Hui Shi's Monism: A Russellian Interpretation

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A dilemma in interpreting Hui Shi's ten theses is that they are understandable only in the light of relativistic pluralism, which conflicts with his own main theme of absolutistic monism. However, after a careful investigation of the evolutionary paths of the tense and aspect uses of the temporal adverb *fang* 方 in classical Chinese language, a construction argument can be made for *fang sheng fang si* 方生方死. But before presenting this construction argument, we first introduce the dilemma in interpreting the ten theses.

I. The Dilemma in Interpreting the Ten Theses

Hui Shi's ten theses are listed as follows:

1. The ultimately great has no outside, call it the Great One. The ultimately small has no inside, call it the Small One.
2. The dimensionless cannot be accumulated, its size is a thousand miles.
3. Heaven is as low as earth, mountains are level with marshes.
4. Just as the sun is at noon, it is declining. Just as things are alive, they are dying.
5. The same on a large scale but different from what is the same on a small scale, this is called "same and different on a small scale." The myriad things all being the same or all being different, this is called "same and different on a large scale."
6. The south has no limit yet has a limit.
7. Today go to Yue but arrive yesterday.
8. Linked rings can be disconnected.
9. I know the center of the world. It is north of Yan [the northernmost state] and south of Yue [the southernmost].
10. Universally care for the myriad things. Heaven and earth are one body.[1]

Since there are no textual materials left that show how Hui Shi himself argues for the ten theses, it is not clear whether the order of the ten is random or deliberately organized. But it is widely accepted that Thesis 10 is central: the monism revealed in it is the main theme of all the ten theses.[2] However, even if Thesis 10 is assumed to be the final conclusion, there is still controversy between two approaches concerning the validity of the monistic interpretation: one is metaphysical and the other is cognitive. On the one hand, the metaphysical approach defends the monistic interpretation in the way that Thesis 10 is presumably justified in terms of *reductio ad absurdum*: there are various distinctions, which all lead to contradictions or paradoxes, so that it is not reasonable to make any distinction; rather, it would be better to view the myriad things, including heaven and earth, as an inseparable unity. One representative of the metaphysical approach is A. C. Graham. On the other hand, the cognitive approach admittedly agrees with monism as the main theme, but denies that any available argument for Thesis 10 would be valid: in view of perspectives or contexts, any distinction is relative, so one distinction has no privilege over another, but it is implausible or even impossible for Hui Shi to leap from pluralism in the cognitive sense to monism in the metaphysical sense. One representative of the cognitive approach is Chad Hansen. However, in our view, it is hardly satisfying for both approaches to provide a coherent interpretation for the ten theses.

According to Graham, the validity of monism is defended by rejecting the plausibility of pluralism, because it is wrong to make any division or distinction in the pluralistic sense, which unavoidably leads to a series of paradoxes or contradictions with respect to time and space.[3] His argument by *reductio ad absurdum* shows not only how Hui Shi learns what is right from what is wrong but also how he returns from the abyss of relativism to the peak of absolutism. That is, according to Graham's interpretation of Hui Shi, distinctions are superficial, illusory, and unreal, but the unity is genuine, substantial, and real. Thus, it is incorrect to make any distinction, while it is correct to grasp everything as a unity. However, Hui Shi does not express any negative attitude toward various kinds of distinctions even in an implicit way. That is, the final conclusion of Hui Shi seems to conflict with common sense, according to which certain distinctions are accepted by default, but there is no textual evidence showing whether he takes a positive or a negative position on common sense. Therefore, the argument by *reductio ad absurdum* is not sufficient for the reasoning from relativistic pluralism to absolutistic monism.

An alternative solution might be the following: Hui Shi recognizes that any distinction is relative, but the proposition "any distinction is relative" itself is not relative but absolute. This is similar to the semantic version of an argument from Descartes' self-doubting: although I am doubting everything, I cannot be doubting the proposition that "I am doubting

everything." We call this the *reflection argument*, whose general form is as follows:

> A predicate (i.e., "relative" or "doubting") occurs positively in a proposition (i.e., "any distinction is relative" or "I am doubting everything"), but the same predicate could only negatively occur again (i.e., "not relative" or "not doubting") in a sentence where the same proposition as a whole is predicated (i.e., "the proposition 'any distinction is relative' itself is not relative" or "I cannot be doubting the proposition that 'I am doubting everything'").

Here, at least two levels should be distinguished in the semantic or epistemic sense: an ordinary level and a meta-level. For Hui Shi, the ordinary level is "any distinction is relative," while the meta-level is "the proposition 'any distinction is relative' itself is not relative but absolute"; for Descartes, the ordinary level is "I am doubting everything," while the meta-level is "I cannot be doubting the proposition that 'I am doubting everything'." However, in our view, the reflection argument also fails to show how Hui Shi leaps from relativistic pluralism to absolutistic monism. Since any distinction is a kind of cognitive schema or behavior pattern, our making of such a distinction is relative to a certain purpose, standard, or background; thus, one distinction has no absolute privilege over another. But the making of no distinction is also a kind of cognitive schema or behavior pattern, which in turn has no absolute privilege over the making of a distinction. That is, even if the ten theses admittedly show in the ordinary level that any distinction has no absolute privilege, this does not imply in the meta-level that the making of no distinction has absolute privilege over the making of a distinction. In other words, there is no sufficient reason why Hui Shi ascends from the ordinary level of making a distinction to the meta-level of making no distinction.

Even worse, the cognitive dimension in the reflection argument disastrously leads to what Chad Hansen calls "verification fallacy":[4] if the reflection argument holds, then it presupposes that a distinction exists only if one knows such a distinction (or equivalently that if a distinction exists then one definitely knows such a distinction). But a counter-example immediately arises from a very intuitive idea that there are many things we do not know and thus it is unreasonable for us to deny their possible existence. Thus, if Hui Shi had inferred the conclusion "no distinction is ultimately real" from the premise "I do not know which distinction is ultimately real," then he would be confused about the difference between what is grasped in the cognitive sense and what really exists in the metaphysical sense.

Therefore, a dilemma in the interpretation of the ten theses is as follows. On the one hand, if the ten theses are understandable and coherent, then any interpretation has to appeal to the cognitive dimension, involving relativism or pluralism in terms of perspectives or contexts. On the other hand, the monistic theme in Thesis 10 could hardly be consistent or integrated with any relativistic or pluralistic interpretation. That is, it is

difficult, at least from the text itself of the ten theses, to fill in the gap between metaphysical (or absolutistic) monism and epistemic (or relativistic) pluralism. As we have shown, neither *reductio ad absurdum* nor the reflection argument is sufficient for the leap from relativistic pluralism to absolutistic monism. We will provide a new argument to save Hui Shi from such a dilemma. In the following, we do not intend to provide coherent interpretations for each thesis but primarily focus on Thesis 4, since the meaning of *fang* 方 in *fang zhong fang ni* 方中方睨 and *fang sheng fang si* 方生方死 deserves our special attention in the classical Chinese language.

II. The Meaning of Fang *and Its Tense and Aspect Uses*

The key to the interpretation of *fang sheng fang si* 方生方死 is understanding the meaning of the Chinese character for *fang*. According to Wang Jihong and Chen Qianrui,[5] there are, in the literature, at least three ways to interpret *fang* in the ten theses of Hui Shi:

(A) *Fang* deals with states, which is close to a monistic interpretation;
(B) *Fang* deals with activities, which is close to a pluralistic interpretation;
(C) *Fang* deals with events, which seems to have a balance between a monistic interpretation and a pluralistic one.

According to (A), *fang* means that something is in a certain state. For example, the interpretation of Thesis 4 by Cheng Xuanying could be translated as follows:

> If the sun in the west is called "the middle," whereas that in the east is called "the side," then there is neither the middle nor the side. The relation between the middle and the side is similar to that between life and death: the living regards death as the end, whereas the dead regards life as the end. As for the sun, there is no distinction between the middle and the side; that being the case, as for things, there is no distinction between life and death as well.[6]

That is, the sun could be in the state of the middle and it could also be in the state of the side; a thing could be in the state of life and it could also be in the state of death. There is no distinction between those two states.

According to (B), *fang* means that actions or motions take place simultaneously. For example, the interpretation of Thesis 4 by Yang Liuqiao could be translated as follows:

> The sun is staying in the middle, but, at the same time, it is moving sideways; all things are growing, but, at the same time, they are dying.[7]

The difference between (A) and (B) is that, according to (A), the adverb *fang* modifies verbs as states, while, according to (B), *fang* modifies verbs as activities. According to (C), *fang* means the successive occurrence of two events. For example, the interpretation of Thesis 4 by Lu Deming could be translated as follows:

> When one says that the falling sun is in the middle (i.e., it is at noon), it is becoming the afternoon; when one says that it is becoming the afternoon, it is becoming the evening; when one says that it is becoming the evening, the rising sun is at the side (i.e. it is in the morning). Thus, it is an endless cycle from the morning (rising or the middle) to the evening (falling or the side) and from the evening to the morning, where the beginning follows the end and the end follows the beginning. Similarly, Life and death also form an endless cycle.[8]

Hu Shi also explains Thesis 4 in a similar way:

> Any temporal division is not a real distinction but one in practical application . . . . When one sees the sun in the middle, it is falling to the side; when one finds that it is at present time, it is in the past.[9]

That is, two events (or states of affairs) in opposition are neutralized in the whole cyclic process.

However, none of the interpretations above could coherently reconcile the conflict between relativistic pluralism and absolutistic monism. Admittedly, a monistic interpretation is preferred in (A), since there is no difference between the states of life and death. But, after all, anyone can tell the difference between life and death: (A) does not further illustrate how two contrary states could be identified as (or internalized into) one and the same state; there is still the question why one distinguishes life and death in the first place if there is no difference between them at all.

On the contrary, a pluralistic interpretation is preferred in (B): both life and death have a relative sense; the activities of living and dying are externally combined together in terms of *fang* as "simultaneity." However, (B) fails to explain how to view one and the same activity as both living and dying internally in a uniform manner; if time is a potential candidate for such a unified frame of reference, then the question is still open as to how to explain the genesis of a unified temporal sequence.

At first sight, (C) seems more moderate than (A) and (B). (C) is different from (A): the emphasis on events rather than states makes it unnecessary for (C) to take the burden, as in (A), of reconciling two contrary states of life and death. Meanwhile, (C) is also different from (B): the emphasis on events rather than activities explicitly presents in (C) a temporal frame of reference that is presupposed without proper justification in (B). However, (C) does not provide sufficient grounds for the leap from relativistic pluralism to absolutistic monism. According to (C), life and death are regarded as successive events; this only means that two different events take place in a temporal sequence with one following another, where the continuity between them is due to the shift of perspectives; but this does not account for how these events could necessarily form a unified temporal frame of reference in their succession. That is, it remains doubtful how the succession itself could constitute a unified temporal sequence.

In our view, rather than isolate the exact meaning of the Chinese character *fang* 方, it would be better to investigate the evolution of its meaning in classical Chinese language to reconstruct Hui Shi's arguments coherently. The adverb *fang*, which modifies a verb, is closely related grammatically to tenses and aspects. Tense refers to the time at which an event takes place, including the present tense, the past tense, and the future tense; aspect refers to the different ways of viewing the internal temporal constituency of a situation, including the progressive aspect and the perfective aspect. In English, the present tense is expressed by the original form of a verb (e.g., "I play table tennis"), the past tense by (usually) a verb plus "-ed" (e.g., I played table tennis), and the future tense by a combination of an auxiliary (shall or will) with the infinitive of a verb (e.g., I will play table tennis). The progressive aspect is expressed by a combination of a copula with a verb plus "-ing" (e.g., I am playing table tennis) and the perfective aspect by an auxiliary (have or has) with the past participle of a verb (e.g., I have played table tennis). Since Chinese characters are logograms, they cannot express tenses and aspects by simply altering word endings as in a phonogram language such as English. However, Chinese characters are able to express tenses and aspects as well by converting content words into adverbs such as *zhe* 着, *liao* 了, or *guo* 过. The *fang* 方 in *fang sheng fang si* 方生方死 is just such an adverb related to tenses and aspects.

Based on the history of the Chinese language and the literature database of classical Chinese, Wang and Chen anchor the original meaning or literal sense of *fang* 方 as "parallel" (*bing* 并/併), from which the meanings of *fang* as "together" or "at the same time" are evolved by converting a noun into an adverb. For example,

虐威庶戮方告无辜于上 (尚书·吕刑)

The tortured and the abused *appealed at the same time* to God for their innocence.

Wang and Chen also articulate three meanings of *fang* related to tenses and aspects.[10] First, *fang* means state duration or activity in progress, which is equivalent to "being or doing" in English. The corresponding grammatical category of state duration is *generalized resultative*, which, in linguistics, is a form that expresses in an extended sense that something or someone has undergone a change in a state as the result of the completion of an event. For example,

国家方危, 诸侯方贰, 将以袭敌, 不亦难乎 (左传·定公四年)

The state *is being in danger* and the princes *are being disloyal*; if we attacked the enemy under such a situation, it would be quite difficult.

The corresponding category of activity in progress is *dynamic progressive*, which is a grammatical aspect that expresses, in the dynamic way, an incomplete action ("to do") or a state ("to be") in progress at a specific time. For example,

驷良方争, 未知所成 (左传·襄公三十年)

House Si *is rivaling* House Liang; I do not know how to make a mediation.

Second, *fang* means that an event happened not very long ago, which is equivalent to "just now" in English. Its corresponding category is *perfect of recent past*, which is a grammatical combination of the past tense and the perfective aspect used to express a past event that happened recently and has present consequences. For example,

方诛商鞅, 疾辩士, 弗用 (史记·苏秦列传)

Shang Yang *was just executed* and the sophists were detested; thus, Su Qin was unemployed in Qin.

Third, *fang* means that an event will happen in a short while, which is equivalent to "be about to" in English. Its corresponding category is *immediate future*, which is a verb form that generally marks an event as not having happened yet but is expected to happen in the immediate future. For example,

言念君子, 温其在邑, 方何为期, 胡然我念之 (诗经·秦风·小戎)

I miss my husband and remember his warmth at home in the city. Is he *going to come back soon*? I am thinking of him all the time.

Under the framework of linguistic typology, Wang and Chen also propose three evolutionary paths for the classification of the tense and aspect uses of *fang*:[11]

(a) The meaning of activity in progress (dynamic progressive) is evolved from that of state duration (generalized resultative);
(b) The meaning of an event that happens not very long ago (perfect of recent past) is evolved from that of state duration (generalized resultative);
(c) The meaning of an event that will happen in a short while (immediate future) is evolved from that of activity in progress (dynamic progressive).

According to Wang and Chen, the evidence for (a) is as follows: the word frequency of *fang* as "state duration" is much higher in classical Chinese literature than that of *fang* as "activity in progress"; thus the usage of *fang* as modifying a dynamic verb is evolved from that of *fang* as modifying a stative verb. The reason for (b) is mainly as follows: in classical Chinese, the usage

of *fang* as perfective is much closer to that of *fang* as resultative (this is a common phenomenon in the Chinese language: e.g., the Chinese character *si* 死 has both the meaning of "die" as perfective and that of "be dead" as resultative). As for (c), when the dynamic verb modified by *fang* (dynamic progressive) is combined with a sentence expressing a purpose, such a verb has the aspect use of immediate future; this case is similar to that in the English sentence "I am going to play table tennis" (progessive), considered as the future tense.

As we have shown, by the discrimination of its meanings, *fang* could be better interpreted as the successive occurrence of two events; and such an interpretation makes explicit the temporal dimension involved in *fang*, which in a narrative structure provides a temporal frame of reference for any two events that happen with one following the other. However, even a successive relation such as "first in the morning and then in the afternoon" is not sufficient for justifying the reasoning from pluralism to monism, since different kinds of successive relations from different perspectives can hardly in a natural way form a timeline in one single dimension. But such a timeline is better presented in the evolutionary paths of the tense and aspect uses of *fang*. The evolutionary path from generalized resultative to dynamic progressive shows the shift from the external perspective to the internal one, since a resultative expression indicates the completeness of an event whose openness, from the external perspective, is shut down for the moment, while a progressive expression indicates an ongoing experience about an event that, from the internal perspective, is possibly open to various alternative results. The evolutionary path from generalized resultative to perfect of recent past shows the perspective shift from the present to the past; the evolutionary path from dynamic progressive to immediate future shows the perspective shift from the present to the future. That is, one traces the present back to the past and projects the present to the future so that this very moment is extended into a timeline.

However, one single, exact timeline is not necessarily developed from various perspectives on an evolutionary path. An object is similar to an event in the sense that the former has a distinct spatial boundary, while the latter has a distinct temporal boundary. However, under certain circum- stances, such boundaries are not sufficiently clearly delineated: for an object such as a heap of wheat, one grain of wheat more or less does not make a difference in the extent of a heap; similarly, for an event such as washing dishes, there is no exact starting point, since that could be the moment when the kitchen is entered, the moment when the water tap is turned on, or the moment when the detergent is used. Such a vague phenomenon has its origin in one's tolerance intuition of everyday life. The evolutionary paths of *fang* potentially reveal the temporal structure of past-present-future, but, in relying only on shifts of perspective, one fails both (a) to grasp an exact moment or instant and (b) to extend the past-present-future structure into the

exact mathematical construction of a temporal unity. As for (a), when one says that it is now exactly eight o'clock, one can come to the conclusion that it is now *not* exactly eight o'clock; thus, it is difficult for one to grasp the exact moment of eight o'clock in ordinary discourse. As for (b), it may be the case that the past-present structure forms one timeline while the present-future structure forms another; thus, it is difficult to place various instants into a unique temporal axis.

III. A Russellian Reconstruction of Hui Shi's Argument

We propose a construction argument to bridge the gap between relativism and absolutism, between pluralism and monism, and between epistemology and metaphysics in Hui Shi's ten theses. The so-called construction argument proposal is to mathematically construct an equivalence class so that any two elements *a* and *b* belong to the same equivalence class if and only if *a* and *b* stand in a certain equivalence relation.

The method of equivalence relation plays an important role in the early development of analytical philosophy; examples are Frege's definition of numbers by the equinumerosity relation between concepts,[12] Russell's construction of time by the simultaneity relation between events,[13] and Carnap's logical construction of the world by the relation of recollection of similarity between elementary experiences.[14] In particular, we find that Russell's mathematical construction of time is very helpful for providing a coherent interpretation for Hui Shi's *fang sheng fang si* 方生方死. Actually, Thierry Lucas also proposes an interpretation of Hui Shi's ten theses in terms of equivalence relations;[15] we will make a comparison between his interpretation and ours later.

Russell's construction begins with the question of how an external or physical world with stability and exactness is constructed from one's sense data or private world with instantaneity and vagueness. According to Russell, different features or aspects of an object could be grasped from different perspectives:

> Given an object in one perspective, from the system of all the objects correlated with it in all the perspectives; that system may be identified with the momentary common-sense "thing." Thus an aspect of a "thing" is a member of the system of aspects which is the "thing" at that moment. . . . All the aspects of a thing are real, whereas the thing is a merely logical construction.[16]

That is, what is real in the cognitive sense is actually the sense data or what one is acquainted with by sense perception, but the sense data from different perspectives present different aspects of one and the same thing, where those aspects stand in opposition or battle against each other for their own superiority; however, we may define a thing as a collection of those aspects that share great

similarities (or proximities) with one another, so a thing is not primitive in the cognitive sense but rather the result of logical construction.

Thus, according to Russell, "a 'thing' will be defined as a certain series of aspects, namely those which would commonly be said to be of the thing."[17] We illustrate this definition by an example from Russell:

> Consider, say, a wall-paper which fades in the course of years. It is an effort not to conceive of it as one "thing" whose colour is slightly different at one time from what it is at another. But what do we really know about it? We know that under suitable circumstances—i.e. when we are, as is said, "in the room"—we perceive certain colours in a certain pattern: not always precisely the same colours, but sufficiently similar to feel familiar. If we can state the laws according to which the colour varies, we can state all that is empirically verifiable; the assumption that there is a constant entity, the wall-paper, which "has" these various colours at various times, is a piece of gratuitous metaphysics. We may, if we like, define the wall-paper as the series of its aspects. These are collected together by the same motives which led us to regard the wall-paper as one thing, namely a combination of sensible continuity and causal connection.[18]

That is, it is by all means "a piece of gratuitous metaphysics" to assume a wallpaper, whose color slowly fades away, as one and the same entity at different points in time. Certainly, one could attempt to collect the series of different aspects of the wallpaper as one thing, but only through "a combination of sensible continuity and casual connection" could one actually do that. In this way, Russell defines particles, points, and instants, from which permanent things, a single space, and a single time are constructed. As for time, Russell holds that what one directly grasps is not instants but events; that is, in the cognitive sense, events are primitive, while instants are derivative. It is not by instants that the boundary of an event is measured, but it is rather in terms of events that instants are exactly defined, and thus a temporal sequence is logically constructed.

As we have shown, an instant is an exact time point (that is, an instant is not influenced by perspectives or contexts, and the happening of an event could be indexed by instants) while the boundary of an event is vague (that is, one and the same event may have different boundaries from various perspectives or in various contexts). However, in spite of the vague phenomena, one can still roughly determine the "earlier," "simultaneous," and "later" relations between any two events. The simultaneity relation between two events is also an overlapping between them in the temporal dimension. If one could collect as a group all events that happen at the same time so that any two events inside the group are simultaneous with each other but no such event is simultaneous with any one event outside the group, then we can define an instant as such a group of events. Moreover, if the instants defined in this way have relations such as anti-

symmetry, transitivity, totality, and compactness, then these events constitute a single temporal axis.[19]

We will illustrate Russell's construction of time by an example. Let a, b, c, d, and e be five events. Assume that their precedence relations are as follows: a precedes c, a precedes d, a precedes e, b precedes e, and c precedes e. Assume again that their overlapping relations are as follows: a overlaps with b, b overlaps with c, b overlaps with d, c overlaps with d, and d overlaps with e. Then three instants can be defined from these events as follows: the instant i_1 can be defined as the set of events $\{a, b\}$, the instant i_2 as $\{b, c, d\}$, and the instant i_3 as $\{d, e\}$. Each instant is a maximal set of pairwise overlapping events. Obviously, these instants satisfy the following linear order: $i_1 < i_2 < i_3$. Here, $i_1 < i_2$, because the event a as an element belongs to i_1 as a set, c belongs to i_2, and a precedes c; $i_2 < i_3$, because c belongs to i_2, e belongs to i_3, and c precedes e; $i_1 < i_3$, because a belongs to i_1, e belongs to i_3, and a precedes e (see Figure 1).[20]

Now, we turn back to the Chinese sentences *fang zhong fang ni* 方中方 睨 and *fang sheng fang si* 方生方死, which could be better translated as follows:

> As for the sun, its rising and falling as two events happen with one following the other (or at the same time); there is at least an instant belonging to the overlap of these events
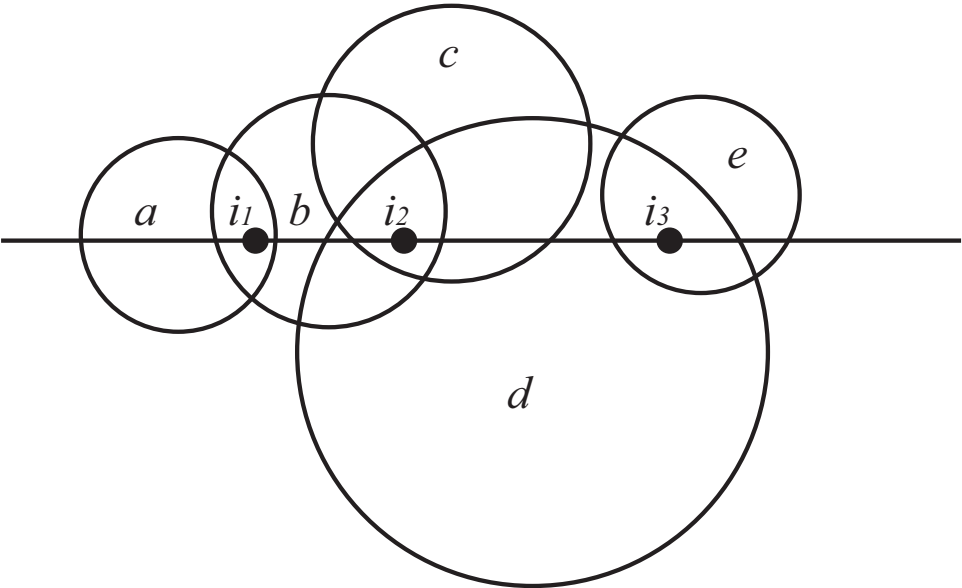

Fig. 1. An example of temporal construction.

> As for a thing, its life and death as two events happen with one following the other (or at the same time); there is at least an instant belonging to the overlap of these events.

More generally, the schema *fang X fang Y* in classical Chinese language expresses the relation between the event *X* and the event *Y*. There are a good many similar examples in the Chinese language, for example *fang meng fang xing* 方梦方醒 and *fang xing fang shuai* 方兴方衰, which could be better translated as follows:

> As for a person, her sleeping and waking as two events happen with one following the other (or at the same time).

> As for a state, its prosperity and decadence as two events happen with one following the other (or at the same time).

In light of Russell's construction of time, we argue that Hui Shi should have made use of the schema *fang X fang Y* to show how a unique temporal axis is constituted from events that happen with one following another (or at the same time) from various perspectives.

First, in view of various perspectives and contexts, there is no sharp boundary between any two events that happen with one following another or at the same time; that is, there are vague borderline cases of a certain degree between these events. Such an overlap between events is reflected in the derivative meaning of *fang* 方 as "simultaneity" or "coordination," which comes from the original meaning of *fang* 方 as "parallel." Examples are: there is no sharp boundary between rising and falling, between life and death, between sleeping and waking, and between prosperity and decadence; in other words, for these events, it is possible neither that one starts just after the other ends, nor that one ends just before the other starts. However, the intersecting point of these overlapping events can be used to identify an exact moment or instant: the more that events overlap each other, the more accurate the intersecting point will be. That is, these events from different perspectives confront and compete against each other for their own privileges, but the overlapping or intersecting between them (i.e., their simultaneous occurrence) makes such tension and conflict vanish harmoniously. On the one hand, each event from a certain perspective has a vague temporal range or interval when it happens by itself; on the other hand, the intersection of all these overlapping events can be used to identify an exact point when all of them happen at the same time.

Second, with the collection of these exact time points, the perspectives of viewing an event as occupying a vague time interval can shift from one to another: from the perspective of the external present (generalized resultative) to that of the internal present (dynamic progressive), from that of the external present (generalized resultative) to that of the proximate past (perfect of recent past), and from that of the internal present (dynamic

progressive) to that of the proximate future (immediate future). In fact, the shift of perspective is also the ordering of instants: one instant is in continuity with another, since, by shift of perspective, the present time point is extended gradually back to the adjacent past and forward to the adjacent future. The more frequently the perspectives shift, the further the extension could be in either direction; thus, one finally obtains a complete time axis concerning the past-present-future structure. In our view, the monism expressed in the maxim "heaven and earth are one body" of Thesis 10 is interpreted as just such a complete one-dimensional linear time axis, which is constructed from "the myriad things" interpreted as multiple events from various perspectives.

In sum, an exact time point is fixed by the overlapping of events or the intersecting of vague time intervals when they happen; the linear time axis is determined by the shift of perspectives and the ordering of exact instants. Therefore, our construction argument is able to bridge the gap between relativistic pluralism and absolutistic monism.

Obviously, our construction argument is better than both *reductio ad absurdum* and the reflection argument. The *reductio ad absurdum* is flawed because of its "white or black" strategy: the leap from pluralism to monism is achieved simply by denying any one of relativistic perspectives but taking an absolute position of superiority. However, this kind of argument is supported neither by textual evidence nor by linguistic analysis; in addition, the conflict between monism and pluralism is still not reconciled harmoniously. Nevertheless, in the construction argument, neither is a complete one-dimensional linear time axis treated as irrelevant nor are multiple events from various perspectives viewed as illusory. Rather, such a time axis is extended from instants, which are constructed by events with one following another or at the same time. That is, the monism of a temporal unity is derived naturally from the pluralism of events from various perspectives.

Moreover, the reflection argument is flawed as well, because it does not fundamentally justify the superiority of absolutistic monism over relativistic pluralism: it is possible that the proposition "any distinction is relative" is itself relative. In fact, the reflection argument cannot be rid of the shadow of skepticism; that is, the metaphysical conclusion "no distinction is real" is not approachable in the ultimate sense by the cognitive premise "I do not know which distinction is real." Nevertheless, the debate about skepticism is irrelevant to the construction argument. It is notoriously difficult to refute skepticism, but radical skepticism as a trivial theory brings about nothing fruitful. Since the time axis is regarded as the result of instants constituted by multiple overlapping events from various perspectives, the construction argument is not trapped in the question of how a time axis is justified in the ultimate metaphysical sense. If any two time axes constructed by Russell's method are isomorphic (or any one time

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axis so constructed is isomorphic to the continuum of real numbers), then it is reasonable to assume in a mathematical sense that such a time line is ultimately a metaphysical one.

Other theses of Hui Shi can also be interpreted more naturally in terms of the construction argument. Thesis 2 can be interpreted as follows: any point is dimensionless without size, because such a point in either the spatial or temporal sense comes from the intersecting of objects or overlapping of events from certain perspectives. The exactness of such a point is determined by how many objects or events there are from certain perspectives overlapping one another: the more that objects or events overlap one another, the more fine-grained such a joint point is. Such a determination could be idealized: a rough area or interval could be derived from a finite number of objects or events, while a mathematical point could be further obtained from an infinite number of objects or events. Anyway, it is possible to derive a spatial or temporal unity by the Russellian construction.

Thesis 3 can be explained as follows: there is no sharp boundary between heaven and earth or between mountains and marshes. For example, when one approaches a mountain, she is not sure whether a small stone or a tiny particle of dust is within the boundary of the mountain. But a spatial point can be determined by the overlapping of two objects such as a mountain and a marsh; or, in another way, a surface or a plane can be determined by two objects with overlapping at the same altitude. An idealized point or plane could be further obtained from the intersecting of an infinite number of objects. So will a unified three-dimensional space be constructed, if it satisfies certain mathematical conditions of metric theory or topology.

Thesis 6 can be interpreted as follows: just as a one-dimensional timeline is extended in two directions (the past and the future) by the aggregation of more and more instants, a three-dimensional space is stretched in multiple directions by more and more spatial points. The finiteness or infiniteness of a space is determined by how many times perspectives shift: the more frequently perspectives shift, the further such a space is stretched. Again, if perspectives shift countless times and an infinite number of points are collected, then a spatial direction will be limitlessly stretched. If we combine the spatial and temporal interpretations together, then Thesis 7, "today go to Yue but arrive yesterday," can be explained in a similar way.

Thesis 9 can be interpreted as follows: the center of the world is the intersecting point of various spatial objects from certain perspectives so that such a center as a spatial point can either be "north of Yan" (the northernmost state) or "south of Yue" (the southernmost). The key is not where such a center is located but how a unified three-dimensional space is constructed from intersecting points or surfaces.

IV. Two Final Remarks

After the construction argument is explained, there are still two issues that need to be clarified.

First, concerning Cheng Xuanying's interpretation given in section 2 above, there are possibly two different translations that represent two opposite approaches to bridging the gap between monism and pluralism. Cheng Xuanying's interpretation of *fang zhong fang ni* 方中方睨 is as follows:

居西者呼为中, 处东者呼为侧, 则无中侧也

Here, we repeat our translation in section 2:

(α) If the sun in the west is called "the middle," whereas that in the east is called "the side," then there is neither the middle nor the side.

However, there is another possible translation:

(α′) those who live in the west call the sun "the middle," whereas those who live in the east call it "the side," so there is actually neither the middle nor the side.

(α) says that "rising" (日中) and "falling" (日睨) are two different events or two contrary states; that is, the observer is the center, while the sun (as perspective-dependence) is moving around the observer. Thus, by accepting (α), we have to focus on how to leap from epistemic perspectives to metaphysical reality, that is, how two events from different perspectives could be regarded as one and the same—in other words, how one could resolve the contrariety of the two states. (α′) says that one and the same sun is observed by different people at different locations or from different perspectives; that is, the sun (as not perspective-dependence) is the center, while the observers from different perspectives are around one and the same sun. Thus, there is actually no contrariety or conflict between different perspectives. Therefore, if (α′) is accepted, the leap from metaphysical reality to epistemic perspective is not problematic at all, since one and the same sun presents different features from different perspectives; in other words, different dimensions of a single fact could be grasped from different perspectives.

(α) presupposes that epistemology has priority over metaphysics: events from perspectives are primitive, while the world or facts are derivative. However, such a presupposition leads to the problem of how to determine the singularity of the world or the absoluteness of facts by the plurality of events or the relativity of perspectives. We call this the *epistemic determination problem*. (α′) presupposes that metaphysics has priority over epistemology: the world or facts are primitive, while events from perspectives are derivative. But such a presupposition leads to a much more serious problem: how one could justify, in the first place, such a primitive world acknowledged by default as metaphysically real. It is possible that the

so-called primitive world is just one of the various perspectives. How could one obtain the all-seeing eye in order to see through the truths of things? We call this *metaphysical justification problem*.

In our view, dealing with metaphysical justification is more challenging than epistemic determination. Therefore, we prefer the approach from epistemic perspectives to metaphysical reality. Our construction argument is to solve the epistemic determination problem: according to the method of equivalence relation, we could derive a single and absolute temporal axis from various events from different perspectives through overlapping and ordering; we take that such an axis represents the truth of the world or the ultimate fact, since any temporal axis constructed by Russell's method is unique in the sense of mathematical isomorphism.

Second, as mentioned in section 3, Lucas attempts to interpret the ten theses consistently in terms of equivalence relation as well; thus, it is necessary to explain the differences between his interpretation and ours.

Based on the ordering relation and the equivalence relation in mathematics, Lucas proposes the maximalization principle and the similarity principle: the former says that "in every ordering we should postulate as far as possible maximal elements,"[21] and the latter says that "when given a set of things, always look for an equivalence which makes them similar."[22] He interprets Theses 1, 2, and 6 using the maximalization principle. For example, his interpretation of Thesis 6 is as follows: in a certain sense, the south is infinite, because there is an infinite sequence $a_0, a_1, a_2 \ldots$, where a_1 is to the south of a_0 and a_2 is to the south of a_1 and so on; but in another sense, the south is finite, since there is a maximal element according to the maximalization principle.[23] Further, he interprets Theses 3, 4, and 5 using the similarity principle. For example, his interpretation of Thesis 4 is as follows: if the morning and the evening is equivalent and the equivalence relation is compatible with the temporal structure, then all instants are equivalent; it is a kind of great similarity.[24]

However, in most cases, Lucas' two principles are isolated from each other.[25] In contrast, we try to combine these two principles in our interpretation of *fang sheng fang si* 方生方死. Actually, the similarity principle corresponds to the method of equivalence relation, which amounts to our definition of instants by the overlapping of events from perspectives, that is, the definition of instants such as i_1, i_2, i_3 by events such as *a, b, c, d, e* (as indicated in Figure 1). The maximalization principle is similar to the method of well-ordering, which is analogous to the formation of the temporal axis by the ordering of instants through shifts of perspective. In our view, it is due to the isolation of these two principles that Lucas still falls into relativism, which is shown in his proposal of the relativity principle—"the principle of similarity should apply to interpretations"[26]— where his definition of "interpretations" appeals to model theory in mathematical logic, but, loosely speaking, the so-called interpretations could

be regarded as various perspectives or contexts. If the similarity principle (i.e., the method-of-equivalence relation) is applied from various perspectives or in various contexts, then equivalence classes can be defined in terms of different equivalence relations; that is, under one equivalence relation a large temporal interval (or point) is defined by the overlapping of two events, while under another equivalence relation a small temporal interval (or point) is defined by the overlapping of the same two events. In this sense, not only events but also intervals (or points) need to be identified by perspectives; thus, these intervals (or points) with perspectives could hardly form a single temporal axis. Therefore, Lucas' interpretation could not bridge the gap between relativistic pluralism and absolutistic monism.[27] However, as indicated in section 3, our interpretation could naturally bridge the gap between relativistic pluralism and absolutistic monism, since the equivalence relation (simultaneity) in our interpretation is unique, and an exact instant defined by the overlapping of events is not relative.

Furthermore, the disagreement between Lucas and us is presented more obviously in the interpretation of Thesis 5. A better translation of this thesis is as follows:

> Things that have more in common being different from things that have less in common, that is called micro-differentiation. All things having something in common, and all things differing from each other in some respect, that is called macro-differentiation.[28]

Lucas interprets Thesis 5 in terms of local and global similarity principles.[29] According to the local similarity principle: if there is an equivalence relation R such that a corresponding equivalence class includes some objects, then those objects are similar in certain aspects; if there is another equivalence relation R' such that a corresponding equivalence class includes some additional objects, then those additional objects are similar in certain aspects. Here, the distinction between R and R' is the so-called micro-differentiation. According to the global similarity principle: if there is an equivalence relation S such that a corresponding equivalence class includes all objects (since all things are existent), then all objects are similar to one another; if there is another equivalence relation S' such that a corresponding equivalence class includes only one single object (since each object is self-independent), then all objects are dissimilar. Here, the distinction between S and S' is the so-called macro-differentiation.

However, we interpret the distinction between micro- and macro-differentiation in terms of three levels. As indicated in Figure 1, there are three levels in the construction argument: the first is events such as a, b, c, d, e; the second is instants such as i_1, i_2, i_3; the third is a single temporal axis. Here, an instant is a set of events, and a temporal axis is a set of instants. We interpret micro-differentiation by the second level and macro-differentiation by the first and third levels. On the one hand, in the second

level, micro-differentiation is about the size of a temporal interval (or point). Every instant is formed by the overlapping of events: the more events overlap with one another, the less the intersecting interval (or point) will be. Assuming that the interval u is formed by the overlapping of events e_1 and e_2 and u' by e_3 and e_4, where u is more than u', then the overlapping area of e_1 and e_2 is larger than the overlapping area of e_3 and e_4; that is, e_1 and e_2, which have more in common, are different from e_3 and e_4, which have less in common. We interpret the micro-differentiation as such a difference. On the other hand, the first level shows that all things are different while the third shows that all things are the same, so that the difference between the first and the third level is interpreted as the macro-differentiation. Specifically, in the first level, every event as a complete object has its own independence and individuality, so that any event is different from any other. However, in the third level, the independence and individuality of any event is dissolved within a single temporal axis; in other words, the distinction between any two events is no longer presented within this single temporal axis, and thus there is no difference among events.

According to Lucas' interpretation, differentiations rely on equivalence relations (similarity), and equivalence relations in turn rely on perspectives or contexts. Therefore, there are various kinds of equivalence relations, which renders his interpretation still falling into relativism. In contrast, according to our interpretation, there is only one equivalence relation (simultaneity), and an exact instant is defined under such an equivalence relation by an infinite number of events overlapping each other; thus, our interpretation does not lead to relativism. Further, by the use of three levels, we could keep the balance between flexibility (from rough intervals to exact instants) and stability (a unique temporal axis in the sense of isomorphism).

Notes

1 – The translation comes from Chris Fraser, "School of Names," in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta (Spring 2017), https://plato.stanford.edu/archives/spr2017/entries/school-names/.

2 – See Hu Shih, *The Development of the Logical Method in Ancient China* (Shanghai: Commercial Press, 1922).

3 – See A. C. Graham, *Disputers of the Tao: Philosophical Argument in Ancient China* (LaSalle, IL: Open Court, 1989), pp. 78–79.

4 – See Chad Hansen, *A Daoist Theory of Chinese Thought* (Oxford: Oxford University Press, 1992), pp. 262–263.

5 – See Wang Jihong 王继红 and Chen Qianrui 陈前瑞, "*Zhuangzi* 'fang sheng fang si' de yuyan yu zheli jiedu" 《庄子》"方生方死" 的语言与哲理解读 (Linguistic and philosophical interpretations of *fang sheng fang si* in the *Zhuangzi*), *Zhongguo wenhua yanjiu* 中国文化研究 (Chinese culture research) 2 (2013): 66–72.

6 – Guo Xiang 郭象 and Cheng Xuanying 成玄英, *Zhuangzi zhushu* 莊子注疏 (Beijing: Zhonghua Shuju, 2011), pp. 34–35.

7 – Yang Liuqiao 杨柳桥, *Zhuangzi yizhu* 庄子译注 (The collected and explained *Zhuangzi*) (Shanghai: Shanghai Guji Chubanshe, 2006), p. 588.

8 – Guo Qingfan 郭慶藩, *Zhuangzi jishi* 莊子集釋 (The annotated *Zhuangzi*) (Beijing: Zhonghua Shuju, 2004), p. 50.

9 – Hu Shi, *The History of Ancient Chinese Philosophy* (Beijing: Peking University Press, 1998), p. 311.

10 – Wang Jihong 王继红 and Chen Qianrui 陈前瑞, "Gu hanyu shijian fuci 'fang' duo zhong shi ti yiyi de yanhua" 古汉语时间副词 "方" 多种时体意义的演化 (The evolution of the temporal adverb *fang* 方 in ancient Chinese), *Zhongguo yuwen* 中国语文 6 (2012): 537–548.

11 – Ibid.

12 – See G. Frege, *The Foundations of Arithmetic* (Oxford: Blackwell, 1974).

13 – See, Bertrand Russell, *Our Knowledge of the External World as a Field for Scientific Method in Philosophy* (London and New York: Routledge, 2009).

14 – See Rudolf Carnap, *The Logical Structure of the World and Pseudoproblems in Philosophy*, trans. Rolf A. George (Berkeley: University of California Press, 1967).

15 – See Thierry Lucas, "Hui Shih and Kung Sun Long: An Approach from Contemporary Logic," *Journal of Chinese Philosophy* 20 (1993): 211–255.

16 – Russell, *Our Knowledge of the External World*, pp. 71–72.

17 – Ibid., p. 85.

18 – Ibid.

19 – Hans Kamp shows how a temporal structure with a total order is derived from the structures of events by Russell's method; see Hans

Kamp, "Events, Instants and Temporal Reference," in *Semantics from Different Points of View*, ed. R. Bäuerle, U. Egli, and A. von Stechow (Berlin: Springer, 1979), p. 379. S. K. Thomason also shows how to construct time as a continuum (isomorphic to the real numbers) in light of Russell's method; see S. K. Thomason, "On Constructing Instants from Events," *Journal of Philosophical Logic* 13, no. 1 (1986): 85–96.

20 – This example comes from Friedrich Hamm and Oliver Bott, "Tense and Aspect," in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta (Fall 2018), https://plato.stanford.edu/archives/fall2018/entries/tense-aspect/. The figure by us included here is based on such an example.

21 – Thierry Lucas, "Hui Shih and Kung Sun Long," p. 220.

22 – Ibid., p. 222.

23 – Ibid., p. 223.

24 – Ibid.

25 – Occasionally, by combining the maximalization principle and the similarity principle, Lucas proposes the principle of choice: "in an equivalence relation, one could distinguish any single element by choice" ("Hui Shih and Kung Sun Long," pp. 224–225). He interprets Theses 8 and 9 using the principle of choice, but the maximalization principle indeed stands in isolation from the similarity principle in his interpretations of Theses 1–6.

26 – Ibid., p. 229. Lucas proposes the relativity principle in his interpretation of Thesis 7.

27 – Lucas himself seems to realize the difficulty as well; see ibid., p. 230.

28 – Joseph Needham, *Science and Civilisation in China, Volume 7, Part I: Language and Logic* (Cambridge: Cambridge University Press, 1998), p. 316.

29 – See Lucas, "Hui Shih and Kung Sun Long," pp. 221–222.