

A Husserlian Interpretation of Lacan's Logical Time: The Epistemology of Unconscious Temporality

Yuhang Long

*Faculty of Letters, Shandong Normal University, Jinan, China
1138885996@qq.com*

Abstract: Building upon Heidegger's profound conception of time, Lacan ingeniously developed a sociologically grounded framework of 'intersubjectivity'. Notably, the key distinction between Lacanian intersubjectivity and Husserl's concept is stark. Lacanian intersubjectivity lacks the epistemological substance that is inherently present in Husserl's idea. Through a meticulous comparative analysis of Lacan's and Husserl's temporal frameworks, complemented by a detailed phenomenological reconstruction of Lacan's theory of time, this in - depth study thoroughly elucidates the application of Lacanian logical time at the microscopic epistemological scale. The paper strikingly reveals that this temporal mechanism functions independently of intersubjective interactions, vividly demonstrating how the subject attains cognitive mastery over the object by establishing its unique logical time.

Keywords: Lacan, Husserl, logical time, unconscious, epistemology

1. Introduction

This paper explores the relationship between Lacanian logical time and the operation of the unconscious through three aspects. First, logical time retrospectively constructs causality. Lacan's logical time reveals that meaning is always retrospectively constructed. When time is reduced to the phenomenological scale, causality is also retrospectively constructed, forming the core of unconscious operations. Second, it identifies the difference between retrospective construction and recollective reflection. Despite their formal similarities, clarifying this distinction is crucial to show that the former pertains to unconscious activity, while the latter belongs to conscious activity. Third, it examines the operation mechanism of unconscious time. When logical time is reduced to the phenomenological scale, it becomes pure unconscious time. Through phenomenological reconstruction, the operation mechanism of unconscious time is revealed.

2. A comparison of Lacan's and Husserl's views of time

In the essay *Logical Time and the Assertion of Anticipated Certainty: A New Sophism*[1], Lacan describes a game devised by a prison warden to determine which of three prisoners will be released. The warden presents three white disks and two black disks, randomly selects three of them, and attaches one disk to each prisoner's back without any prisoner knowing their own disk's color. The prisoners must deduce their own disk's color solely by observing others and reasoning silently without

communication. The first prisoner to logically infer their own disk's color and articulate the reasoning process will be granted freedom.

Lacan proposed three times in logical time through this game: the Instant of Seeing, i.e., S-time, the Time for Understanding, i.e., U-time, and the Moment of Concluding, i.e., C-time, each corresponding to specific events in the game. He interpreted subject's first hesitation—the exclusion of the hypothetical scenario where "one black disk and one white disk" might be perceived by other subjects—as the Instant of Seeing. Subject's second hesitation—the exclusion of the hypothetical scenario of "one black disk and two white disks"—was framed as the Time for Understanding. Finally, the urgency following this second hesitation, where subject already knows the answer and prepares to exit to announce it, was designated as the Moment of Concluding.

It is worth noting that Heidegger remains a central figure in studies of Lacan's concept of time. Lacan's "unconscious time" is presented as "a critical factor that disrupts the continuity of Being and time formulated by Heidegger"[2]. Building on Heidegger's foundation, Lacan employs logical time to construct the sociological concept of intersubjectivity—the co-existence and interactivity of subjects. It is precisely this intersubjectivity that allows Continental philosophy to effectively avoid the solipsism often associated with rationalist traditions since Descartes[3]. However, compared to Husserl's intersubjective temporality, Lacanian logical time lacks the epistemological dimension inherent in the former[4]. To address this gap in Lacan's framework, what we must now do is "return to Husserl".

Before Husserl, the prevailing view of the 'Now' was that it constituted a point dividing the past from the future. For instance, Plato regarded time as the moving image of eternity framed by number[5], while Aristotle defined time as the number of motion in respect of before and after[6]—both conceived time as a static yet continuous motion. These ancient Greek perspectives profoundly influenced temporal studies for millennia, particularly Aristotle's view, which Heidegger later remarked as the first detailed interpretation of time as a phenomenon to have been transmitted to us, and it essentially determined all subsequent understandings of time, including Bergson's[7].

Husserl, however, posited that the "Now" must be a span; otherwise, the subject could not experience the passage of time. For example, when hearing a piece of music, subject would not perceive it as a continuous, flowing melody but rather as a series of isolated perceptions of static sound phenomena, or:

If, in the case of motion, a moving object were retained in consciousness unchanged across its various positions, we would perceive the traversed space as successively filled, but we would not have a representation of motion itself[8].

Although Husserl's example is inaccurate, in vision, even a static succession of schemas, if the gaps are short enough, will be perceived as continuous movement by the subject. From the point of view of epistemology of occurrence, this point does not need to be proved, just recall what we usually experience when we watch a movie[9].

In Husserl's phenomenological framework, the concepts of "Now" and "Present" are fundamentally distinct. The "Present" refers to the instantaneous point serving as the temporal origin, while the "Now" in Husserlian terms constitutes an extended segment of time, which he designates as the "Now-phase". Husserl divides the temporal consciousness of subject into three constitutive components: Retention, Primal Impression, and Protention, corresponding respectively to the past, present, and future[10]. The primal impression represents the primordial sensory material and conscious feeling presented by an object in the Now, characterized as a purely given attribute. Retention, on the other hand, refers to the lingering of the primal impression in the present. It undergoes a transformative process mediated by what Lacan terms the "imaginary function", thereby emerging as an alienated derivative of the primal impression itself. Protention, meanwhile, constitutes an unconscious anticipation of the future grounded in the primal impression[11].

It becomes evident that Lacanian "logical time" does not correspond to epistemological notions of logical time traditionally discussed. To epistemologically ground Lacan's concept, we must narrow its scope to the phenomenological scale (sub-second durations) proposed by neurophenomenologist Francisco Varela[12] to complete the construction of an epistemology of logical time. First, we identify the similarity between the two: both Lacan's and Husserl's time are fragmentary rather than linear. Second, we establish conceptual correspondences: Lacan's S-time aligns with Husserl's primal impression, as both represent the original givenness of the object to the subject, while U-time corresponds to retention, as both require subsequent events to fill their meanings.

Here we first need to answer the question: how is phenomenology possible? I ask this because Lacan denied the rationality and legitimacy of phenomenology in his eleventh seminar. First, the primal impression in Husserl's sense has actually been transformed by the subject's imaginative function, and second, phenomenology's presupposition of the transparency of consciousness is irreconcilable with the structural subversion of the unconscious—Lacan argues that Husserl's "Retention-Primal Impression- protention" model contradicts the non-linear state of the unconscious time[13]. With regard to the first point, we can refute it with Hawking's idea of "goldfish physics", in which the goldfish in the fishbowl may have their own system of physics, but the light they receive from outside the goldfish universe (the fishbowl) is in fact refracted, and goldfish physicists do not know this, and Hawking thus hypothesized that the laws of physics discovered by humans are likely to be different outside the universe, having been modified by the boundaries of the universe, of which humans are unaware[14]; does this mean that human physics is also impossible? The answer is of course no. We still need to study the deformed laws of physics, and here we still need to study the transformed primal impressions—or rather, the object of our study is not the thing itself, but the transformed primal impression of the object. With regard to the second point, it is the goal of this paper to abandon the a priori elements of Husserl's view of time, to transform its traditional linear model, and to reconcile its contradiction with the non-linear unconscious time of psychoanalysis, in order to complete the Husserlian interpretation of Lacanian logical time.

3. Logical time's retrospective construction of causality

The difference between Lacan and Husserl's conceptions of time lies first and foremost in their distinct scales of measurement. This disparity serves as a crucial entry point for our study, which involves scaling down Lacan's logical time to a phenomenological scale. Specifically, we may employ the phenomenological method of epoché to return to phenomena beyond battery, thereby enabling the subject to retroactively construct causal relationships[15]. What then is the relationship between logical time and retrospective construction?

Lacan posits that a prisoner, upon observing two fellow prisoners with black disks, would immediately conclude that their own disk is white, thereby consistently associating this inference with S-time—the moment of seeing[1]. At first glance, this conclusion seems attainable without requiring hesitation from others, and the presence of two black disks does not imply temporal sequentiality with the necessity of a third white disk; their relationship is purely logical causality. However, on one hand, while this atemporal logical relation may appear self-evident in object structures, it still necessitates a diachronic operation within the unconscious structure of the subject. On the other hand, if we reduce the phenomenon of two black disks to an isolated event, neither the logical connection nor the conclusion holds — it retrospectively constructs the meaning of a previously absent event. Subject must reintroduce an already effaced occurrence and integrate it with the present to reach this conclusion. This precondition lies in the warden's random selection (from the prisoners' perspective) of three disks from a pool consisting of three white and two black disks. What this paper aims to articulate is that all events or phenomena inherently possess a retroactive quality.

In the first logical time, which we designate as Time a, the S-time formally commences when the subject glimpses 'two white disks'—we might say that within logical time, the object's time duration extends beyond S-time, while the subject's comprehension traces back to what precedes S-time, thereby completing the construction of U-time through a dialectical synthesis. Through the U-time of Time a, the subject not only negates the conclusion of "two black disks and one white disk" but simultaneously constructs the meaning of the given conditions (two black disks and three white disks). This moment marks Time a's transition into its conclusive phase, namely C-time. Abruptly, the subject perceives the first moment of hesitation in fellow prisoners — termed Phenomenon b — which signals that Time b subsequently initiates its own formation. Within U-time, this process accomplishes both the interpretation of Phenomenon b and the retroactive construction of Time a's meaning.

Therefore, we can assert that time a and time b are not isolated from each other but rather sequential and consecutive. However, this raises a further question: the "S-time" of time b—that is, the first moment of hesitation in glimpsing the other prisoners—does not necessarily immediately follow the "C-time" of time a, which involves the rejection of the hypothetical scenario of "two black disks and one white disk". How, then, do these moments connect sequentially? To explore this, we might consider the example of the infant shaking a rattle cited by Piaget[16].

It could be stated that when subject perceives the event of "shaking the rope", retrospection is immediately initiated. The signifying function of the unconscious subject retroactively traces the structure that has just been established—a structure capable of generating spatio-temporal resonance with object. This unconscious retrospective process constitutes what is termed "U-time". When unconscious subject completes this retrieval and simultaneously achieves the symbolic representation—actively attaching the floating battery of the known "rope-shaking" to this object—then "C-time" arrives. At this moment, the establishment of logical time in this phase is fully accomplished.

Similarly, from the time the unconscious subject perceives the object of the bell to the completion of the resonance of the known structure to the object, and the completion of the representation of the object by the energetic reference of "bell", this also constitutes the establishment of a logical time. After that, the unconscious subject will perceive the sound, and the U-time will immediately begin to retrospectively construct the meaning of the previous logical time, and through the relationship of spatial and temporal proximity (locating the source of the sound), connect the sound with the bell, and complete the establishment of the logical relationship. That is to say, the meaning of the logical time corresponding to the energetic reference "bell"—not the meaning of the object itself, the bell, or the phenomenon itself—is constructed through the successive, sound-understanding times of the phenomenon. The time of understanding the phenomenon is constructed. This is true even if, in contrast, subject first perceives the sound and then experiences the bell, in which case the referential retrospective nature of the bell constructs the meaning of logical time of the sound.

Then, when subject completes the identification of the "ringing", it is also the beginning of a new logical time of the "ringing", until the unconscious subject retrospectively constructs the meaning of the logical time of "rope-swinging" again, the "ringing" and the "rope-swinging" are linked together, and the logical time of this segment ends.

4. Identifying the similarities and differences between retrospection and reminiscence

The numerous formal similarities between retrospection and reminiscence, along with the fact that the latter is a conscious activity or the outcome of the combined operation of conscious and unconscious elements, render the positioning of retrospective activity crucial. In order to show that retrospection is an unconscious activity, it is necessary to identify the difference between the two. On the other hand, retrospection is a process wherein the unconscious subject non - selectively sifts

through structures along a timeline, guided by their proximity to the temporal origin. The capacity for retrospection has limitations, yet there is no clearly defined standard, and it typically occurs over a short span of time. In other words, retrospection is not infinite; it may conclude when meaning has been successfully constructed, when the constructed meaning is re - evaluated, or autonomously after a specific duration. In contrast, reminiscence is the process by which an unconscious or conscious subject selectively retrieves a structure from a known repository of battery. Typically, the priority of retrieval is related to a combination of the strength and similarity of the structure, which is related to the proximity of time from the original event and the degree of impact on subject, e.g., an event that traumatizes subject, even if it is very long ago, this structure may be in a position of being untouchable in the library of structures. Here we also need to understand the difference that meaning is constructed retrospectively, reminiscence—whether consciously or unconsciously—cannot construct meaning, what it does is to reflect on the meaning that has already been constructed by retrospection.

The mechanisms of retrospection and unconscious reminiscence operate in tandem. The conclusion of retrospection does not directly precipitate the termination of reminiscence, and the meanings they construct or contemplate may not align. For example, when subject repeatedly experiences a certain similar sound, and each time it is judged by subject to be logically associated with the bell, the battery and meaning are to some extent (strongly) anchored, thus completing the signifiedization of battery—the phenomenon itself becomes a real representation, a pure image, and therefore there is no longer any need for the attachment of the battery. In this case, the strong similarity of structure makes the unconscious reminiscence to be completed before the retrospection, in other words, subject no longer needs to complete the perception of the bell as an object itself and the establishment of the corresponding logical time, in order to complete a certain kind of unconscious reflection on the meaning, and thus to refer to it as "bell". Although such an identification may still be wrong, because the sound may only be a bell-like sound produced by some instrument.

If the events group (group in this case refers to the group structure in Piaget's sense) is a new one for subject that has never been experienced before and is not logically related to previous events, then subject will not be able to construct the meaning of the established logical time through the phenomena a. But such a situation is often idealized and theorized, and we cannot find in reality a new event completely isolated from other object events that does not have a structural universal. Or, in other words, even if subject experiences a completely new event, the unconscious subject initiates a process of retrospection and reminiscence, and sifting and retrieval of existing structures takes place, with the end result that subject may only be able to complete a generalized or erroneous identification. For example, a young child who sees a chip that he has never seen before will identify it as a jigsaw puzzle, or a mature individual who has never seen a chip will struggle to complete a generalized identification through a known structure or an already constructed sense of logical time. Given that the group structure of space - time was already constructed during the early stage of the subject's development, and the subject acquired knowledge of most shapes, and also formed representations of a large number of objects in the early establishment of the symbolic function, it can be contended that the unconscious subject's retrospection invariably constructs a meaning related to the previous logical time, except that it is possible that the constructed meaning may not be the right one in the battery of the big Other—There is no absolute distinction between right and wrong in the pure subject.

Thus, for a continuous events group, we may propose a phenomenological interpretation of logical time group: the phenomenon a which is the original point of this event group triggers the S-time of (logical) time a and activates the machinery of U-time, initiating processes of retrospection and unconscious reminiscence. The completion of meaning construction simultaneously heralds the arrival of C-time within time a—marking the termination of U-time, which symbolizes the successful establishment of meaning. This subsequently enables subject's initial apprehension of the next

phenomenon b within the event group. What follows is subject's glimpse of the next phenomenon in that events group, that is, phenomenon b.

Consequently, we must insert a "Continuation for Retention" (R-time/Retention-Time) between the conclusion of time a's C-time and the emergence of phenomenon b (or the S-time of time b). This is the retention in the form of a continuation, not the continuation of retention, and which I will call R-Time (Retention-Time). Crucially, the commencement of time b's S-time does not terminate time a's R-time—the latter persists until achieving its own semantic actualization, as the unconscious subject cannot predetermine whether or not the phenomenon b is able to complete the retrospective construction of meaning in Time a. Evidently, R-time exists not in isolation but as an integral component of logical temporality. Does this imply subsequent logical times are partially embedded within the R-time of their predecessors? Precisely so. It is this alternating yet continuous time stream that constitutes the unconscious subject's construction of logical time across event groups.

5. Unconscious time: a phenomenological measure of logical time

At this point, we perceive within Husserl's concepts of retention and protention another movement direction through which unconscious structures build meaning. This reveals that the movement of signifying activity concerning meaning operates bidirectionally: retrospectively constructing the meaning of prior logical time toward the past, while protentively seeking the meaning of present logical time toward the future. Nevertheless, a critical distinction must be drawn between protention and retention. Retention is the process by which the past pursues meaning in the present, while protention represents the present's search for meaning in the future. Every primal impression will turn into retention in the future, and every retention originated from a primal impression in the past.

However, it should be noted that this change is merely a formal transformation. It does not imply that retention will fully inherit the primal impression in content. In human mental activities, impressions gradually become blurred or deviate from the original. As time passes, especially in U-time, under the influence of the subject's imaginary function, their content continues to be alienated from the original, and may eventually transform into something completely different. When the origin of time (the present moment) moves on the time axis, the period of time that was originally presented as a protention on the time axis after the original point, which we may call P-Time (Protention-Time), immediately changes part of its form of existence along with the movement of the origin into the present that coincides with the origin, that is to say, the primal impression, and then immediately changes into the retention before the origin, which exists in the form of R-time. Of course, the length of the P-time on the time axis does not diminish as a result of this change; On the representation, it is the line segment corresponding to the P-time that is itself moving with the movement of the origin, and as long as the R-time has not ended, or as long as the R-time of the time a does not end with the arrival at the C time of the time b, the P-time of the time a will always remain in existence with the same length all the time, and when the process is over, the time a 's P-time will disappear in a quantum-free form and will be immediately transferred to the P-time of time b.

At this point, the structure of unconscious logical time is constructed, and it will exist in the form of the following diagram:

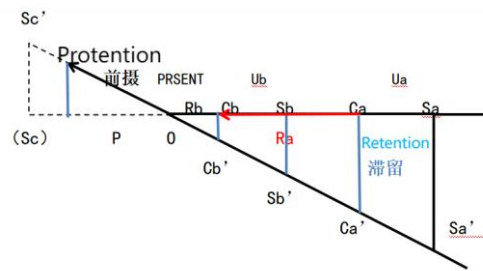


Figure 1: Schematic Diagram of the Principles of Protention and Retention

The diagram in figure 1 represents in which an unconscious subject is building up the logical time (unconscious time) of phenomenon b. In the figure, the straight line $\bar{S}_a\bar{S}_c$ is the time horizontal axis of the logical time, while the representation of the state of consciousness is no longer the vertical axis as in Husserl's original illustration[8] ($\bar{S}_a\bar{S}_a'$), and we indicate the state of operation of subject's unconscious by $\bar{S}_a\bar{S}_c$. Where $\bar{S}_a\bar{C}_b$ represents the logical time of the phenomenon a, that is, time a, and $\bar{C}_a\bar{C}_b$ represents the R-time of time a, which is denoted by R_a in the diagram. It can be seen that a Husserlian "sinking" is likewise taking place at all time points, except that it is along the longitudinal axis down the axis of the unconscious state, and that this sinking itself demonstrates the process of retention (e.g., C_a sinking to C_a' , the longitudinal axis between them representing the retention formed through this sinking). Or, in fact, one could say that it is the entire axis of unconscious that is undergoing the seeking at a constant angle to the horizontal axis. This diagram aptly illustrates a certain "static" property of time itself in the ontological sense, where it is matter that is in movement, and the unconscious itself that is in flow. It can be seen that the unconscious time, like the stream of consciousness, has a certain property that transcends the conventional linear time[17]. In this context, building on the theoretical framework of the "stream of consciousness" we propose the concept of an "stream of unconscious" to characterize this temporal motion within the unconscious[18]. Only the movement of the unconscious stream is not simply forward or backward, but is constantly doing a kind of seeking movement.

While retention embodies the retention of a prior primal impression in the present, this does not imply the unconscious perceives it as the present. Such retentions recede from the present origin O as the unconscious axis sinks—this is also why retrospection is inevitable, though retention preserves impressions in the present, the unconscious subject does not experience them as present (retrospection remains unrepresented in the diagram, as origin O resides within the continuum of retention). Simultaneously, the diagram clarifies that retrospection and protention is not the retrospection and protention of phenomena itself along the temporal axis, but rather the retrospection of retention on the axis of the unconscious and protention of the future on it.

Conversely, protention's orientation opposes retrospection's direction. S_c and S_c' denote the potential S-time of phenomenon c in the future. The diagram renders the post-origin future as dashed lines, signifying its non-actualized status on the temporal axis; similarly, regions beyond the protentional limit are dashed to indicate their absence within the subject's unconscious state. However, the protentional limit need not align precisely before S_c as depicted, nor must S_c materialize on the object time axis. Put differently, the position and existence of S_c' on the unconscious axis lack strict correspondence to the object time axis—their relationship is imaginary. Thus, the present constitutes the unconscious subject's verification of protention, and it can be referred to as a moment of verification.

Indeed, on the phenomenological scale, C-time is already complete as soon as the unconscious subject completes its attachment of battery to phenomenon a. This time is very brief. First of all,

phenomenon b whose logical time is established does not lie in the subject's perception of phenomenon b itself, but in the subject's inspiration of its S-time—fundamentally that is, of U-time, which is the starting point of U-time, and which cannot exist in itself if U-time is not able to be inspired; this is like the relation between the runway and the starting point, the starting point exists for the sake of the runway but not vice versa. That is, even if phenomenon b ensues in the subject's perception, its unconscious state does not necessarily inspire a new period of logical time.

Similar to protention, retention also has a limit, and this limit determines the scope of retrospection. Since retrospection always occurs when the subject looks back at retention on the unconscious axis, the subject cannot look back at things beyond the scope of retention.. Given that logical time itself is reducible and mergeable, the logical time group consisting of a series of phenomena's logical time can itself be seen as a structure of logical time. For a events group, whether or not the unconscious subject has already established the corresponding structure of events group, and whether or not there is a retention in the subject's perception of that event as it occurred in that past present, subject will retrospectively construct a meaning for the recurring event in the present and go through the establishment of the logical time of that events group all over again. Even if the process of unconscious reminiscence has taken the lead, this does not affect the retrospection, and the establishment of logical time does not end as a result.

Thus, the unconscious subject always creates new meanings of events in the present—even if this is a repetition of events in the past—through signifying activity. And the meaning that the subject reflects on through unconscious recollection is always different from the meaning that the subject retrospectively constructs in that present moment, not because the reminiscence creates a new meaning, but because the meaning of the present moment that the subject reflects on is already alienated from the meaning that is retrospectively constructed in that present moment itself—which, to a certain extent, creates the effect of difference in Derrida's sense. This implies the impossibility of a certain absolute self-realization of meaning itself in the battery of the Big Other, as well as the dissolution of a certain metaphysics of psychic primordially[19].

It is worth noting that for the related phenomena a and b, as we know, the unconscious subject will first construct a logical time around these phenomena at the battery level. At the moment when C - time in time a (C_a) ends, the subject will form a perception of the battery related to phenomenon a. The battery can likewise be called a phenomenon—in linguistic terms, it is composed of images or sounds, which both exist as word-representations, i.e. as objects perceived by the subject. Thus, if the U-time of the battery of phenomenon a can be illuminated, subject will finish glimpsing it in a split second. The subject's attachment to the isolated battery to phenomenon b does not retrospectively construct the meaning of time a (the attachment of the battery to phenomenon a) because the two phenomena are not directly related in terms of temporal proximity at the level of the battery. As for the logical relation between phenomenon a and phenomenon b, the establishment of logical time would also form a discursive structure, i.e., phenomenon a and phenomenon b would be regarded as a connected whole of phenomenon c—of course, the unconscious subject may regard it as a whole of phenomena in the first place, except that such a whole is a whole that does not have a perception of a specific battery, in which the two object phenomena a and b are linked together by spatio-temporal proximity rather than by some logical relation, and are therefore only a perceptual whole in a certain phenomenological sense—and in which the construction of the meanings of phenomena a and b is completed by the establishment of the logical time of the phenomenon c, thus forming a logical event.

6. Conclusion

It can be seen that the mechanism by which logical time operates at the phenomenological level is in fact the same as the mechanism by which unconscious time operates, and that it represents above all the kind of non-linear temporal relations. Unlike Bergson's view of time as a perceptual form of

conscious, or Husserl's view of time as conscious itself, our study is to view logical time as a form of operation of the unconscious. This study creates more possibilities for the development of psychoanalysis in its epistemological dimension, and also finds an application of phenomenology in psychoanalysis that provides a valid paradigm for studying the structure of the subject's unconscious.

References

- [1] Jacques Lacan, *Écrits*, Trans. Chu Xiaoquan Shanghai: East China Normal University Press, 2019.
- [2] Yu, Yang. (2017). *The Temporal Motive and Systematic Misrecognition of the Generation of the "I"-An Analysis of Lacan's "Logical Time and the Determination of Expected Certainty: a New Sophism"*. *Foreign Literature* (3), 8.
- [3] Wang Xiaodong, *Critique of the Theory of Intersubjectivity in Western Philosophy: A Morphological Perspective*, Beijing: China Social Science Press, 2004.
- [4] Edmund Husserl, *The Phenomenology of Intersubjectivity*, Trans. Wang Bingwen, Beijing: The Commercial Press, 2018.
- [5] Plato, *Timaeus*, trans. Xie Yuwen, Shanghai: Shanghai People's Publishing House, 2005.
- [6] Aristotle, *Physics*, trans. Zhang Zhuming, Beijing: The Commercial Press, 2006.
- [7] Martin Heidegger, *Being and Time*, Trans. Chen Jiaying and Wang Qingjie, Shanghai: SDX Joint Publishing Company, 2006.
- [8] Edmund Husserl, *Zur Phänomenologie des Inneren Zeitbewusstseins (The Phenomenology of the Consciousness of Internal Time)*, Hua X, ed. Rudolf Boehm, Dordrecht: Martinus Nijhoff, 1966.
- [9] Jean Piaget B. Inhelder, *The Psychology of the Child*, Trans. Wu Fuyuan, The Commercial Press, 1980.
- [10] Chen Wei & Li Hengwei, *A Neurophenomenological Reinterpretation of Husserl's Structure of Time-Consciousness*, *Philosophical Trends*, 2014, no. 9.
- [11] Ma Ming, *Husserl's Phenomenology of Inner Time-Consciousness: From The Phenomenology of Internal Time-Consciousness to the Bernau Manuscripts*, Doctoral Dissertation, Fudan University, Shanghai, 2010.
- [12] D. Rudrauf, A. Lutz, D. Cosmelli, J. P. Lachaux, and M. Le Van Quyen, *From Autopoiesis to Neurophenomenology: Francisco Varela's Exploration of the Biophysics of Being*, *Biological Research*, 2003, 36(1), pp. 27–65.
- [13] Jacques Lacan, *Le Séminaire, Livre XI: Les quatre concepts fondamentaux de la psychanalyse (The Seminar XI: The Four Fundamental Concepts of Psychoanalysis)*, 1964, Ed. Jacques-Alain Miller, Paris: Seuil, 1973.
- [14] Stephen Hawking, Lennard Monodino, *The Grand Design*, Trans. Wu Zhongchao, Changsha: Hunan Science and Technology Publishing House, 2011.
- [15] Deng Xiaomang, *An Introduction to Husserl's Phenomenology*, *Zhongzhou Academic Journal*, 1996.
- [16] Jean Piaget, *L'Épistémologie Génétique (The Principles of Genetic Epistemology)*, Paris: Presses Universitaires de France, 1970.
- [17] William James, *The Principles of Psychology*, Trans. Bai Xue, Shanghai: Shanghai Translation Publishing House, 2020.8; Xie, Y. (2024). *On the Timelessness of the Unconscious - An Interpretation of Freudian and Lacanian Theories of the Unconscious*. *Jingu Wenchuang* (19); Li Jinhui Wang Yihui (2023), *James's stream of consciousness doctrine and the liminality of phenomenology*, *Northern Series* (4).
- [18] Hu, Kai-Shun (2009). *Study on the Ideological and Methodological Problems of James's Stream of Consciousness - A Comparative Study of James's Stream of Consciousness Theory and Husserl's Phenomenology*. Guangdong: Sun Yat-sen University.
- [19] Zhu, G. *Origin and Difference: Derrida's Deconstruction of the Metaphysics of Origin*. Shanghai: Shanghai People's Publishing House, 2006.