Interpreting Interdependence in Fazang's Metaphysics

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Abstract

This paper examines the metaphysics of interdependence in the work of the Chinese Buddhist Fazang. The dominant approach of this metaphysics interprets it as a species of metaphysical coherentism wherein everything depends upon everything else, no individual is more fundamental than any other, and so reality itself is non-well-founded in the sense that chains of dependence never terminate. I argue, to the contrary, that Fazang's metaphysics is better interpreted as a novel variety of foundationalism. I argue, as well, using set- and graph-theoretic techniques, that there is a consistent way to model this alternative interpretation, and that this model differs in significant ways from a coherentist model.

Keywords Fazang · Huayan Buddhism · Indra's net · Metaphysical coherentism

1 Introductory Remarks

Modern astronomy teaches that the shadow of the night depends upon Earth's surface; modern biology, that animal bodies depend upon their cells, which in turn depend upon organelles. Abrahamic religions teach that contingently existing things depend upon God; philosophical Daoism, that the myriad things (*wan wu* 萬物) depend upon *dao* 道. These relations of dependence are metaphysical rather than causal, because that which depends upon another has the other as its simultaneous source, and this source helps to explain its existence and identity. Insofar as no explanandum helps to explain its explanans, metaphysical dependence relations seem to be anti-symmetric, such that no individuals depend upon each other. The anti-symmetry of metaphysical dependence, together with the assumption that all chains of metaphysical dependence terminate, entail metaphysical foundationalism—the view that some individuals depend upon no others. Insofar as some

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individuals depend upon others for their existence or identity, metaphysical foundationalism is a natural view to hold about the (dependence) structure of reality.

Many philosophers, past and present, European and Asian, endorse some version of metaphysical foundationalism (see Bliss and Priest, 2018a, b). Recent analytic metaphysics, however, exhibits a growing interest in metaphysical coherentism as an alternative to metaphysical foundationalism (see Bliss, 2014; Thompson, 2016; Barnes, 2018; Morganti, 2018). Metaphysical coherentism is a view wherein everything depends upon everything else, no individual is more fundamental than any other, and so reality itself is non-well-founded in the sense that chains of dependence never terminate. Some cite certain state-of-affairs metaphysics and trope metaphysics as evidence for the viability of metaphysical coherentism (see Barnes, 2018, 57–59). Others, however, argue that the paradigmatic metaphysical coherentist comes from the Buddhist tradition, citing the Chinese monk Fazang as an exemplar (see Bliss and Priest, 2018a, b, 71–72; Priest, 2018a, 130–131; Bliss *forthcoming*).

Fazang 法藏 (643–712) is the third patriarch of the Huayan 華嚴 tradition of Chinese Buddhism. Huayan is one of several indigenously Chinese Buddhist traditions. It is known for teaching that one is all and all is one, as well as for influencing Chan (Zen) Buddhism and Neo-Confucianism (see Van Norden and Jones 2019). Fazang, for his part, is known for systematizing Huayan's metaphysics. Some older scholarship supports interpreting Fazang as a metaphysical coherentist. (Bliss and Priest, for example, tend to cite Chang, 1972 and Cook, 1977). More recent scholarship on Fazang's metaphysics, however, casts some doubt on this interpretation (see Jones, 2015, 142–144; Jones, 2018, 317–319). These doubts, if apt, diminish the historical evidence in favor of metaphysical coherentism as a viable alternative to foundationalism.

I shall argue, in conformity with more recent scholarship, that Fazang endorses a novel species of foundationalism.¹ Fazang's metaphysics is a species of foundationalism, insofar as it maintains that each *dharma* is fundamental, a terminus for a chain of dependence. It is a novel species of foundationalism, insofar as the fundamentality of each *dharma* is aspectual. On the aspectual interpretation I shall defend, Fazang endorses a metaphysics whereby every *dharma* has two aspects—one whereby all other *dharmas* depend upon it while it depends upon nothing else, another whereby it depends upon others while nothing depends upon it. I admit that this is a counterintuitive view—and for those who prefer to reserve the category of foundationalism for something more conventional, I have no attachment to the categorization. Setting aside naming preferences, I offer two kinds of support for my interpretation. I argue, first, that Fazang's writings favor the aspectual interpretation

¹ Some scholars deny that Buddhism, properly understood, engages in metaphysical speculation. (An anonymous referee for this journal raises precisely this concern, arguing that Fazang's views are inconsistent with Buddhist teachings by virtue of being metaphysical.) The intended audience for this paper is the group of scholars who do not frame Buddhist teaching as hostile to metaphysical inquiry. This group includes most contemporary philosophers who engage with Fazang's writings. It includes, as well, those who interpret central Buddhist concepts—regarding self, causality, and momentariness, among others—as having metaphysical import. Even with this caveat, I shall have occasion to question whether Fazang's views are consistent with the teaching of dependent arising.

over its coherentist alternative. I demonstrate, second, using set- and graph-theoretic techniques, that there is a consistent way to model Fazang's view under an aspectual interpretation, and that this model differs from a coherentist model.

I begin by introducing Fazang's metaphor of Indra's net as a model for understanding interdependence. Indra's net merits discussion, because coherentist interpreters of Fazang most frequently invoke this metaphor as support for their view. I use Fazang's remarks about the metaphor to cast doubt upon a coherentist interpretation of his view. Because Fazang's remarks about Indra's net are brief, I next attend to some of Fazang's more metaphysical writings in order to defend an interpretation of Fazang's view. I argue that this interpretation qualifies as an aspectual variant of foundationalism, and that it coheres with Fazang's writings better than the coherentist interpretation. I then construct a formal model of Fazang's view (as I interpret it), and I contrast this model with a formal model of its coherentist competitor. I conclude by discussing some potential implications of the aspectual interpretation of interdependence.

2 Contemplating Indra's Net

Coherentism and foundationalism are views about the metaphysical structure of reality. This structure relates individuals with respect to their dependencies upon each other. For Fazang, the individuals so related are the basic constituents of what he refers to as the *dharma*-realm of dependent arising (*dharmadhātu pratītyasamutpāda*; *fajie yuanqu* 法界緣起). He refers to this realm as a *dharma*-realm (*dharmadhātu*, *fajie* 法界), because he maintains that the fundamental constituents of reality are *dharmas* (*fa* 法). In his commentary on Devendraprajña's (d. 691) *Discourse on the Dharma-Realm's Non-Duality* (*Dasheng fajie wu chabie lun shu* 大乘法界無差別論疏), Fazang offers a threefold analysis of *dharmas*:

Dharma has three meanings. The first is that which upholds and maintains, meaning that its self-nature does not change. The second is rule/doctrine, referring to standards that give birth to release [from *samsāra*]. The third is mental object, referring to what is known to discriminating consciousness.² (T44.1838.63b18–63b19)

Fazang refers to the *dharma*-realm as a realm of dependent arising (*pratītyasamutpāda*, *yuanqu* 緣起), because he affirms the Buddhist teaching of dependent arising whereby every *dharma* arises in dependence upon other *dharmas*. Part of Fazang's significance, in the history of (Chinese) Buddhism, is the way in which he articulates this teaching. Fazang maintains not only that each *dharma* depends upon some other *dharma*, but also that each depends upon every other *dharma*. Commentators typically characterize Fazang as endorsing

² Unless otherwise noted, all translations are my own.

a metaphysics of interdependent arising, using the prefix "inter-" to mark that Fazang's view strengthens the more typical Buddhist metaphysics of dependent arising.

Of the several metaphors Fazang offers for understanding interdependence within the *dharma*-realm of dependent arising, the metaphor of Indra's net has the most explicit and direct connection to Huayan Buddhism's root scripture, the *Avatamsaka Sūtra* (*Huayan Jing* 華嚴經). This scripture, in its thirty-third chapter, associates Indra's net with the teaching of dependent arising:

[All Buddhas] know that every *dharma* (*fa* 法) always obeys dependent arising exhaustively and without exception. They know every kind of world exhaustively and without exception. They know the entire *dharma*-realm is throughout like Indra's net, and they know the particularity of all the various *shi* 事 within this net exhaustively and without exception. (T10.279.248.c14-16)

The *Avatamsaka Sūtra* does not elaborate upon this association. But in *Contemplations on Exhausting Delusion and Returning to the Source by Cultivating the Mysteries of Huayan* (*Xui Huayan ao zhi wang jin huan yuan guan* 修華嚴奧旨妄盡還源觀), Fazang offers the following remarks:

The ... contemplation of Indra's net is of chief and attendant manifesting (or revealing) each other. This means that one acting as chief views others acting as attendants; or perhaps one *dharma* acting as chief [views] all [other] *dharms* acting as attendants; or perhaps one body acting as chief [views] all [other] bodies acting as attendants. So one *dharma*, selected as chief, receives [the other] attendants all together, one after the other without limit. This models the nature of *dharms* as manifesting reflections one after another, each *shi* central to all [others] without limit, just as compassion and wisdom also multiply one after the other without limit. (T45.1876.640b27-640c03)

The intended meaning of Fazang's contemplation of Indra's net is difficult to interpret.

It is natural to interpret Fazang's contemplation as expressing a view known as metaphysical coherentism. Coherentist interpretations of Indra's net are especially prominent with Buddhist approaches to ecology. Here is a typical example:

In Hua-yen Buddhism we find a simile or a legend of Indra's net to show the interdependence [sic] nature of man and ecology.... The universe is a complex web of relations. Human relationships are far more important in the social context. Yet relationships of man with the ecological aspects also play a major role for human existence. Humans also have decisive reciprocal relationships with natural factors. All animate and inanimate things in the nature are relative to each other. They mutually help each other for their longer existence. Each individual human being is interlinked with others, with animals as well as with the ecosphere (Ilangkoon, 2014, 105-106).

Here is another example that more explicitly connects Indra's net with an absence of hierarchy:

We are merely one node in the endless web of life. From the perspective of Indra's Net, there is no hierarchy among the interdependent things of life (Barnhill, 1990, 21).

This approach to conceptualizing human-nature relationships typically serves to motivate more compassionate and biocentric—and so less instrumentalist and anthropocentric—relationships with the environment. The argument, in brief, is that since nothing in nature is more fundamental than any other, human needs merit no special priority over the needs of other species (see also Cook, 1977, 5–6; Kaza, 1993, 57; Thiele, 2011, 18).

The propriety of interpreting Fazang's contemplation as endorsing a species of metaphysical coherentism is unclear for several reasons. Some are exegetical. For example, insofar as coherentism rejects hierarchies of dependence whereby some individuals are more fundamental than others, why, in the preceding quotation from *Contemplations on Exhausting Delusion and Returning to the Source by Cultivating the Mysteries of Huayan*, does Fazang speak of some *dharma*s as chief, others as attendants? Other reasons are theoretical. For example, contemporary metaphysicians typically treat dependence relations among individuals as anti-symmetric. Coherentism entails, however, that some dependence relations are symmetric. The coherentist interpretation of Fazang's contemplation, accordingly, seems to violate a methodological principle of charity enjoining us to prefer interpretations that, by our lights, are more likely true than false (see Williamson, 2005, 220).

3 Analyzing Fazang's Contemplation

The central difficulty for interpreting Fazang's contemplation of Indra's net is the relative dearth of specific detail Fazang offers for the content of his contemplation. There are, fortunately, clues to Fazang's meaning in the final chapter of his *Treatise on the Five Teachings of Huayan* (*Huayan Wujiao Zhang* 華嚴五教章). The second section of the final chapter analyzes *dharma*s as dependently arisen causes (*yanqi yin men* 緣起因門). This analysis considers *dharma*s relationally, as causing and being caused by each other.³

³ Fazang declares that the analysis of *dharma*s as dependently arisen causes pertains to the realm of Samantabhadra (*Puxian jingjie* 普賢境界) (T45.1866.503a19). Those who experience this realm cognize differences and relations among *dharma*s, and they do so in ways that are free from delusion. He contrasts the realm of Samantabhadra with the realm of Mañjuśrī (*Wenshu* 文殊). Because the latter realm is inexpressible and inconceivable, those who experience this realm cognize *dharma*s only as such (or as Suchness, 眞如 *zhenru*), without mediation through concepts such as *being the cause of* or *depending upon*. Fazang maintains that the realm of Samantabhadra is epistemically prior to the realm of Mañjuśrī, because cognizing the former is a vehicle for cognizing the latter (T45.1866.503a20-25; see also Hamar 2012, 62–63). He also maintains that the realm of Mañjuśrī is ontologically prior to the realm of Samantabhadra, because he conceptualizes *dharma*s as such as the source of distinct and interdependent *dharma*s (T45.1866.499b; see also Liu 1979, 361–362.).

3.1 Analyzing Dharmas as Causes

Fazang's analysis of *dharma*s as causes involves two salient posits (see Cook, 1970, 446; Liu, 1979, 396–401). The first is that every *dharma* simultaneously has the aspect of existing or being present (*you* 有) and the aspect of absence or being empty (*kong* 空). As existing, each *dharma* appears as an individual—a particular with (spatiotemporal) boundaries that suffice well enough to demarcate it from other such particulars and thereby render it countable; and each *dharma* determines the nature of others.⁴ As empty, each *dharma* lacks any sort of intrinsic self-nature that would render its nature invulnerable to others. These dual aspects distinguish *dharma*s from sovereign selves (*ātma*), which exist but are not empty, and from mere phantasms, which are empty and do not exist.⁵

Fazang's second posit is that every *dharma* also simultaneously has the aspects of having power (*youquanli* 有全力) and lacking power (*quanwuli* 全無力). As powerful, each *dharma* takes in others, affecting others in ways beyond their control and despite their resistance. As powerless, each *dharma* is vulnerable to others, entering into them, affected by them in ways beyond its own control and despite its resistance. These dual aspects also distinguish *dharma*s from sovereign selves (*ātma*), which are powerful but not powerless, and from mere phantasms, which are powerless but not powerful.

Fazang correlates the existing aspect of *dharma*s with their aspect of having power, and the empty aspect of *dharma*s with their aspect of lacking power. The latter correlation receives support from the *Discourse on No-Self* (*Anatta-lakkhana Sutta* SN 22.59), which argues that selves are empty because they lend themselves to *duḥkha*—because they lack power to resist the results of hindrances and defilements (see Harvey, 1995, 47). The former correlation receives support from a principle that contemporary metaphysicians refer to as Alexander's Dictum, according to which power to affect others coincides with, or at least entails, existence (see Car-gile, 2003).

Fazang's analyses of *dharma*s as dual-aspect causes, and the correlations among those aspects, receive support and clarification from the substance-function hermeneutic (see Jones, 2018, 306–313).⁶ This hermeneutic pervades the Chinese

⁴ This account of *individual* follows Pradeu's except for dropping the requirement that individuals have transtemporal identity. A particular, on Pradeu's account, is "anything that can be designated through a demonstrative reference (*this* F)." See Pradeu 2010, 247.

⁵ Although Fazang conceptualizes existing and being empty as contraries, he does not conceptualize existing as ontologically committing. Insofar as *dharma*s are empty, they exist in the (ontologically committing) sense of being part of the furniture of the *dharma*-realm. They do not, however, determine the nature of others.

⁶ The potential influence of indigenous Chinese metaphysics is also worth noting. For example, according to Robin Wang, *yinyang* metaphysics conceptualizes *yin* 陰 and *yang* 陽 as interdependent and mutually inclusive, so that "even something that is strongly *yang* can be considered *yin* in some relations" (Wang 2015, 24). For example, Fazang's father has an aspect whereby he is *yang*, by virtue of being Fazang's superior; but the same person simultaneously has an aspect whereby he is *yin*, by virtue of being subordinate to the ruler. Conceptualizing things as having the dual aspects of *yang* and *yin* is akin to Fazang's conception of *dharma*s as having the dual aspects of existing and being empty. Whether this

engagement with Buddhism. Chinese Buddhists use the contrast between substance and function as a hermeneutic to avoid tendencies to treat other conceptual pairings—such as form (*rūpa*, *se* 色) and emptiness (*śūnyatā*, *kong* 空), or knowing wisdom (*prajñā*, *zhi hui* 智慧) and skillful means (*upāya*, *fang bian* 方便)—as exclusionary rather than complementary (see Muller, 2016, 115). The substance-function contrast is, accordingly, said to be nondual:

The purpose of the [substance-function] formula is to show the inseparability of two seemingly separate but in reality nondistinct things.... [T]he purpose of the [substance-function] hermeneutic device in Chinese Buddhist texts is to remove false discriminations originating from a dualistic way of thinking, as reflected in such dichotomies as subject-object, means-end, cause-effect, arising-cessation, and birth-death (Park, 1983, 36).

According to this hermeneutic, substance corresponds to that which is internal and hidden, constitutive of something's identity; and function corresponds to that which is external and visible, a manifestation of something's constitutive identity. For example, with respect to a tree, the substance is the root system, the function the trunk and branches. The contrast between substance and function is nondual, because while the root system is not identical to the trunk and branches, the tree's roots develop together with its trunk and branches (and inseparably so).

Fazang, like many other Chinese Buddhists, endorses the Madhyamikan teaching that all *dharma*s manifest as empty. He also correlates emptiness with powerlessness. Hence, when interpreted in accordance with the substance-function hermeneutic, Fazang's analysis of *dharma*s ascribes to each *dharma* a functional aspect whereby it is empty and lacking power. Fazang further correlates existing with powerfulness. Insofar as substance and function are not identical, the substance-function hermeneutic further indicates that Fazang's analysis ascribes to each *dharma* a second, substantial aspect whereby it exists and has power.

3.2 Applying Fazang's Analysis

Fazang's analysis bears directly upon the contemplation of Indra's net—so much so that his analysis almost yields an interpretation of his contemplation as a corollary. Fazang's contemplation posits that every *dharma*—every individual within Indra's net—simultaneously has the aspects of being chief (*zhu* 主) and being attendant (*ban* 伴). It is natural to interpret the chief-attendant distinction as an instance of the substance-function distinction. This interpretive maneuver does not settle which member of the chief-attendant duality corresponds with which member of the substance-function duality. But Fazang's analysis of *dharma*s as causes supports interpreting chiefs as substance and attendants as function.

Footnote 6 (continued)

similarity contributes to Fazang's conception of *dharma*s remains an open question. (For a potentially relevant discussion, see Lai 1980.).

According to Fazang's analysis, *dharma*s are substantial insofar as they have power, and having power means affecting others in ways beyond their control and despite their resistance. Chiefs have exactly this power over their attendants. This entails that being chief corresponds to the substance aspect of *dharma*s. Insofar as the different aspects of *dharma*s exclude each other, it follows that being attendant corresponds to the function aspect of *dharma*s.

Combining these correspondences with other correlations from Fazang's analysis of *dharma*s as causes yields two significant interpretive conclusions. The first is that, insofar as a *dharma* is chief, it exists and has power. The second is that, insofar as a *dharma* is an attendant, it is empty and lacks power. These conclusions indicate that Fazang speaks of some *dharma*s as chief and others as attendants because he maintains that, insofar as *dharma*s are causes, they are existing and powerful in one aspect, empty and powerless in another. Insofar as every tribe has exactly one chief, these conclusions also indicate that Fazang endorses a sort of aspectualism whereby every *dharma* by itself has a substantial aspect whereby it enacts the role of chief and another, functional aspect whereby it enacts (with others) the role of attendant.

3.3 Confirming the Application

The third section of the final chapter of Fazang's *Treatise on the Five Teachings of Huayan* provides some confirmation for this interpretation. Three passages from this section are especially salient. The first concerns the relation of identity (*ji* 即) among *dharma*s.

First: Self as existing necessitates the others lacking [existence], so that the others are identical with self. Why? The others lack self-nature, because self creates [them]. Second: Self as empty necessitates the others existing, so that self is identical with the others. Why? Because self lacks self-nature, therefore the others create [it]. (T45.1866.503b10–503b13)

The second concerns the relation of inclusion (*ru* 入)—and its converse, “taking in” (*she* 攝)—among *dharma*s.

Self having complete power as cause thereby allows it to take in the others. The others completely lacking power as cause thereby allows them to be included within (or enter into) self. Understand by contrast the others having power and self lacking power. (T45.1866.503b16–503b18)

These passages indicate that insofar as one *dharma* exists or has power, the others are empty and lack power; and that insofar as one *dharma* is empty or lacking power, the others exist and have power. The passages also indicate that the salient relations among *dharma*s are one-many (or many-one) relations rather than many-many.

A third passage connects the relations of identity and inclusion with the aspects of substance and function, respectively.

Also, by means of function subsuming substance, and so not being separate from substance, there is nothing more than the mutual inclusion of *dharma*s. By means of substance subsuming function, and so not being separate

from function, there is nothing more than the mutual identity of *dharmas*.
(T45.1866.503b21-503b23)

This passage indicates that Fazang correlates identity among *dharmas* with their substantial aspect and inclusion among *dharmas* with their functional aspect. Because Fazang also correlates identity among *dharmas* with the aspects of existing and being empty, and inclusion among *dharmas* with the aspects of having power and lacking power, it follows that *dharmas* are substantial insofar as they exist and have power, functional insofar as they are empty and lack power.

4 Deciding among Interpretations

The preceding interpretation for Fazang's contemplation of Indra's net entails that Fazang does not endorse metaphysical coherentism. Fazang endorses aspectual hierarchies among *dharmas*. Every *dharma* has an aspect whereby it enacts the role of chief and all others enact the role of attendant. But chiefs are more fundamental than attendants, because chiefs are not empty and vulnerable in the way attendants are. Hence, on Fazang's account, every *dharma* has an aspect whereby it is more fundamental than all other *dharmas*. Coherentism, however, entails that *dharmas* are always and only attendants, because it requires *dharmas* to arise in dependence upon all others and thereby precludes any one *dharma* from creating another without assistance from others. Because coherentism rejects any hierarchy of dependence whereby some individual, acting as chief, is more fundamental than others, Fazang's contemplation of Indra's net is not coherentist.

The standard alternative to metaphysical coherentism is metaphysical foundationalism. According to metaphysical foundationalism, there are hierarchies of dependence, and these hierarchies bottom out in some individual, or some collection of individuals, for which nothing is more fundamental. Fazang endorses aspectual hierarchies, and he maintains that each hierarchy bottoms out in some *dharma* that, in one aspect, is more fundamental than any other *dharma*. So Fazang's contemplation of Indra's net seems to be a sort of foundationalism—albeit an unusual, aspectual sort.

Regardless of whether foundationalism admits aspectual variants, Fazang's contemplation, according to the preceding interpretation, has the virtue of honoring the contemporary tendency to treat dependence as an anti-symmetric relation. *Dharmas* as attendants are empty and thereby depend upon another. *Dharmas* as chiefs are not empty and thereby do not depend upon others. Because Fazang maintains that the status of any *dharma* as chief or attendant is aspectual, and because he denies that there is any aspect whereby a *dharma* simultaneously enacts the roles of chief and attendant, Fazang's contemplation entails that, for any *dharma*, the aspect in which it (as attendant) depends upon another never coincides with the aspect in which others depend on it (as chief).

It remains unclear whether the preceding interpretation of Fazang's contemplation honors a principle of charity enjoining us to prefer interpretations that are, by our lights, more likely true than false. The interpretation ascribes to Fazang a sort of aspectualism, whereby every *dharma* has two distinct aspects. Aspectualism is

not, at present, a mainstream metaphysical view. But the view has received some contemporary attention (Baxter, 2018; Turner, 2014). So Fazang's contemplation provides some reason to reconsider more familiar approaches to conceptualizing the metaphysical structure of reality.

Despite these qualifications, one might object that interpreting Fazang's view as some kind of aspectualism is inconsistent with the Huayan doctrine that all things lack obstruction (*shishi wu ai* 事事無礙). This doctrine expresses, for the *dharma*-realm of dependent arising, a teaching from the *Avatamsaka Sūtra* according to which "all things are nondual, beyond duality, all equal...not distinguishing self and nonself" (Cleary 1993, 1011). There is, however, precedent for conceptualizing equality as opposed to hierarchy (see Olds, 1992, 409; Wang, 2005, 225). Hence, insofar as Fazang endorses the equality of *dharma*s, and insofar as equality precludes hierarchies of dependency, the interdependence of *dharma*s is inconsistent with supposing that each *dharma* has an aspect whereby it is more (or less) fundamental than others and so Fazang's view is better interpreted as a kind of coherentism.⁷

The preceding objection errs in supposing that equality precludes hierarchies of dependence whereby some *dharma*s are more fundamental than others. On Fazang's view, all *dharma*s are equal because each has the dual aspects of existing with power and being empty without power. These aspects are nondual, because no *dharma* has one aspect without also having the other. Moreover, *dharma*s do not obstruct each other, because one *dharma* having one aspect does not preclude other *dharma*s from also having that same aspect. But this does not preclude hierarchical relations of fundamentality among *dharma*s, because the aspect of one *dharma* whereby it exists with power correlates with the aspect of other *dharma*s whereby they are empty without power, and the aspect of one *dharma* whereby it is empty without power correlates with the aspect of other *dharma*s whereby they exist with power. If *dharma*s were to have one aspect but not the other, hierarchical relations of fundamentality among *dharma*s would preclude their equality. But Fazang is quite explicit that *dharma*s do not have one aspect to the exclusion of the other. This distinguishes his view from more traditional kinds of foundationalism. Similarly, if the aspects of *dharma*s were identical to each other, equality among *dharma*s would preclude hierarchical relations of fundamentality. But Fazang is also quite explicit that the aspect whereby a *dharma* exists with power is distinct from the aspect whereby it is empty without power. This distinguishes his view from coherentism. Ascribing two aspects to each *dharma* allows Fazang to accommodate the teaching that *dharma*s are equal. Correlating these aspects in the way he does also allows Fazang to conceptualize *dharma*s as more or less fundamental than each other.

⁷ I thank an anonymous referee for this journal for raising this objection.

5 Modeling the Interpretations

Fazang's contemplation of Indra's net secures interdependence among *dharma*s through a sort of aspectualism. Each *dharma*, in Fazang's contemplation, has one aspect of existing and having power whereby it "takes in" (*she* 攝) all other *dharma*s. This is the sense in which each *dharma* is more fundamental than others and acts as a chief to those others. Each *dharma*, in Fazang's contemplation, also has another aspect of being empty and lacking power whereby it "enters into" (*ru* 入) other *dharma*s as those others enact their own power. This is the sense in which each *dharma* is less fundamental than others and acts as an attendant to those others. Contemplating every *dharma* as having these dual aspects thereby models each *dharma* as depending upon all other *dharma*s.

For the sake of forestalling a concern that this aspectual interpretation of Fazang's metaphysics is incoherent or not substantially different from the coherentist interpretation, I use a formal modeling technique to demonstrate salient differences among the interpretations. I follow Priest's strategy of providing set-theoretic models for each interpretation (Priest, 2009, 474–474; Priest, 2018b, 117–120).

Priest offers a set-theoretic model for the coherentist interpretation of interdependent arising. The model posits a non-empty set of objects X_0 and a set of binary relations ρ among these objects. Priest supposes that, for any distinct objects x and y in X_0 , there is a relation instance R_i in ρ that extends from x to y . Priest denies that the sets X_0 and ρ suffice as a model of interdependent arising. His reasons are two-fold. First, he maintains that each object x in X_0 has an intrinsic self-nature. Second, he maintains that each R_i in ρ also has an intrinsic self-nature. Insofar as nothing in a model for interdependent arising should have an intrinsic self-nature, it follows that the members of X_0 and ρ are inappropriate for such a model. Priest thereby refines his model. For example, for each object x in X_0 , he defines the locus of x as the set of relation instances of ρ that extend from x to some object y in X_0 . The locus of each object in X_0 , so defined, is nothing more than a location in a field of relations. Priest takes these loci, rather than the objects and relations from which they are constructed, as models of interdependent *dharma*s. (Priest, 2009 pursues a similar strategy for the instances of ρ , defining a correlate for each that is also nothing more than a location in a field of relations. Priest takes these correlates to be models of relations among interdependent *dharma*s.)

Priest's justification for supposing that the members of X_0 and ρ have intrinsic self-natures depends upon his notion of relational existence. Something has relational existence, according to Priest, if and only if there is nothing more to its existence than bearing certain relations to others (Priest, 2009, 467–468). Priest interprets the doctrine of interdependent arising as the view that all *dharma*s have relational existence. His reasoning, in brief, seems to invoke two premises: first, that interdependently arising *dharma*s lack intrinsic self-nature; second, that whatever lacks intrinsic self-nature is nothing more than a locus in a field of relations. He argues, as a corollary, that the members of X_0 and ρ lack relational existence. He justifies the corollary by example.

Priest's example involves a model with three objects a, b, c and two relations between them, such that $X_0 = \{a, b, c\}$ and $\rho = \{R_0, R_1\}$, and such that a bears R_1 to b and R_0 to c , b bears R_0 to a , and c bears R_1 to itself (2009, 473). He represents this model as a directed graph, where superscripted arrows denote relations from ρ . (See Fig. 1.)

Priest offers a terse justification for why the constituents of this model—the members of X_0 and ρ —lack relational existence. The justification focuses on the relations rather than the objects:

Each R_i [in ρ] has a collection of instances, $\langle R_i \rangle$. The standard way to think of these is as sets of ordered pairs—or, actually, ordered triples, the third member indexing the relation. Thus...the members of $\langle R_0 \rangle$ would be $\langle b, a, 0 \rangle$ and $\langle a, c, 0 \rangle$, and those of $\langle R_1 \rangle$ would be $\langle a, b, 1 \rangle$ and $\langle c, c, 1 \rangle$. This, of course, is already to think of the objects in X_0 as existing in themselves (2009, 473).

Priest's justification strikes me as incomplete. Nothing in set theory forbids stipulating that the objects in X_0 lack intrinsic self-natures, nor that they have relational existence. The axioms of, say, Zermelo-Fraenkel set theory concern relations of numerical identity, set membership, and implication among variables of an arbitrary domain. They do not, however, impose restrictions upon the nature of those variables. Moreover, relations are relations among variables. These variables lack relational existence only insofar as they are independent variables. But nothing in Priest's model requires supposing that the objects in X_0 are independent variables.

I suspect that Priest's aim in constructing a set-theoretic model of interdependent arising is to model, rather than stipulate, the way in which interdependent *dharma*s lack intrinsic self-natures. Achieving this aim requires constructing a model that exhibits its constituent objects as interdependent. Priest's contention that interdependent *dharma*s have relational existence then motivates the particular construction he pursues. However, the aspectual interpretation I favor for Fazang's doctrine of interdependent arising *denies* that *dharma*s have relational existence. On the aspectual interpretation,

Fig. 1 Priest's graph-theoretic approach to modeling objects and relations. (Created by author in Microsoft PowerPoint. Adapted from Priest, 2009, 431, Fig. 1.)

Fig. 2 Transparency sheet wherein objects b and c depend upon object a . The filled circle represents an existing object; the open circles, objects that are empty. Directed arrows represent relations whereby the object at the head depends upon the object at the tail. (Created by author in Microsoft PowerPoint.)

each *dharma* has an aspect whereby it is empty (and thereby lacking intrinsic self-nature) but also another aspect whereby it exists. Because no *dharma*, insofar as it exists, depends upon any other *dharma*, every *dharma* has an aspect whereby it lacks relational existence. I propose, accordingly, to model the contrast between aspectual and coherentist interpretation of Fazang's doctrine by positing a non-empty set of objects X_I such that the members of X_I lack intrinsic self-nature.

I conceptualize each object in X_I as having one aspect whereby it exists and another aspect whereby it is empty (of intrinsic self-nature). Each object in X_I thereby corresponds to a *dharma* in the *dharma*-realm of dependent arising as Fazang understands it. I also posit a relation δ such that x_i in X_I bears δ toward x_j in X_I if and only if x_i depends upon x_j . For the sake of modeling the dual aspects of each object in X_I , I posit a set of "sheets" Σ such that, for each object x_i in X_I , there is one and only one sheet σ_i in Σ , where x_i is said to ground the sheet. Each sheet corresponds to the aspect of its grounding object whereby the object exists. Each sheet σ_i in Σ , grounded in x_i from X_I , consists of a set of objects from X_I and a set of relation instances from δ such that, for all $x_j \neq x_i$ in X_I , $\delta(x_j, x_i)$, $\neg\delta(x_i, x_j)$, and for any $x_k \neq x_i$ in X_I , $\neg\delta(x_j, x_k)$. That is, each sheet is such that all of its non-grounding objects depend upon its grounding object and there are no other relations of dependence. Insofar as the non-grounding objects for each sheet depend upon the sheet's grounding object, they are empty of intrinsic self-nature. Because, for every object in X_I , there is one sheet in which it is a grounding object and another (in fact many) in which it is a non-grounding object, it follows that every object in X_I has an aspect whereby it exists and another whereby it is empty.

I find it useful to visualize the aspectual model of interdependent arising as a stack of marked transparency sheets. Transparency sheets are an old technology. Each is a transparent page, made of flexible material, onto which figures can be drawn. When placed on an overhead projector, the projector displays the drawing without interference from the sheet. Each transparency sheet corresponds to a sheet

Fig. 3 **a** A stack of three transparency sheets, each with one existing object and two empty ones. **b** A projection of the three sheets. (Created by author in Microsoft PowerPoint.)

from Σ , and the markings on a transparency sheet correspond to a directed graph drawn according to the following instructions: each object in X_I receives a "dot" on the transparency sheet, and each relation instance from δ for a sheet receives an "arrow" drawn from the dot for the sheet's grounding object to the dot for one of the sheet's non-grounding objects. If $X_I = \{a, b, c\}$, the transparency for sheet σ_a would be drawn as a directed graph. (See Fig. 2.)

If one were to stack the transparency sheets drawn for sheets σ_a , σ_b , and σ_c one on top of the other and project the stack through an overhead projector, the projection would depict an image wherein there is an "arrow" between each "dot" and every other. (See Fig. 3.)

Interpreting the "dots" as *dharms* and the arrows as relations of dependence, the result is an image depicting interdependence among the *dharms* (Fig. 3b). The basis for the image—the stack of transparency sheets (Fig. 3a)—then depicts Fazang's model of interdependence in the *dharma*-realm of dependent arising, with each transparency sheet depicting an aspect of the *dharma*-realm whereby one *dharma* exists and the others are empty.

Consider, by contrast to this aspectual model of interdependent arising, a coherentist model. Like the aspectual model, this model contains the set of objects X_I and the relation δ . Unlike the aspectual model, this model contains only one sheet σ in Σ , such that $\delta(x_i, x_j)$ for all x_i and x_j in X_I . (Or, if δ is neither reflexive nor transitive, σ is such that $\delta(x_i, x_i)$ for any distinct x_i and x_j in X_I .) Visualizing this model with transparency sheets involves one transparency sheet marked with "dots" for each object and "arrows" for each instance of σ . The markings that result exactly trace the image projected by the stack of transparency sheets associated with the aspectual model of interdependent arising (Fig. 3b). The central difference between this model and its aspectualist competitor is that the aspectual model represents, in a way the coherentist model does not, Fazang's contention that every *dharma* has two aspects.

There is a way to articulate this difference formally using Bayesian networks. A Bayesian network consists of a directed graph and a probability distribution. On the aspectual interpretation of interdependence, the *dharma*-realm is a "stack" of Bayesian networks; on the coherentist interpretation, it is just one network. On both interpretations, the graph for a network is the graph specified by the sheet for a network

(and depicted on the associated transparency sheet); and the probability distribution for each network is as follows. Each object has a (prior) probability for arising equal to p . Each has a (prior) probability for not arising equal to $q = 1 - p$. Further, objects x_i and x_j in X_I are such that the conditional probability of x_i given x_j equals 1 whenever x_i depends upon x_j . Given these distributions, it is straightforward to prove that each network is such that all of its objects have the same (prior) probability, and that this probability is greater than 0 and less than 1. It is also straightforward to prove that the aspectual model, but not the coherentist one, allows some (non-grounding) objects to be (marginally) independent of each other and to be such that the probability of one given the other is less than 1. So the aspectual interpretation I favor differs from the coherentist interpretation in the sort of (probabilistic) independencies and the values for conditional probabilities it permits.

6 Concluding Remarks

Aspectualism and coherentism offer competing interpretations of interdependence. Because the differences among these interpretations are subtle, consider an analogy that likens *dharmas* to colors. For the sake of simplicity, suppose that there are exactly six color categories: blue, cyan, green, magenta, red, and yellow. Then, just as one might inquire into relations of metaphysical dependence among *dharmas*, one might inquire into relations of color dependence among these categories. Central to such an inquiry is the question: Which, if any, of the colors are primary, existing independently of other colors; and which are secondary, existing in dependence on primary colors as mixtures of those colors? One answer to this question models red, green, and blue as primary colors, cyan as a mixture of green and blue, magenta as a mixture of blue and red, and yellow as a mixture of red and green (see Pridmore, 1991, 123). A different answer to the same question models cyan, magenta, and yellow as primary colors, blue as a mixture of magenta and cyan, green as a mixture of cyan and yellow, and red as a mixture of yellow and magenta (see Pridmore, 1991, 122). A foundationalist interpretation of color dependency allows at most one of these models to be correct. By contrast, a coherentist interpretation rejects both models in favor of an alternative whereby no color is primary and, instead, each color is a mixture of others.

Like the coherentist interpretation of color dependency, an aspectual interpretation maintains that each color is a mixture of other colors. However, unlike the coherentist interpretation, the aspectual interpretation also maintains that each color is primary. Rather than reject the models of color dependency that treat three colors as primary and three others as secondary, the aspectual interpretation of color dependency maintains that both models are correct by virtue of identifying different aspects of each color. For example, the aspectual interpretation maintains that there is one aspect of red wherein it is primary, another aspect of red whereby it is a mixture of yellow and magenta. Aspectualism about color dependency thereby rejects the foundationalist presupposition that at most one model of color dependency is correct, and it also rejects the coherentist contention that there are no primary colors. By analogy, aspectualism about metaphysical

dependence rejects the foundationalist presupposition that there is exactly one privileged class of fundamental *dharma*s, and it rejects the coherentist contention that no *dharma* is more fundamental than any other. Each *dharma* has one aspect whereby, as chief, it is more fundamental than other *dharma*s. Each also has another aspect whereby, as attendant, it depends upon other *dharma*s.

I have argued that the aspectual interpretation of interdependence better fits Fazang's views about interdependent arising within the realm of *dharma*s. Because Fazang ascribes to *dharma*s the dual roles of chief and attendant, his conception of interdependence involves a sort of hierarchy that is consistent with aspectualism but not coherentism. The aspectual interpretation also preserves the anti-symmetry of the dependence relation, while the coherentist interpretation does not. These considerations undermine the contention that Fazang's metaphysics provides a viable example of metaphysical coherentism.

I have provided, as well, a set-theoretic model (and graphical illustration) for the aspectual interpretation. The model formalizes some key differences between the aspectual interpretation and its coherentist competitor. It also allays the concern that the aspectual interpretation is incoherent, by demonstrating that the interpretation supports a self-consistent model of metaphysical reality. Because contemporary discussions of metaphysical foundationalism tend not to consider aspectual variations, this expands the conceptual space for metaphysical inquiry.

A central task for the history of philosophy is to facilitate thinking differently about problems of enduring philosophical relevance (see Antognazza, 2015). The aspectual interpretation for Fazang's contemplation of Indra's net achieves this objective. It provides a view about the structure of reality that combines the hierarchical dependencies of foundationalism with the equalized statuses of coherentism, albeit without collapsing to either of these more familiar alternatives. The apparent dichotomy between hierarchy and equality drives many long-standing debates, including debates about the relations between *yang* and *yin*, ruler and subject, man and woman, cause and condition. The aspectual interpretation of Fazang's contemplation thereby reveals an approach to resolving these debates without prioritizing hierarchy over equality or equality over hierarchy.

Data Availability Not applicable.

Code Availability Not applicable.

Declarations

Conflicts of Interest None.

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