zhuangzi*, ‘heavy’, ‘lodge’, and ‘spillover’ sayings.

and myth, science and magic, and oppositions between the literal and the metaphorical can be examples of failing to distinguish between actors' and observers' categories. The context for this discussion is refuting claims for mentalities by Lévy-Bruhl and others. Lloyd's point is that arguments about whether 'paradoxical' statements are literal or metaphorical belies the absence of any such category distinction among the statements' authors; the result is a false contrast between different styles of discourse that privileges the 'literal' and downgrades the 'metaphorical' [ibid.: 14–19].<sup>5</sup> He goes further and argues that 'in origin, the distinction between the literal and the metaphorical—like that between myth (as fiction) and rational account—was not just an innocent, neutral piece of logical analysis, but a weapon forged to defend a territory, repel boarders, put down rivals' [ibid.: 23]. I shall return to this point later.

Lloyd then articulates four principal issues in the comparative study of analogy: (1) translation across languages, a limited case of the issue of mutual intelligibility; (2) comparatism, specifically the problem of how to avoid distortion and reductionism; (3) the strengths and weaknesses of analogy as heuristic, for example, Aristotle's use of analogy in identifying resemblances between animals outside of same species or genus was fundamental to his classification of animals; and (4) underlying assumptions about nature and culture, specifically the assumption that nature is universal but human cultures differ.<sup>6</sup>

The first two issues reflect arguments he has made extensively in other studies.<sup>7</sup> The discussion of his fourth point closely follows the arguments of two ontologically oriented anthropologists: Philippe Descola [2013] and Eduardo Viveiros de Castro [1998].<sup>8</sup> Lloyd [2017: 248] concludes that analogies have been and remain a major cognitive resource common to all humans. In some cases, perceptions of similarity or likeness draw on human universals, such as shared biology, the use of language, and the universal experience of mortality. Lloyd offers particular objections to three widely used dichotomies: realism and relativism, literal and metaphorical, and nature and culture. He makes the controversial claim that while culture itself may be a cross-cultural universal, the idea of nature is artefactual and culturally particular [ibid.]. Finally, he argues [ibid.: 248–249] that the study of analogies and comparisons gives us access to important insights into radically different cosmologies and ideas on how we should lead good lives.

### 3. Another Theory of Metaphor

What are we to make of the apparently universal use of analogies, models, metaphors, and images? I now turn to another influential approach to the understanding metaphor. It begins with George Lakoff and Mark Johnson's theories of image schemata and conceptual metaphor [Lakoff and Johnson 1980, 1999; Johnson 1981, 1987], and continues with Gilles Fauconnier and Mark Turner's [2002] notions of conceptual blending, and Antonio Damasio's [1994] theory of somatic markers (which has important

<sup>5</sup> That downgrading arguably begins with Aristotle. For details see Lloyd [2009: 21–2].

<sup>6</sup> These topics are explored in detail in Lloyd [2015], chapters 1 (translation and intelligibility), 2 (comparatism), 4 (analogy as heuristic), and 5 (underlying assumptions about nature and culture).

<sup>7</sup> For translatability and intelligibility see Lloyd [2014]. For reductionism see Lloyd [1996].

<sup>8</sup> Cf. Lloyd [2007, 2011, 2012]. Descola [2013] identifies 'analogism' as one of four ontologies based on differing combinations of physicality (body and non-physical component) and interiority (inner and outer).

implications for ethics especially), among others. For limited purposes of convenience, I will refer to all these as cognitive metaphor theory.

Lakoff and Johnson argued that metaphors are neither literary ornaments nor even deliberate cultural constructions. Rather, they claim that a certain class of ‘root metaphors’ or ‘conceptual metaphors’ are ‘mappings’ between ‘source domains’ of somatic experiences common to all humans and ‘target domains’ to be clarified or better understood by metaphorical mappings. Examples include the metaphors GOOD IS UP, ARGUMENT IS WAR [Lakoff and Johnson 1980], LIFE IS A JOURNEY, LIFE IS A PLANT, and LIFE IS A DAY [Lakoff and Turner 1999]. Typically the source element is concrete or physical and the target is more abstract. Lakoff and Johnson argue that source domains are universal because they derive from our shared embodied biological experience. They also argue that the mappings of conceptual metaphors derive from image schemas, pre-linguistic schemas about space, time, motion, control, and other basic elements of embodied human experience.

Conceptual blending theory goes further and argues that all human cognition creates mental spaces and creates mappings between them. In this broader theory, conceptual metaphor is one cognitive process (a single- or multiple-scope conceptual blend) among many. Here the basic unit is a ‘mental space’, a temporary but coherent structure. Blending theory modifies conceptual metaphor theory by showing that many things that seem to be simple source-to-target-domain mappings are ‘blends’ of multiple mental spaces into new conceptual structures. For example, in a single-scope blend, two input spaces (source and target domains) lead to a third ‘blended’ space. Blended spaces make it possible to create mental spaces with structures that come from more than one source domain mapped to one target domain. In what is a theory of human creativity, blending theory is a general model for the selective combination of image schemas into new conceptual structures, which can be inputs to further blends. Blending theory allows for the modelling and incorporation of cultural information that can affect perceptual schemas and create culturally specific concepts. On these views, metaphors are basic to thought and not merely language, and for these reasons, at least some concepts are inherently imagistic [Fauconnier and Turner 2002]. But if concepts are imagistic, our conceptual life is pervaded by what Damasio [2004] calls ‘somatic markers’: motor and emotional data that accompany sense perception and memory. He argues that somatic markers play a crucial role in human reasoning and decision-making.

Attempts also have been made to apply cognitive metaphor theory to classical Chinese texts. In a series of thought-provoking papers, Edward Slingerland [2011] has applied conceptual metaphor analysis to the study of metaphor in early China, drawing on cognitive linguistics and neuroscience to argue that conceptual metaphor analysis is a powerful tool for the analysis of early Chinese thought and for the study of comparative religion. He also examines metaphors for the self in the *Zhuangzi* [Slingerland 2004] and mind–body dualism in early China [Slingerland 2013; Slingerland and Chudek 2011].<sup>9</sup> The problem Slingerland identifies, and attempts to redress, is a pre-existing tendency within Western scholarship on early Chinese thought to see metaphor—in analogical reasoning especially—as a uniquely Chinese style of reasoning

<sup>9</sup> In addition, two monographs by Ning Yu have examined cognitive metaphor theory in a Chinese context [1998] and metaphors based on the heart (*xin* 心) [2009].

about the world. He notes the prevalence of the view that metaphorical or analogical thinking is a special or unique feature of early China, and offers alternatives to both the ‘aesthetic’ account of metaphor as part of a ‘Chinese mind’ and to a kind of reverse imperialism that glorifies these imagined tendencies.<sup>10</sup> Slingerland counters these views by the argument that conceptual metaphor theory and image schemas underline all human cognition. Implied in all this are additional claims about embodiment: connections between body, emotion, and thought in both everyday reasoning and ‘abstract’ thought. Slingerland combines conceptual metaphor, blending theory, and the theory of somatic markers to suggest that the function of conceptual metaphors or blends is to harness emotions produced by ‘basic’ scenarios in order to use them in decision-making in complex or abstract scenarios.

#### 4. Metaphor and Nature

Lloyd’s discussion piece (and *Analogical Investigations* [2015: 43]) does not pursue this line of research beyond a brief reference to Lakoff and Johnson’s *Metaphors We Live By*, in discussion of the emotions in *Cognitive Variations* [Lloyd 2007], and in a review of a recent book by Slingerland [Lloyd 2009]. Cognitive metaphor theory intersects with, and diverges from, Lloyd’s approach in three ways that are of considerable inherent interest, and also bear on Lloyd’s arguments. My purpose is here is not to argue for either point of view, but rather to open up new lines of inquiry relevant to the interests of both.

A first is that cognitive metaphor theories rely—or seem to—on the nature-culture binary that Lloyd [2007, 2011, 2012] so centrally opposes. If metaphors derive from biological, pre-linguistic components and are not mere artefacts of language, they seem to fall under the rubric of ‘nature’ rather than culture. If so, they seem to draw on some version of assumptions that nature is universal but human cultures differ. But Lloyd takes the opposite view, that culture may be universal but ‘nature’ is culturally specific.<sup>11</sup> Cognitive metaphor theory seems to position—or arguably reduce—conceptual metaphors as a ‘natural’ phenomenon arising out of our embodied biological state. It thus clashes with Lloyd’s central claims about cultural ideas of nature.

#### 5. Biology Versus Anthropology

A second difference concerns jarring or possibly incommensurable findings and insights between the biological and anthropological sciences. In his discussion of the emotions in *Cognitive Variations*, Lloyd [2007: 59–60] identifies three issues that, for purposes of the present discussion, bear on cognitive metaphor theory: (1) the elements of cognition within the experience of emotion and the relation of emotions to rationality and propositional attitudes; (2) the role of emotion in the development of a moral sense; and (3) the question of the adequacy of specifically Anglophone terminology for

<sup>10</sup>For strong versions of this view see Wu Kuangming [1995: 35–40]; Hall and Ames’s [1987; 1998] opposition between ‘analogical or correlative thinking’ and an ‘aesthetic order’; and Ames’s [2008: 41] ‘correlative thinking’. For a different view see Allan [1997], which explores the roles of root metaphors for water and plants in early Chinese philosophical discourse (and refers to Lakoff and Johnson).

<sup>11</sup>But are cognitive scientists wedded to a notion of nature and culture as binary opposites? Some studies within Classics have attempted to bridge these categories, and offer other alternatives. See Budelman [2010], esp. 114–116.

the study of emotion.<sup>12</sup> Lloyd makes several important points here. First, although biological studies provide empirical analyses of a wide range of emotional experiences, they do not account for subjects' own reports of how they feel, and there is considerable diversity in how emotions are described in different cultures. Second any ambition to construct a single universally valid metalanguage for all human cognitive and affective experience involves a massive idealisation, and goes far beyond biological data. Third, even if biology answers some questions about the neurophysiology and biochemistry of emotional experience and cognition, there remains a lacuna between these findings and the many concepts used in different natural languages to register those experiences [ibid.: 59–66].<sup>13</sup> Lloyd concludes by observing that:

We have indeed learnt much, in recent years, from biology, and will no doubt discover a good deal more as research on the brain proceeds at an ever-increasing rate. Studies in developmental psychology, in social anthropology, and in linguistics have also made important advances. Yet these have often been orthogonal to one another. Nor can the results in these three areas be seen as complementing, or easily meshing with, those of the neurosciences [ibid.: 80].

His explanation for the lacuna is the plasticity of human cognitive structures, which allows for different patterns of development [ibid.: 81].<sup>14</sup>

More generally, *Cognitive Variations* presents compelling reasons to be sceptical about any claims for a universal metalanguage, including cognitive metaphor theory.<sup>15</sup> But there is a risk of losing a baby in the bathwater by completely rejecting the idea that there may be pervasive metaphorical structures based on embodied experience and through it a shared biological heritage.

## 6. Metaphor and Argument

A third issue concerns claims that root or conceptual metaphors are pre-linguistic. These claims for conceptual metaphors challenge Lloyd's view of analogy because they remove at least some metaphors from deliberately constructed argument. Lloyd's interest in Aristotle's overall pejorative treatment of metaphor and in the literal/metaphorical dichotomy both view metaphor as a style of discourse or argument. Lakoff and Johnson's claim that at least some metaphors are pre-linguistic might seem to undermine claims for metaphor as a style of discourse or analogy as a mode of argument.

## 7. Conclusions

Lloyd's interests and concerns are clearly very different than those of conceptual metaphor theory, especially in attitudes toward universalist claims. Cognitive metaphor theory seems to be seeking universalist explanations for the roles of metaphor in human cognition. Lloyd by contrast is justly suspicious of any claims for a universal metalanguage. However there are several areas of agreement in approaches to analogy and

<sup>12</sup>These three are the last three of his six issues of active controversy.

<sup>13</sup>Here he cites in particular Wierzbicka's [1999: 34 ff., 273 ff.] comprehensive cross-cultural study of a wide range of natural languages and her notion of a 'natural semantic metalanguage'. She argues that there are shared universal concepts that are the 'bedrock of cross-cultural understanding.

<sup>14</sup>He also argues that the study of ancient attitudes and terminology is particularly useful because it offers the possibility of alternative maps of the emotions [Lloyd 2007: 82].

<sup>15</sup>For more on this book see Raphals [2009].

metaphor that bear reflection. Both agree that the use of analogies and metaphors seems to be a cross-cultural universal, but they differ as to why.

Both reject the widely used dichotomy of the literal and metaphorical, but for different reasons and in different ways. Lakoff and Johnston explicitly positioned their view of metaphor as an alternative to the dichotomy of literal and metaphorical, a category Lloyd also rejects.

Both agree that metaphor is basic to human thought, but for different reasons. Both also reject the dominant association of metaphor with poetry, rhetoric and other 'literary' devices, albeit for different reasons. Lloyd argues that the study of analogies and comparisons gives us access to important insights into radically different cosmologies and ideas on how we should lead good lives. Lakoff and Johnson argue that source domains are universal because they derive from our shared embodied biological experience, which results in pre-linguistic image schemas about space, time, motion, control, and other basic elements of embodied human experience. Implied in all this are additional claims about embodiment: connections between body, emotion, and thought in both everyday reasoning and 'abstract' thought. On both views, metaphors are basic to thought and not merely language. The difference lies in why. For cognitive metaphor theorists, universal image schemas underline all human cognition. Lloyd argues for the plasticity of human cognitive structures, which allows for different patterns of development, individual and cultural. This view is consistent with his deep and fruitful engagements with anthropology, and his use of interdisciplinary perspectives to argue against the limitations of universalist approaches.

I conclude by suggesting a nuanced view of cognitive metaphor theory that is truly comparative, and that takes note of the concerns Lloyd raises here and in earlier work might indeed advance the lines of inquiry into the core problems of how humans think that both Lloyd and cognitive metaphor theorists are interested to pursue.

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No potential conflict of interest was reported by the author.

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