I. Introduction

Dynamic Time—Convergence between Leibniz and Zhuangzi

What is time? Is time real, or a mere illusion? We seem to feel the passage of time in our consciousness but are doomed to encounter great difficulty when trying to get a deeper grip on the nature of time. As Augustine famously remarked, “if no one asks me about what time is, I know what it is, but if I wish to explain it to him who asks, I do not know” (Confessions, bk. 11, chap. 14). The present essay does not aim so much at giving a complete answer to this intricate and difficult question as to focus on Zhuangzi to excavate the idea of time inherent in his philosophical writings. A second aim is to show how it relates to some of the contemporary concerns about time. More specifically, our concern is not about the metaphysical foundation of time, but about the complementary view of time as consisting of different levels. These levels of time are characterized within the natural order (the logical space of nature), rather than pertaining to the metaphysical ground in the logical order (the logical space of reason; see Sellars 1963, McDowell 1994).

Even though many studies have been done in the past few decades concerning Zhuangzi’s philosophy, his idea of time has remained largely unexplored. Most of the studies on his works have been centered on other aspects of his philosophy such as epistemology, language, ethics, and the like. This lack is surprising and undesirable given Zhuangzi’s great concern about the issue of life and death, which clearly bears a close link to time. The lack in question is likely due to the unavailability of a suitable conceptual framework in which Zhuangzi’s idea of time can be illuminated. The present essay represents an initial attempt to exploit Leibniz’ philosophical discussion about time to provide a needed and congruous comparative framework for this purpose. We shall rely on recent commentators on
Leibniz to distinguish between different levels of time, which then shall be extended to, and compared with, Zhuangzi.

To do a comparative study, it would help to have a glance at how the views of these two philosophers are connected. Leibniz ascribes to a dynamic view of time, presented in his famous correspondence with Clarke, a student of Newton (Leibniz and Clarke 2000), where temporal change and passage are central hallmark features of time (which metaphysically may be grounded on eternity as in the monads; see below). Such a dynamic view of time stands in sharp contrast to the block view of time held by Newton. According to Leibniz, Newton considers time and space as a block or container that, by itself, remains static and therefore does not show temporal change, passage, and succession.

What is meant by dynamic and block views of time? The main difference consists in how they conceive the passage of time (see Dainton 2010, pp. 6–12, for an overview). The dynamic view conceives the passage of time with its different moments in time (which we describe as past, present, and future) as real, that is, as an objective feature of reality that holds independent of us and our consciousness (with its experience of time flow) (see also Northoff 2016a, Northoff 2016b, Northoff 2018, chaps. 9–11). The block view, in contrast, rejects that very same claim, postulating instead that the passage of time is neither real nor an objective feature of reality—all moments of time (and all events) are equally real without any moving or changing time. Time is here characterized as non-dynamic and thus as a mere block that acts as a container for us and our consciousness (with its experience of time flow) (Dainton 2010, pp. 7–8).

How about Zhuangzi’s notion of time? We argue here that Zhuangzi’s view is close to the dynamic view, given his construing change and transformation as essential to things, and seeing temporal change as inherently inseparable from life and death, which define the natural world. Therefore, we propose convergence between Leibniz’ concept of dynamic time and Zhuangzi’s view of time. In addition to such convergence, we also assume that Zhuangzi’s view of time may complement Leibniz’ notion of dynamic time in important aspects concerning the connection between the time of different subjects, that is, monads.

Methodological Strategy—Natural versus Logical Order
We need to mention some methodological differences between Leibniz and Zhuangzi that affect the context within which their notions of time must be understood. First and foremost, it shall be noted that the debate between Leibniz and Newton-Clark is highly metaphysical, driven by a logical inquiry of reason. In contrast, Zhuangzi’s main concern lies within what occurs in the natural world. Thus, we restrict ourselves here to the natural order of time, the occurrence of time in the natural world—this is the ground on which we compare Leibniz and Zhuangzi, rather than going deeper into the
metaphysical grounding of time, which is the logical order. More specifically, it will be on the levels of time—supplementary to the dynamic view—that we will focus and rely upon when conducting our comparative work.

Our main focus will be on the explication of Zhuangzi’s view of time. Consequently, we may adapt some of Leibniz’ ideas to suit our purpose here. Therefore, we remain within the natural order and consider both Zhuangzi’s and Leibniz’ concept of time within that context. This, for instance, makes it possible to characterize time in relation to cognition and experience, which reflect different levels of time. In contrast, we do not focus on a metaphysical framework that presupposes the logical order and has often been assumed when interpreting Leibniz’ notion of time.

In what follows, after distinguishing between two- and three-level accounts of time in Leibniz (section 2), we shall show that the kinds of levels of time found in Leibniz have paralleling counterparts in Zhuangzi (section 3). Even more conspicuously, we shall further identify a distinctive novel level of time in Zhuangzi that appears absent in Leibniz, where bodily skill looms large (section 4). Finally, in the concluding remarks, we discuss the contemporary significance of our account (section 5).

II. Levels of Time in Leibniz

The Mental Level—Ideal Time as Cognition-based Time

Recent commentators on Leibniz argue that he distinguishes different levels of time in his relational or dynamic conception of time. One may propose either a two- or three-level distinction of time in Leibniz. We here start with the two-level distinction that refers to ideal and real time as suggested by interpreters like Rescher (1979) and Russell (1937), while a three-level account has been proposed by Winterbourne (1982) and Hartz and Cover (1988). Note that we do not intend to go into a full-blown discussion of Leibniz and the subtle and fine-grained interpretations. We only intend to signify the different levels of time that current Leibniz interpreters distinguish, in order to point out the analogy to the different kinds of time as distinguished by Zhuangzi.

The ideal level refers to our cognition and conception of time. Based on our rational abilities, we can cognize and philosophize about time, and we can generate different concepts of time as “entia rationes” or “res mentalis” (Hartz and Cover 1988, p. 504). These concepts can remain more or less independent of time in reality as it is by itself, for example metaphysical time or world-based time. This clearly refers to what we describe as ‘cognition-based time’, which, like ideal time, is based on cognitive functions or “rational capacities,” to use Leibniz’ term.

How can we exemplify such ideal time, that is, cognition-based time? Leibniz, for instance, distinguishes the notion of time as used in mathematics and physics from the way we experience time and ultimately from time itself, that is, real time. Based on our rational capacities, we cognize time in
mathematics and physics in a way that is different from time as we experience it. This is well reflected in the following quote by Winterbourne and his interpretation of time in Leibniz:

Leibniz’ distinction of the real and the ideal separates perceptual time—phenomenon bene fundatum—from the time of physics and mathematics. The former is continuous, but not mathematically dense. Mathematical and physical time are idealizations and are not instantiated in experience. (Winterbourne [1982] pp. 211–212).

The Non-mental Level—Real Time as World-based Time
Cognition-based time is related to our rational capacities and how they allow us to conceive time. As it is based on our rational capacities, Leibniz speaks of an ideal time. Such ideal time needs to be distinguished from real time. The distinction in question pertains to the distinction between mind and world, and ultimately between cognition and world. Ideal time is based on cognition and may, therefore, be characterized as cognition-based time. The concept of cognition-based time refers to the fact that cognition is a necessary (though not yet sufficient) condition of possible time in an ideal sense, that is, ideal time, that reflects the way we perceive and cognize time. In contrast, real time is supposed to be based on the world itself, which remains prior to and independent of our cognition of time. One may therefore want to speak of ‘world-based time’, which refers to the world as the necessary condition of the possible existence of time, that is, real time.

How does Leibniz conceive real time, that is, world-based time? Leibniz clearly classifies bodies as real entities, as they must be distinguished from mathematical entities and consequently ideal time, that is, cognition-based time (Hartz and Cover 1988, p. 504). Leibniz suggests that mathematical entities are “not real,” or “not something actual,” since “the parts are only possible and completely indefinite,” whereas “in real things, that is, bodies, the parts are not indefinite . . . ” (Leibniz 1875, II, p. 268; Leibniz 1969, p. 536). There is a reality, though, that lies even deeper than bodies, namely the famous monads. Specifically, the reality of bodies is derivative from their constituent monads as their underlying metaphysical basis: “There can be nothing real in nature except simple substances,” Leibniz writes in his final letter to de Volder (in 1706), but he adds, “and the aggregates resulting from them” (Leibniz 1875, II, p. 282; Leibniz 1969, p. 539).

The Phenomenal Level—Experience-based Time
However, things are not so simple. In addition to our cognition of time in an ideal sense, we also experience time. This is reflected, for instance, in William James’ characterization of consciousness as a “stream of consciousness” (Northoff 2014), where time is experienced. How does such experienced time in our consciousness relate to the ideal time that, as mental
abstraction, is based on our cognition? Hartz and Cover (1988) seem to consider the experience of time or phenomenal time as semi-mental (as distinguished from ideal time as mental).

Leibniz uses the notion of “mental” as a way of calling attention to the fact that one attains the ideal realm by (mentally) abstracting from actual perceived phenomena. He specifically claims in several places that ideal things are abstract, or accessible by thought (e.g., at Leibniz 1875, II, pp. 195, 249; VII, pp. 395, 561, 564; VI, p. 584; Leibniz 1956, L5.27, p. 63; Leibniz 1969, pp. 523, 529, 621; Leibniz 1981, p. 110), and elsewhere he speaks of them as “beings of reason” (Leibniz 1875, II:189; Leibniz 1981, pp. 226-227) or “imaginary” (e.g., Leibniz 1875, IV:436, VII:373, 402; Leibniz 1953, p. 18; Leibniz 1956, L4.14, p. 38; L5.47, pp. 71-72; Leibniz 1969, p. 309). Hence, the notion of mental is here closely associated with mental abstraction, as in cognition-based time. That raises the question of how the experience of time must be characterized. Unlike cognition-based time, the experience of time is no longer characterized by discrete points in time or by discontinuity. Instead, ‘experience-based time’, as we say, is characterized by dynamic change, passage, and flow of time—this emphasizes continuity over discontinuity in our consciousness of time. Due to such a difference with regard to continuity versus discontinuity, experience-based time must be featured by a different degree of mental abstraction than cognition-based time.

We are confronted here with an ambiguity. Does the experience of time reflect real time or, alternatively, ideal time? The semi-mental characterization of experience of time seems to defy both: the experience of time and its phenomenal features such as the “stream of consciousness” is neither fully mental nor fully real; it is “semi-mental” as Hartz and Clover say. This means that a two-level account of time in terms of real and ideal time with the distinction between real (world-based) and ideal (cognition-based) times may come to its limits here. One may instead opt for a three-level account of time in Leibniz where a third level, that is, experience-based time, is sandwiched between real time and ideal time.

The Metaphysical Level—Monads and World-based Time
How can we characterize the third level, that is, world-based time, that is often associated with a metaphysical level of time? This is the point where Leibniz introduces his concept of monads, which exist at the most fundamental level of metaphysics (Winterbourne 1982; Hartz and Cover 1988; Cover 1997; McDonough 2008). We do not intend to go into detailed philosophical interpretation about the concept of monads. Our main concern is about the temporal characterization of monads.

Are monads temporal or non-temporal? Futch (2008) argues that monads are not temporal themselves—they are thus a-temporal. However, they can be linked and connected to time, which makes them temporal in a derived sense. How is such a derivative association of monads with time possible?
Futch argues that the monads need to be linked and integrated into the overall "harmony" of the world, including other monads. The linkage and connection to other monads is possible only by constructing temporal (and spatial) relations between monads, which therefore can be characterized as temporal in a second-order or derived sense.

How do the monads stand in relation to our distinction between world- and experience-based time? Or put another way, how is it possible that the single primarily non-temporal monad can serve as metaphysical grounding of the different levels of time, including world- and experience-based time? Here one may need to consider not only the single monad that remains non-temporal in itself, but also the interaction between monads and, more specifically, their "pre-established harmony." Futch argues that the notion of harmony plays an essential role in Leibniz’ philosophy. Harmony concerns the world as a whole, where monads are its most basic building blocks, which are the ontological parts whose totality accounts for the metaphysical existence of the world including its world-based time. Due to their interaction in terms of "pre-established harmony," the monads can constitute time and provide the kind of temporal structure that is necessary to constitute experience-based time.

We have clarified the gap that stands between the metaphysical level of world-based time and the phenomenal level of experience-based time, and explained how by applying the principle of harmony to monad-monadic interactions, Leibniz tries to bridge that gap. This leads us to a three-level view of time: world-based time at its metaphysical level, experience-based time at the phenomenal level, and cognition-based time at the ideal or cognitive level.

Note that the notion of monads is highly metaphysical in Leibniz’ philosophy; it is conceptually posited to serve as a metaphysical ground for the reality of the natural world and what occurs in it. We do not intend to delve into deep metaphysical discussion about it, since Zhuangzi’s philosophy tends to focus more on what lies within the natural world, rather than engaging itself in the logical inquiry of its metaphysical foundation. Though the concepts of metaphysics and ontology are often used interchangeably, to avoid confusion we here distinguish the two. We acknowledge that both are concerned with what is real and exists, but the former concerns the logical order of nature, that is, the natural world, while the latter deals with the logical order of reason, that is, the logical world. In what follows, we shall adapt Leibniz’ three-level analysis of time, which has a strong metaphysical flavor, to a more ontological one, when applying it to explicate Zhuangzi’s view of time.

III. Analogous Levels of Time in Zhuangzi

The Mental Level—Cognition-based Time

How do the three-levels of time in Leibniz relate to Zhuangzi’s conception of time? Below we rely on the original texts, mostly from the seven Inner
Chapters widely believed to be written by Zhuangzi himself, to conduct this inquiry.

We may begin with the following paragraph at the opening of chapter 2 of the *Zhuangzi*:

Ziqi of South Wall sat leaning on his armrest, staring up at the sky and breathing—vacant and far away, as though he’d lost his companion. Yan Cheng Ziyu, who was standing by his side in attendance, said, “What is this? Can you really make the body like a withered tree and the mind like dead ashes? The man leaning on the armrest now is not the one who leaned on it before!” (chap. 2, “Discussion On Making All Thing Equal,” in Watson 2003, p. 31; emphasis ours)

This paragraph points to some order of events, and imposes a temporal framework of “now-before” to that order. The linguistic expression “now and before” is clearly employed to demarcate the linearity of time, thus exhibiting a form of cognitive operation. A cognition-based time—that is, the ideal time of Leibniz at the first-level of analysis—is obviously in place.

A similar expression of cognition-based time can be found in another paragraph in the same chapter:

If a man follows the mind given him and makes it his teacher, then who can be without a teacher? Why must you comprehend the process of change and form your mind on that basis before you can have a teacher? Even an idiot has his teacher. But to fail to abide by this mind and still insist upon your rights and wrongs—this is like saying that you set off for Yue today and got there yesterday. (Watson 2003, p. 34; emphasis ours)

Here Zhuangzi invokes an intriguing way of expressing a notion of impossibility by using a “today-yesterday” temporal frame. In this frame, “today” and “yesterday” signify discrete points on a continuous temporal order, wherein an idea similar to time’s arrow involving one-way direction or asymmetry of time becomes conveyed in the paragraph cited above. We suggest that employing a temporal frame such as this one entails cognition-based time. Only in our cognition and its bounds are we unable to depart today, that is, at point B, and to arrive in that place at that place at point A, that is, yesterday. Such a situation remains impossible as our cognition provides us with a template or “conceptual grid” (see above) that does not allow such a reversed sequence in time. Zhuangzi’s assumption of the impossibility of such reversed time thus entails what we described as cognition-based time (or, using Leibniz’ term, ideal time).

*The Phenomenal Level—Experience-based Time*

How about the second-level of time in Leibniz’ account, that is, experience-based time? Does Zhuangzi have a conception of it? The following paragraph, also in one of the Inner Chapters, is crucial:

The short-lived cannot come up to the long-lived. How do I know this is so? The morning mushroom knows nothing of twilight and dawn; the summer
cicada knows nothing of spring and autumn. They are the short-lived. South of Chu there is a caterpillar which counts five hundred years as one spring and five hundred years as one autumn. Long, long ago there was a great rose of Sharon that counted eight thousand years as one spring and eight thousand years as one autumn. They are the long-lived. Yet Pengzu alone is famous today for having lived a long time, and everybody tries to ape him. Isn’t it pitiful!


At first glance, the first-level of time, cognition-based time, is expressed in this paragraph. The two pairs of terms “twilight and dawn” and “spring and fall” signify temporal divisions of some duration of time—a day and a year, respectively. A more exact numerical series that involves “five hundred” and “eight thousand” years is also employed. These are linguistically explicit expressions used by human rational capacities for the purpose of describing the objectified facts that some living organisms, such as mushrooms and cicadas, have relatively short lives while some others, such as a caterpillar or a great rose of Sharon, enjoy relatively long lives. A cognition-based time at a first-level of time in Leibniz is plainly involved here in these expressions.

Upon closer observation, we soon discover that, in raising a question of the form “How do I know that this is so?” to the claim “The short-lived cannot come up to the long-lived,” Zhuangzi casts doubt upon some opinion made about these objectified facts. Specifically, a sense of time different from that of cognition-based time seems to be lurking here. To unpack it, we need to ask in what ways the short-lived may surpass the long-lived. Here is a way of making sense of it that our experiences can relate to: to a cicada, living and singing for one summer might feel like forever, while a great rose of Sharon, having lived for eight thousand years, might feel as if the cicada’s whole life has passed in the blink of an eye. That the short-lived outperforms the long-lived in a temporal dimension is possible, and this possibility is grounded in how the passage of time is experienced by different sentient beings. In this way, we see how a distinctive experience-based time is required to understand Zhuangzi’s doubt about the claim “The short-lived cannot come up to the long-lived,” a claim that expresses cognition-based time. In other words, Zhuangzi’s doubt in this paragraph, when suitably unpacked, shows that time as cognized might not match time as experienced. Hence, experience-based time must be distinguished from cognition-based time.

The Ontological Level—World-based Time

We may now move to the third-level of time in Leibniz, namely world-based time or real time, which is independent of cognition and experience. Would Zhuangzi have conceived of time in this way? The answer is positive, and the following paragraph is critical in showing this:

The Way has its reality and its signs but is without action or form. You can hand it down but you cannot receive it; you can get it but you cannot see it. It
is its own source, its own root. Before Heaven and earth existed it was there, firm from ancient times. It gave spirituality to the spirits and to God; it gave birth to Heaven and to earth. It exists beyond the highest point, and yet you cannot call it lofty; it exists beneath the limit of the six directions, and yet you cannot call it deep. It was born before Heaven and earth, and yet you cannot say it has been there for long; it is earlier than the earliest time, and yet you cannot call it old. (chap. 6, “The Great and Venerable Teacher,” in Watson 2003, p. 77; emphasis ours)

The Way, or Dao, is the key notion under scrutiny in this passage. Both the spatial and temporal features of Dao are depicted in this cosmological picture. Dao is certainly real, but its reality appears to be opposite to the kind of reality of Heaven and earth, as well as everything else in the world, which can be associated with and identified through its specific spatial and temporal features. Any object, state, or event is subject to some spatial characterization, that it has certain shape or form, height or depth. However, despite the fact that Dao gives birth to Heaven and earth and thus that Dao exists “beyond the highest point” and “beneath the limit of the six directions,” we cannot call it “lofty” or “deep.” In other words, Dao escapes any conceptual characterization with respect to space.

The same goes for the temporal aspect of Dao. Dao, described as giving rise to Heaven and earth, has surely existed long before ancient times. Thus, it is both natural and logical to say that Dao was there “earlier than the earliest time.” But most oddly, we can say neither that Dao “has been there for long” nor that Dao is “old.” This suggests that with regard to time any conceptual imposition on Dao is inappropriate and should be forbidden. A notion of time like this, which we may dub “Dao-based time,” is clearly distinct from cognition-based time. Furthermore, Dao-based time as such must also go beyond any human endeavor to sense it in a perceptual experience. It is thus further distinct from experience-based time. A Dao-based time can, therefore, be assimilated to world-based time: it is a kind of time that is based on the world itself independently of any sentient being, distinguishable from both cognition-based and experience-based times.

Dao-based time as construed in Zhuangzi is thus real time in Leibniz’ sense. However, there are some subtle similarities and differences that need to be pointed out and clarified. Real time refers to the ultimate real foundation for the experience and cognition of time. For Leibniz, the ultimate metaphysical grounding of time is itself atemporal. It is an eternal ordering of monads that is then experienced temporally. In a similar manner, for Zhuangzi, the real foundation of time rooted in Dao cannot be conceived of as time itself, either. Nevertheless, Dao, the ultimate foundation of time, is not an eternal order of monads, but pure change or spontaneity. This idea of Dao deserves a more thorough explication, which goes beyond the limits of the present essay. Suffice it to say that the idea of monads is metaphysical, while that of Dao is ontological; the former derives
from logical considerations, whereas the latter confines itself within a natural order.

IV. A Distinctively New Level of Time in Zhuangzi

The Fourth Level of Time I—Action and Bodily Skill
There is a level of time inherent in some of Zhuangzi’s central writings that we believe is further distinct from all the preceding three levels of time in Leibniz discussed so far. It has to do with bodily skill, which is so familiar in our mundane phenomena that they more often than not escape our notice, not to mention receiving close examination. The most famous case is perhaps that of Cook Ding dissecting a cow, as described below:

Cook Ding was cutting up an ox for Lord Wenhui. . . . He slithered the knife along with a zing, and all was in perfect rhythm, as though he were performing the dance of the Mulberry Grove or keeping time to the Jingshou music.

“Ah, this is marvelous!” said Lord Wenhui. “Imagine skill reaching such heights!”

Cook Ding laid down his knife and replied, “What I care about is the Way, which goes beyond skill. When I first began cutting up oxen, all I could see was the ox itself. After three years I no longer saw the whole ox. And now—now I go at it by spirit and don’t look with my eyes. Perception and understanding have come to a stop and spirit moves where it wants. I go along with the natural makeup, strike in the big hollows, guide the knife through the big openings, and follow things as they are. So I never touch the smallest ligament or tendon, much less a main joint.

“A good cook changes his knife once a year—because he cuts. A mediocre cook changes his knife once a month—because he hacks. I’ve had this knife of mine for nineteen years and I’ve cut up thousands of oxen with it, and yet the blade is as good as though it had just come from the grindstone. . . .

“However, whenever I come to a complicated place, I size up the difficulties, tell myself to watch out and be careful, keep my eyes on what I’m doing, work very slowly, and move the knife with the greatest subtlety, until—flop! the whole thing comes apart like a clod of earth crumbling to the ground. I stand there holding the knife and look all around me, completely satisfied and reluctant to move on, and then I wipe off the knife and put it away.” (chap. 3, “The Secret of Caring for Life,” in Watson 2003, pp. 45–46; emphasis ours)

The first thing to note about this description of the performance of Cook Ding is that it clearly expresses cognition-based time, the first-level of time in Leibniz: a good cook changes his knife once a year, while a mediocre cook once a month; Cook Ding takes three years to achieve an apprentice level, and nineteen years to reach a master level, and so forth. All the times mentioned here are units of time imposed by people on daily life events and activities. These expressions of time signify an objectified sense of time, and are clearly cognition-based time.
Second, it will be uncontroversial to interpret the paragraph in question on the basis of experience-based time, the second level of time in Leibniz. In the process of training and becoming a master cook over the duration of nineteen years, Cook Ding must have experienced the passage of time in some ordinary manner, in a way similar to a bus driver or medical doctor who trained and worked for two decades in the city of New York. There is some subtle range of experiences that Cook Ding may have. For example, after three years of training, Cook Ding moves from the stage of initially seeing nothing but a whole ox itself to that of no longer seeing an ox as a whole. This process must have involved many obstacles and required much practice to overcome them, so much so that Cook Ding experiences or feels that it took perhaps ten years for him to get beyond the apprentice stage. However, after nineteen years of practice and having achieved the master level, where he can dissect a cow without consuming much of his energy (this is reflected in the shape of the blade of his knife), he may feel like nineteen years have passed in a flash of time when he looks back at how he has attained this level of competence. All these variations of subjective experiences are different from cognition-based time, and can be aptly classified as a second-level of time in Leibniz.

Third, what catches our special attention in the case of Cook Ding is his spectacular performing experience of dissecting an ox, which Zhuangzi has so concisely and yet precisely depicted. After nineteen years of practice, Cook Ding is described as dissecting a cow without having to look at it with his eyes. To be more precise, the faculty of perception and the faculty of understanding as well are said to stop working in the course of his action. What guides his action, then, is spirit. Here spirit does not mean something mysterious, belonging to some realm of a dualistic nature. It appears to denote some complex set of capacities and physicality—which constitute a specific type of skill—that Cook Ding has eventually acquired over years of training and practice. Exercising this skill results in a series of spontaneous and seemingly effortless movements when performing a highly demanding task, such as dissecting an ox.

The Fourth Level of Time II—Skill-based Time
What kind of time is involved in a highly skillful practice like this? It cannot be cognition-based time, for no conceptual repertoire is deployed in making these movements happen. As Zhuangzi observes and explicitly states, understanding comes to a stop in this behavioral mode. Neither can it be classified as world-based time, for world-based time requires independence of any human endeavor that includes sensing and thinking, whereas Cook Ding remains somewhat aware of his performance, not entering into an entirely dark state of consciousness. May it, then, be characterized as a form of experience-based time? It is tempting to do so, and to some extent doing
so appears appropriate. For, as just said, performing a skillful action obviously involves some sort of conscious experience on the side of the performer, which renders the ascription of experience-based time legitimate. Nonetheless, we propose to resist making this move for the following considerations.

When Cook Ding performs the action of dissecting an ox, where perception and understanding come to a stop, this means that the ox is no longer an object of cognition or perception for Cook Ding. Accordingly, the sense of being a subject on the side of Cook Ding in the same process must be maximally diminished as well. There exists a unity of some sort between Cook Ding and the dissected ox, where the two are dynamically synchronized in some way. Indeed, the sphere, as it were, in which the dynamic synchronization takes place and an object-subject dichotomy collapses is likely to be greater than just described. Cook Ding, after finishing the dissection of the ox, looks all around him, feeling completely satisfied. He seems to be in a synchronized state, with not just the ox but also the surrounding environment.

What kind of time is involved in the skillful state of Cook Ding? We venture to say that it is quite unlike the kind of experience-based time that we have discussed so far. Experience-based time, as characterized earlier, covers some range of ordinary activities in which the passage of time is experienced, such as waiting for a bus or spending a summer vacation somewhere on a Pacific island, which does not require going through some serious training and hard work. Highly skillful action, in contrast, seems to create a very different kind of experience, in which faculties like perception and understanding that typically function in an ordinary activity cease to operate, or cease to operate in any familiar manner.

Jean François Billeter (Bi Laide 2011), who has placed skillful action at the core of Zhuangzi’s philosophy, maintains that skillful action involves moving upward from some mechanism of a lower level to another mechanism of a higher level. In this process, conscious control of cognition and perception is taken over by unconscious movements of the body. When performing with such a spontaneous flow, the consciousness of a highly skillful person undergoes some major transformation, if not turning into an entirely unconscious state. A sense of time, which is involved in a state of consciousness like this, must be qualitatively very different; perhaps it feels as if time comes to a stop in a spontaneous flow of skillful action. It may be proper, then, to characterize time as sensed in skillful action as lurking somewhere between experience-based and world-based times. Placing time at this juncture would be in agreement with the idea of Zhuangzi, for he states, in the passage just quoted, that Dao goes beyond skill, indicating that skill enables one to leave ordinary experience behind and move toward Dao. We suggest, therefore, that a new level of time be drawn, dubbed “skill-based time.”
The Fourth Level of Time III—Skill-based Time and Meditation

Here, we may deviate a bit to extend our discussion of skill to meditation. Skillful action does not seem to be the only type of special activity that leads one toward Dao. Meditation, also central to Zhuangzi’s concerns, is another type of activity that brings a person even closer to Dao. In a vivid tale, Yen Hui explains in a dialogue with his teacher Confucius how he practices the technique of meditation: “I smash up my limbs and body, drive out perception and intellect, cast off form, do away with understanding, and make myself identical with the Great Thoroughfare. This is what I mean by sitting down and forgetting everything” (chap. 6, “The Great and Venerable Teacher,” in Watson 2003, p. 87). In this practice, “forgetting” is crucial, and there are several stages where progress can be made along the way when different kinds of things get to be forgotten. The first to be forgotten is benevolence and righteousness—a task typically requiring cognitive evaluation. The second thing to be forgotten is rites and music, which usually involves sensory perception of some sort. At the final stage, everything is forgotten. Yen Hui himself sums up these different stages of forgetfulness as involving the getting rid of sensory perception and intellectual understanding, and finally reaching a state of unifying with the Great Thoroughfare, or the world.

Yen Hui’s practice of meditation is similar to the ox-dissecting skill of Cook Ding in some important respects, despite the obvious difference that the latter is dynamic while the former is static with respect to bodily movement. One common feature is that perception and understanding are dropped out in both activities. This is such a difficult task that it patently takes great effort and likely many years of practice to achieve. The pay-off of this hard work is to get closer to, or, better, be unified with Dao, which is inaccessible to someone whose normal functioning is dominated by the faculties of perception and understanding when engaging with the world. What sense of time is it that may be involved in this state? We tend to say that it is close to, if not identical with, world-based time.

The claim above can be further supported by a dialogue in which the Woman Crookback tells Nan-bo Zi-kuei how she has taught Bu-liang Yi, a person with the talent of a sage, to practice meditation and get to the Way, or Dao:

So I began explaining and kept at him for three days, and after that he was able to put the world outside himself. When he had put the world outside himself, I kept at him for seven days more, and after that he was able to put things outside himself. When he had put things outside himself, I kept at him for nine days more, and after that he was able to put life outside himself. After he had put life outside himself, he was able to achieve the brightness of dawn, and when he had achieved the brightness of dawn, he could see his ownaloneness. After he had managed to see his ownaloneness, he could do away with past and present, and after he had done away with past and present, he was able to
enter where there is no life and no death. . . . (chap. 6, “The Great and Venerable Teacher,” in Watson 2003, p. 79; emphasis ours)

The linguistic terms, “three days, “seven days, and “nine days”—obviously expressing cognition-based time—are used to signify different stages of progressing, from initially putting the world, things, and life outside oneself, then seeing one’s aloneness and doing away with past and present, and eventually entering the realm of Dao, where there is no life and death. Here at the last stage, time is explicitly mentioned: to get to Dao is to get to where there is no life and death, and to get there one has to do away with past and present. Here we have a clear case of Dao-based time that is very similar to world-based time, where time as distinguished by past and present (and future) does not exist, and a practice like meditation can get us there. The initial stages of putting the world, together with things and life in it, outside oneself require one’s stopping the operation of the faculties of understanding and perception, which cover cognition-based and experience-based time. The intermediate stage of getting to see one’s aloneness and thereafter to rid oneself of past and present are the passage through which one is led to Dao-based time. Similar to the kind of skill of Cook Ding but taking a step forward, the practice of meditation not only brings one from ordinary experience close to Dao, but even allows one to fully enter the realm of Dao. There is thus a legitimate sense in which we construe Zhuangzi as classifying meditation as a sub-category of skill. Skill, construed in this broad sense, involves forgetting, rather than acquiring knowledge. It is crucial to bringing us closer to the realm of Dao.

Nevertheless, it does not seem entirely suitable to assimilate meditation to skill, for, after all, the dynamic bodily movements involved in skillful action such as dissecting an ox appear quite different from what is involved in meditation. Discussing meditation in this context lends extra support to the claim that it would be apt for us to posit a distinctive level of time, namely skill-based time, that lies somewhere on a temporal continuum between experience-based time and world-based time, as does the kind of time involved in meditation.

The Fourth Level of Time IV—Skill-based Time and Monads
It would be useful to further illuminate the novelty and importance of this fourth level of time by contrasting it with some core but obscure aspect of Leibniz’ philosophy. Earlier we saw that Leibniz sees the need to explain how we come to experience and cognize time, when time is at the monadic level, that is, monad-based time or world-based time. He appeals to the harmony principle to account for the derivation of experience-based and cognition-based time from world-based time: there is a pre-established harmony in the interaction among monads such that the former brings about the latter.
The idea of monad-monad interaction is a notoriously mysterious part in Leibniz' philosophy. We surmise that it is out of a metaphysical pursuit in a logical realm of reason that the harmony principle is postulated as a purely conceptual artifact to explicate the interaction between monads. Now we seem to have a way of making some sense of it, but it has to be couched in terms of skill and skill-based time within the naturalistically ontological framework on which Zhuangzi's philosophy is built. Skill, in the form of bodily movement, such as ox-dissection, creates spontaneous action, which harmoniously unifies a practitioner and her environment. It requires the exercising of skill to bring two objects, say, Cook Ding and a dissected ox, into a harmoniously coupled relationship.

This is the kind of explanation that goes missing in Leibniz' theory of how a monad forms a harmonious connection with another monad. While Leibniz' metaphysics of monads and their eternal ordering of perfection ignores the connection between monads, Zhuangzi's ontology of dynamic process gives us an empirically plausible grip of how the harmony principle might be implemented to connect two objects. A direct comparison between Leibniz and Zhuangzi is not what we aim for here, as they hold very different metaphysical outlooks. However, it would not be too far-fetched to say that the harmony principle may well be appreciated in Zhuangzi's philosophy, and there is a ready-made skill-based notion in it that enables us to understand it in the natural world that we inhabit. This adds extra confidence to our postulate of skill-based time in the three-level account of time originating from Leibniz' philosophy.

The Four Levels of Time—World-, Skill-, Experience-, and Cognition-based

Taken together, we here postulate four levels of time. These four levels of time—one more level than what Leibniz' account has given us—appear to correspond to the four layers of boundary described in another paragraph of Zhuangzi's writings, as follows:

The understanding of the men of ancient times went a long way. How far did it go? To the point where some of them believed that things have never existed— so far, to the end, where nothing can be added. Those at the next stage thought that things exist but recognized no boundaries among them. Those at the next stage thought there were boundaries but recognized no right and wrong. Because right and wrong appeared, the Way was injured, and because the Way was injured, love became complete. But do such things as completion and injury really exist, or do they not? (chap. 2, "Discussion on Making All Things Equal," in Waton 2003, pp. 36–37; emphasis ours)

This paragraph describes how people in ancient times held a view of the world according to the kinds of stages they were in. People of the first stage believed in the existence of a realm of nothingness, apparently where Dao lies. People of the second stage saw a realm of things existing without
boundaries, a realm that seems to be one in which skillful action or the practice of meditation takes place. People of the third stage conceived of a realm of things existing with boundaries but without a distinction between right and wrong. This appears to involve a realm where the faculty of cognition does not operate—since a distinction between right and wrong requires cognitive evaluation—but that of perception does, which enables one to recognize boundaries among things. Lastly, cognition is in place at the fourth stage, thus rendering possible the making of a distinction between right and wrong among things recognized with boundaries. Accordingly, four levels of time can be said to be involved in these four different realms of existence: world-based time, skill-based time, experience-based time, and cognition-based time.4

V. Conclusion

In light of our reading, then, we see strong convergences between Leibniz’ and Zhuangzi’s views of time. There is a certain similarity in Chinese and European (e.g., German) thought about the metaphysical existence of time and its epistemic-phenomenal features. The focus on similarities lets us neglect their divergences, such as the difference between metaphysical (European) and ontological (Chinese) traditions, which need to be discussed in future work. One such related divergence shall nevertheless be pointed out here. This is about the methodological approach to the metaphysics of time.

A strong line of thought in the European and American intellectual tradition tends to take cognition-based time as its methodological starting point. In order to generate the logical standard as methodological standard, cognition is required. The reliance on cognition as a methodological tool brings with it cognition-based time in either an explicit or, more often, an implicit way. Any subsequent reasoning about the metaphysics of time is then rather implicitly set against or compared with cognition-based time and its temporal discontinuity.

Such cognition-based time and its temporal discontinuity provide, for instance, the starting point for Newton to develop his model of ideal time, which surfaces as a block or container view of time, especially in the current Anglo-American philosophical discussion. Cognition-based time serves here as a methodological starting point (and ultimately as a methodological standard) to develop a metaphysics of time. However, it should be mentioned that some twentieth-century European-continental philosophers like Husserl, Heidegger, Whitehead, and Bergson deviate from that view (and, more recently, Dainton [2010, pp. 117–120]; see also Northoff 2016a, Northoff 2016b, and Northoff 2018, chaps. 9–11). Instead of cognition-based time, that is, the way we cognize time, they take time as we experience it, that is, experience-based time, as the methodological starting point for determining the existence and reality of time.
Leibniz and his current interpreters remain ambivalent in this regard as they seem to be torn between both methodological starting points, that is, cognition- versus experience-based time. Unlike many of his traditional European colleagues (but somewhat similar to Husserl, Heidegger, Bergson, and Whitehead), he points out the dynamic and continuous nature of time—he therefore conceives temporal discontinuity with discrete points in time as ideal time, that is, cognition-based time, rather than as real time, that is, world-based time. However, at the same time, his metaphysical approach to time follows the more traditional European philosophers in their block or container view of time when he traces dynamic time to monads that are seemingly eternal and do not show any dynamic change and passage of time.

Zhuangzi is more clear and less ambivalent than Leibniz in this regard. He clearly takes the dynamic nature of time, the change and passage of time, as a starting point to determine the existence and reality of time, that is, world-based time. Rather than cognition-based time, he takes experience and—specific in his approach—skill-based time as methodological starting points to determine the nature of world-based time. Unlike in Leibniz and his metaphysics of external monads, there is no need for him to refer to some underlying eternal entity (like monads) that act like a block or container for dynamic time in our experience, that is, experience-based time.

One may speculate that the difference between Leibniz and Zhuangzi may be related to their different methodological frameworks. Leibniz ultimately presupposes the logical order, that is, the logical space of reason, as manifest in his quest for the metaphysics of time as in monads. In contrast, Zhuangzi operates and remains within the bounds of the natural order, that is, the logical space of nature—and he thus focuses on the ontology of time within our actual natural world (rather than on the metaphysics of time in the logical world, that is, logically conceivable possible worlds). Due to his ontological (rather than metaphysical) framework, he does not need to go beyond and transcend the natural world, that is, world-based time, to the logical world as Leibniz does in his metaphysics when he assumes monads to underlie real time as world-based time. However, despite their different frameworks, that is, “logical order/metaphysical” versus “natural order/ontological,” our comparison nevertheless shows some interesting parallels between Leibniz’ and Zhuangzi’s notions of time as long as one remains within the natural world and its different levels of time.

To sum up, we have explored the metaphysics of time in Zhuangzi through a comparative framework of Leibniz’ philosophy, showing the convergences and complementarities between Leibniz’ and Zhuangzi’s notions of time that concern specifically the various levels of time. We have also pointed out differences that are mainly related to their different frameworks, with Leibniz presupposing the logical order and metaphysics while Zhuangzi remains within the bounds of the natural order and ontology.
We hope that this novel perspective is conducive to further research on both Zhuangzi and the philosophy of time.

Notes

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1 – Chai 2014 is an exception.

2 – One question may arise here: how can we distinguish ideal time as cognition-based time from real time as world-based time? Let us presuppose Leibniz’ concept of relational time as world-based time. Relational time can be characterized by temporal relations as related to continuous change and succession. This entails temporal continuity with continuous temporal overlaps and relations such that the distinction between different parts and segments of time remains impossible here. There are no single discrete points in time that can be distinguished from each other in relational time. Relational time is continuous and non-divisible. This is different from ideal time or cognition-based time. Based on mental abstraction, we are well able to distinguish different single discrete points in time. Time as cognized is no longer continuous but discontinuous.

3 – Here we use the term “dissecting” instead of “butchering,” despite the fact that the latter may be more appropriately used in an ordinary colloquial context. A main reason is that the term “dissecting” may better capture the important sense of a highly skillful action embodied by Cook Ding than “butchering.”

4 – Our levels-of-time reading of Zhuangzi finds an echo in David Chai (2014), who has recently proposed a meontological notion of time in the Zhuangzi, where three levels of time are distinguished: (1) Dao-based time as ontological nothingness but possessing creative
potentiality, which is immeasurable, lying beyond the realm of time that has directionality and divisibility; (2) Cosmology-based time as the state of primal chaos, collective oneness consisting of undifferentiated things, where time is measurable; and (3) Human-measured time as everyday human experience. Chai further adds a generation thesis to this analysis, stating that Dao-based time gives rise to Cosmology-based time, which in turn leads to Human-measured time. Chai’s cosmological interpretation of Zhuangzi is in perfect agreement with our reading, but we differ from him in some respects. One is that we distinguish more finely two levels of time, namely cognition-based and experience-based time, which match his characterization of human-based time. Another is that we explore a core concern of Zhuangzi with skill and stress a distinctive level of skill-based time as mediating between experience- and cognition-based time on the one hand and Dao-based time on the other. In a way, this is not in contradiction to Chai’s analysis. For Cosmology-based time as a state of measurable yet primal chaos is likely a state in which skillful action enables a master practitioner to enter into it. Our notion of skill-based time can be seen as complementary to illuminating Chai’s Cosmology-based time. These differences in question are likely derived from the fact that we set our comparative work against Leibniz’ conceptual framework. However, surprisingly, we both come up with the notion of different levels of time. It would be fair to say that our readings give us mutual support.

References


