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Lee-Ryeok Hans Han

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Two-timed Strategy for Self-identification

Lee-Ryeok Han

Abstract

Self-identification is studied to identify a being itself including versatile identities of a being. A being is considered to be combination of spatio and temporal identities. Self-identification does not need an outer observer but requires no time flows. Therefore, a concept of a dream is introduced to realize self-identification in time flows. Dream is defined by two-timed flows, which are depicted by opposite moving directions in time flows. The Aristotelian paradigm asserts that the future decides the past which includes candidate beings with probability and allows an instant temporal observation. Thus, the Aristotelian paradigm is adopted to allow a temporal observer who can travel backward in time flows. Accordingly, two-timed flows are brought into the Aristotelian paradigm to let opposite moving directions in time flows and self-identification is realizable in time flows.

Keywords: Aristotle, Quantum, Self-identification, Uncertainty

1. Introduction

1.1 Aristotle's Look

Aristotelian viewpoint of time flows is depicted in a circle of temporal determination as Figure 1. [14] (pp. 104-106).

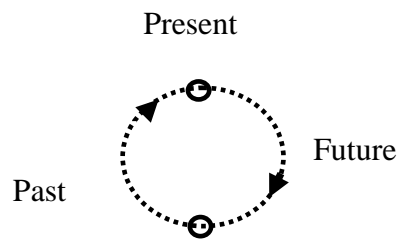


Figure 1 Circle of Temporal Determination

In other words, a circle of time describes that the present becoming from the past evolves to the future which defines the past. The only temporal instance when is able to perceive is now. As the present becomes the future, the future is evolved in chain of nows. However, a being (or state) is perceived during a dynamic transition. If the now might a temporal instance, then it should provide a basis of observation. In contrast, the now is a temporal instance which is stationary so that observation could not be performed. As a result, Aristotle concludes that a being temporalizes and spatializes the present including successive nows in motion. Further to this, a being is defined to be spatio-temporal so that a subject is temporal without specifying an independent spatio one [14] (p. 5). Quantum physics admits that a particle becomes an anti-particle when it travels in opposite time flows. By using

Feynman's diagram [6], Figure 2 can be drawn to describe travelling backward in time flows to reach its a priori one.

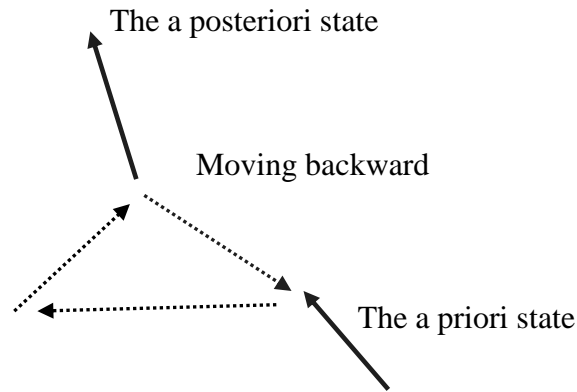


Figure 2 Reducibility in a Closed Recursive Loop by Reverse Causation

Each solid and dotted arrow denotes a respectively a photon and a particle such as an electron to consist of Feynman's diagram. Therefore, a particle moving backward in time flows depicts the reverse causation. If a particle could move backward in time flows, the circle of temporal determination is also explained by Aristotelian paradigm. So, Figure 2 is able to substitute with Figure 1, which describes the Aristotelian paradigm. And, the retro-causality also makes up a closed recursive loop now that justifies reducibility to the a priori one. Despite the expectation of the reverse causation effect in Figure 2, the a priori state cannot possibly be reduced from the a posteriori state in quantum picture. Hence, state collapse is difficult to be explained due to the complete recursive loop in figures 1 and 2. An anti-particle is assumed to be a conjugate particle moving in the opposite direction in timeline. Let the

dashed-dotted arrow be the conjugate with the dotted arrow. The dashed-dotted arrow is used to denote an anti-particle in Figure 3.

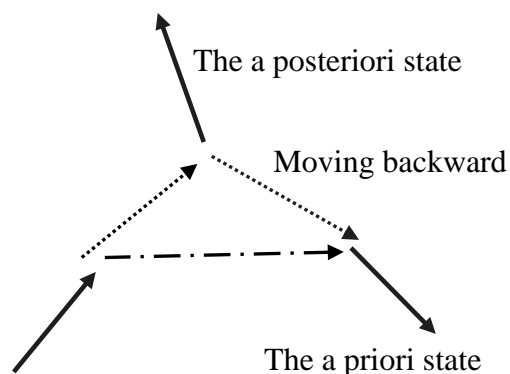


Figure 3 The Multiple Simultaneous a Priori State in a Closed Recursive Loop

Quantum state is so irreducible that is depicted by two simultaneous a priori state as illustrated by heading to opposite directions in Figure 3. Two simultaneous a priori state is termed superposition of state. The choice of superposed state is specified with probabilities to signify respective possible selections of state and depends on measurements. The multiple a priori state also imply the irreducibility that causes state collapse. And they would rather require a particle and its conjugate one than single identical ones of a couple to consist of the a priori state. The tentative attempts how to interpret the quantum uncertainty hold the belief that they need logical justification so that physical investigations do not fail to account for the simultaneous state. Moreover, it is beyond dispute that logical derivations have focused and elaborated on the construction to relate causes and effects in uni-directional orders moving forward or backward in time flows. Therefore, further

investigation on the Aristotle's paradigm is required so as to adopt its teleological determination for the irreducibility.

1.2 Aristotelian Paradigm with Two-timed Process

Consciousness from a brain is compared with quantum physics to explain the irreducibility and state collapse [18] (p. 11). As Mensch [14] (pp. 4-9) points out, the Aristotelian paradigm states that to perceive is to initiate temporalization which is able to be defined as a subjectivity of an observer. Tuszynski and Woolf [18] (p.4) insist that state collapse is led during observation which is in time flows and results in irreducibility between classical and quantum physics. In contrast, Hameroff [8] (p. 232) asserts that unconsciousness can be defined to be timelessness to describe the uncertain state similar to quantum scheme. A dream is specified to be unconsciousness because visual scenes and contents from a dream are perceived without physical sensory observation of objects but with information obtained by internally physiological or psychological processes in a brain. In other words, dreaming can be assumed that there is no outer observer. Accordingly, a dream is inherently irreducible to the macroscopic picture so that a dream would not be observed by the interaction with outer state from an observer. Thus, Blanco sheds light on the irreducibility from Aristotelian philosophy with the process of wake-up from dreaming [8] (p. 230). Hameroff [8] (p. 204) proposes bi-directional time flows to describe consciousness in a dream.

Unfortunately, Hameroff [8] adopts the notion of bi-directional time flows to elucidate recognition in a dream isolated from the outer system but not measurement problem without an outer observer. However, the uncertainty issues such as state collapse and multi simultaneous beings (state) can be assumed to be treated by a dreaming process that is bi-directional time flows. According to the Aristotelian paradigm, a being is a holistic appearance which temporalize and spatialize state of a being and is irreducible. But a significant limitation is set on the holistic concept thanks to an overwhelming teleological viewpoint as a whole by ignoring observation process that could involve subjectivity with temporalization. Considering arguments of Mensch and Hameroff, timelessness is termed the vague definition of a subject, which is an instant observer of a temporal subjectivity. A subject is a temporal identity and assumed not to recognize time flows as if it would be occupied in a temporal dimension. When it comes to observation, bi-directional time flows in a dream can be concerned to complement for holistic viewpoint of the a posteriori and the a priori worlds by adding subjectivity with temporalization. But, if dreaming could be an observation process that reflects the being observed around the outer system, then a dream would be considered as observation state regardless of actuality. It is still certain that stochastic pictures may still be necessary. Heisenberg also indicates that if an observer cannot interact with the outer system where it belongs to, probability is recommended for the

physical descriptions of state¹⁾ [10] (p. 154). In a nutshell, as far as an Aristotelian outlook has something to do with quantum issues, more rigorous attentions need to be paid to the development of justifiable logics to assert the manifest transition between the a posteriori and the a priori state than the holistic viewpoint. The Aristotle's paradigm could be understood to be reducible or irreducible in terms of a teleological viewpoint or a holistic one that results in contradictory arguments even though both translations could be applied to the quantum model. Therefore, a temporal observer in a dreaming process needs to be introduced into an identification strategy to avoid the vague relationships of the a posteriori and the a priori schemes. Further to this, a conjugate part with a temporal subject will inevitably be accompanied on creating multiple simultaneous beings, which makes it irreducible. For this scholarly purpose, the Aristotle's paradigm is presented with a dreaming process in two-timed flows to observe an object.

1.3 Self-identification in Two-timed Flows

If an observer is independent of the outer system when the concept of a dream is introduced to be bi-directional in time flows, then self-identification is expected to have an effect on observation and state estimation. Self-

¹⁾ According to Turok [17], Feynman's diagram is drawn in the stochastic picture.

identification is defined to perceive itself such as the Out-of-body Experiences (OBE) [13]. Self-identification is not physically realizable in time flows, however, able to be constructed through a dream in two-timed flows because observation is conducted without an outer observer. For the purpose of self-identification, an observer is a subject that is temporal and enables to distinguish actuality from a dream. Aristotle argues that a teleological being is what a being is. And then, the a priori being is called to account. If the a posteriori actuality in teleology could be identical with the a priori potentiality in ontology, then they are asserted to be reducible. Consequently, the a priori potentiality in ontology can be compatible with actuality that will not be assumed to be potentiality furthermore. If teleological state of a being is realized as it is the a priori potential state of a being whether the a priori one is actuality or not as a dream as potentiality, then the a priori potential state of a being can be assumed to be completely observed. Hence, self-identification could be complete when the a priori ontology being is revealed such as to be recognized. Specifically, the teleological probability of error covariance refers to the ontological probability of error covariance and remains unchanged while the initial error covariance acts for the error limitation of accuracy.

2. Aristotle's Paradigm

As Mensch [14] (pp. 85-95) points out, a system as a subject activates the physical state in repeated time intervals. Contrary to Aristotle's philosophical

recognition over the physical nature, modern physical frame is based on the mechanical Cartesian grid along with its rolling correspondence of time. Physical state is represented in the coordinate of space and time. Time is related to space that represents the physical state and those would be varied if one of space, time, and state is changed. The varied is subject to time along with space. Their relationships are complete in the Cartesian coordinate of space and time. The causality of the past determines the present leading to the future as the a posteriori estimation. However, the estimation is conducted for the fact that state outputs always have been considered to be potentially realized and this is assumed to be unavoidable because systems are incomplete and the environment is uncertain to be probably inherent. Therefore, probability appears to get to actualization on the flow of historical happens and time-based estimation. The belief takes the uni-directional process of repetition to proceed. The interaction of systems and observation relates a space and the given conditions by expected probability on the time lines as a playing ground. This can be explained by quoting from ‘What is history?’ of Carr [3] (p. 30), who was a British historian:

“... process of interaction between the historian and his facts, an unending dialogue between the present and the past... the rotation of a wheel”

Carr’s rotation of a wheel is depicted in Figure 4. In accordance with the statement of “the rotation of a wheel”, an irreversible recursive function takes reversibility to the past becoming the future through the present and vice

versa. In general, system, disturbance, and noise are considered to be independent of each other. If ‘historian’ and ‘facts’ are replaced by ‘system’ and ‘measurement’ respectively, noise represented by probability may be considered to be an interactive relationship to have an unending dialogue between the system and measurements.

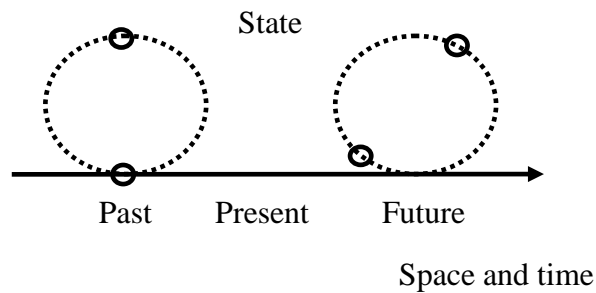


Figure 4 The Rotation of a Wheel

Mathematical, genetic, and organic relations including artificial intelligence have been studied in the fields of sciences and engineering for state estimation to identify an object that is observed. However, if information is lost in the form of noise, estimation could be difficult to be evolutionarily adaptive. Aristotle’s teleological determination is described in a circle as Figure 1. If the time circle is unfolded as a line, then, it is equivalent to the modern view of time flows as Figure 5. Aristotle argues that time accompanies with the space that corresponds to the taken party as a parallel coincidence. With the inseparable formation of the determined, the past is redefined over again as a potential resource according to the future. The past is actualized by the teleological determination of a dynamic model of a being to relate state.

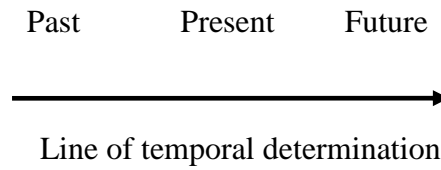


Figure 5 Unfolded Line of Temporal Determination

Thus, the Aristotelian rotation of a wheel could be rolling over the line of temporal determination as in Figure 6.

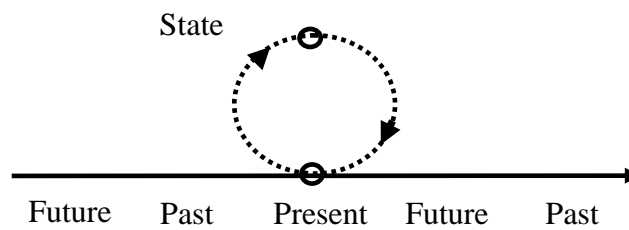


Figure 6 Temporal Line of Aristotelian Destination

Here is another axiom presented by quoting from Mark Twain [5] (p. 121).

“History does not repeat itself, but it rhymes”

According to the axiom, who I am and where I am going are recognized by a wheel of history and corrections even though history of time cannot make it moved by itself. History or time acts as the dimension of measurement for the happened. As time and space are being changed in the definite intervals, state outputs can be estimated on the respective moments and locations. However, as the surface of space seems to be rugged or a wheel of state is not rolling

over the flat surface of the identical time and place, there might be difference between the actual outputs and expectation. Rumbling rhymes of history whispers that space and time could not be made of the flat surfaces. This assumption provides the possible justification for the reason why the same history does not appear with the same envelopes of probabilities as viewed before. Figures 7 and 8 depict the rotation of history on the rugged surfaces as rhymes. Figures 7 and 8 also represent the rugged spatio-temporal combination which can be caused by the reverse causation. Aristotelian paradigm takes the reverse modern view of space and time such that space is a place to provide a predicate of a system in a spatio respect and time is a coordinate party of space. The modern principle is based on the Cartesian coordinates consisting of independent space and timelines.

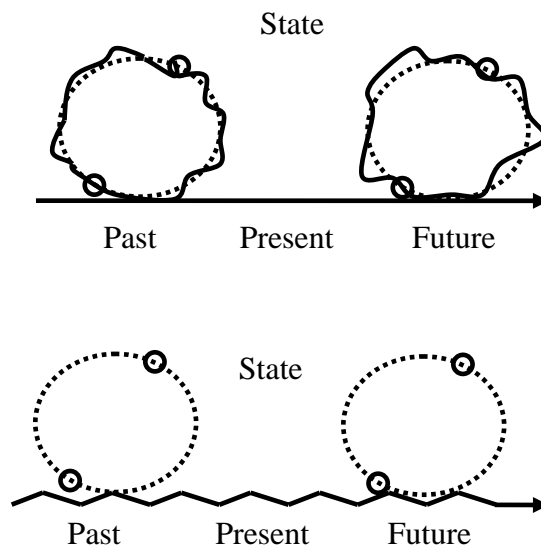


Figure 7 Rugged Surface of Spatio-temporal Line

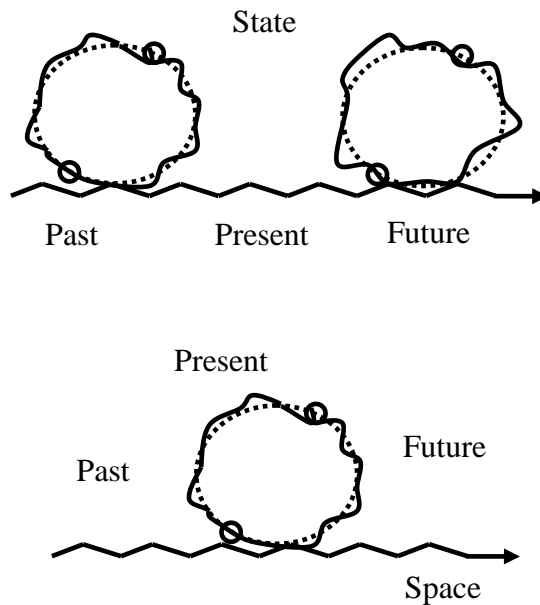


Figure 8 Rugged Surfaces of Spatio-temporal Line

With this mathematical philosophy, physical states are related within space and time as parallel predicates. The anticipated state is formed by a model and causa finalis. A model and causa finalis are translated into representing a system model and its desired output as a mission respectively. And, the modern engineering philosophy considers that a system times the present state by the given temporality to reach the future state. Modern physics specifies that the state transition by a system model can be controlled only in space while the timeline is a step flow which acts as a matching predicate ground [2] (pp. 121- 127). State in prediction becomes identical with the transition of state estimates at the present step by the system model as far as minimization of the error covariance is obtained with respect to the temporal frame [2] (pp.

141-148). This means that estimation one step ahead needs to take the certain system model in its estimator to propagate state in time flows and correct. As far as the now is the only temporal presence to recognize as a reference, the system model is the subject that is a being to propagate the present state in spatio grid²⁾ and that ought to be matched in the temporal presence to correct its motion in a time span that is the mechanical flow, however, independent of the system. Therefore, it can be said that the future state estimates are not dependent on time flows but varied by a system model and the present state to set a limit on the envelope, which could be probability to be defined as matching. This might be caused by the characteristics that the presence of the now is the only temporality to recognize. In contrast, Aristotle asserts that actuality is the future to be taken from the past as the potentiality. Also, the now is a temporal instance which does not belong to the temporal referent. Aristotle insists that a being temporalizes the present. Aristotle's assertion is compatible with the assumption that a system model (a being) invokes state transition (motion) to be recognized in time flows. If a being keeps its state to be unmoved, its space and time are considered to possibly be undefined. The movement of a being is the process that realizes its state in spatio and temporal perspectives. In other words, when a being starts moving along, it spatializes and temporalizes the physical state. On top of that, Aristotle argues that a being's self-manifestation grounds the now which constitutes the

²⁾ When it comes to state propagation, position is state in spatio grid.

continuous time as far as a being keeps its movement [14] (pp. 84-101). In other words, time flows rely on whether a being maintains its operation or not. Accordingly, a being is assumed to consist of temporal and spatio identities.

3. Thought Experiments: Self-identification and Two-timed

3.1 Self-identification

According to Einstein, knowing precedes observation and determines a being [11] (p. 57). As an empirical epistemology, self-identification is concerned in this section and presented with the notion of separate subject and object of a being.

One day when I was a 10-year-old child, I came down on the street and entered a market circle. There were people selling and buying products, looking down displays, and examining samples. Some people were talking to each other. All of them seemed to be busy for something. There, I was standing alone for nothing and could watch them around. As I changed my eyesight to take a look over the space around me, then a view of space had been changed accordingly and I could observe the space and the objects. There was nobody looking at me. They were acting such as not recognizing me and my physical body. I was there like a hollow man among people in the same space. Soon, I wondered whether I was the only subject being beyond other people as object beings. Otherwise, a question occurred in my brain why I could not sense myself as an object as other people and I was not a member of

objects. As Moore claims, this epistemological issue can be explained as:
'How do we know that there exist any other people who have perceptions in some respects similar to our own?' [16] (p. 69). Soon again, I identified that I was a separate being as a subject different from the people as objects in the market circle such that I was looking down them from the place above the space. Incarnation is contrary state [15] (pp. 28-90). I was the only observer as a subject to be able to recognize them. To me, the people in the market circle were the equal objects who seemed to be independent but think of nothing such as busy robots. I speculated whether I was a separate being who did not belong to the group of the other people as objects in the market circle. In a sudden, I could recognize myself standing in the market circle among other people as objects. I realized that some sense of recognition functionality had seemed to leave my physical body and be watching myself away from it. When I perceived that my sense or my eyes were looking at myself away from my physical body, I became an equal object such as the other people in the market circle and the real myself was a self being who were looking at me even though that did not have a physical body. My physical body was sensed as a crisp object of a being. While the sense of subject was separated from a being, time flows were not recognized but my physical body was perceived as an object. Instantly, some person gave a request of me to find a way to go. I answered him. Then, my sense of perception and a physical body were recovered to be a being as before. I identified that I became a (human) being as usual. I became a being who was a subject to perceive and an object to be

perceived at once. I could feel that he was a subject to be able to recognize me as an object and I was a subject to perceive him. Given that a subject could not recognize time flows when it was separated from a being while leaving a physical body as an object, a subject is assumed to be temporal or in the temporal presence. The experience can be partially explained by the Out-of-Body Experiences [13].

3.2 Two-timed: A Dream in a Dream

As a subject party is an observer separable from a self-identity of a being, a concept of dream is introduced to present a subject in the temporal presence. I was sleeping in my bed. While my eyes were closed, I felt that hairs were slowly rising from my head and changed the directions to my eyes. Hairs were folded down onto my two eyes and wrapped them like the wings of an angel's. Those were soft, light, and cosy. I seemed to have had wings on my head. I awoke astonished to get up. Then, I found that I dreamed. I could not get back to sleep because the dream was very clear like reality. I got out of the bed and went to the window in my room to look outside. There was a big tree in the front yard that had not used to be. I wondered when the tree had been moved in and why I had not seen the tree before. Immediately, I felt to be sleepy. I went back to the bed and lay down. And just then, I woke up once again. That was also a dream. I dreamed in dreaming within the same space represented by the same room. In the morning, I went to the window to look outside. There was no big tree in the location. That proved that I saw a big tree in a

dream and dreamed that I woke up from a dream. My hairs must not have moved by themselves. However, if no tree in the front yard in the morning would prove a dream, then the wings of hairs could not remain dreaming because they were perceived by an identity who recognized no tree in the front yard to be actual. As far as no tree in the front yard is proved to be a dream which perceives the a priori state, the wings of hairs could not be defined as the a priori dream even though the wings of hairs seem to be unrealizable. Gregoric contends that sleeping is related to the affection of waking to Aristotle. Dreaming could not be the issue of physical realization but the function of capability which might account for by-work [12]. Also, Caston [4] (pp. 17-18) indicates that Aristotle's philosophy seems to be concerned about the fundamental arguments on the relationships between the intrinsic capability of perception and the extrinsic matter of a being to be perceived apart from the viewpoint of physical realization. Needless to say, previous experiences are necessary for Aristotle to physically realize what is perceived [4] (pp. 75-76). Thus, in the Aristotelian paradigm, a dream could not be considered to mention a being who perceives and is perceived.

4. Subject as Temporal Identity and Object as Spatio Identity

The notion of subject and object is introduced to signify recognition and realization. A being is considered to be an identity who is able to observe and be observed because it is assumed to be spatio-temporal. Therefore, a being is

defined to inherently consist of both identities of subject and object. Dream is different from being which is actual. And identity is defined to be spatio or temporal one. The a priori is specified to indicate a previous one and the a posteriori is being followed in time flows. Self-identification accompanies with the identity separation in order to be recognized as an object by itself. Assuming the separation for self-identification, a subject identity should be cast into the temporal presence and its corresponding object identity is left in the conjugate spatio presence to complete the existence of a being in the spatio-temporal grid. A subject identity belongs to the formless while staying in the temporal presence without enabling the recognition of time flows. An object identity remains in the spatio presence where it provides the firmament presence to be observed and allow a being's existence. Both identities in the spatio and the temporal have the identical self-genesis from a being. Therefore, they do not share any coincidence during self-identification, however, they are able to be contact to observe, be observed or merged in one being. When a subject identity is merged with an object identity in the spatio presence, then a realized being begins sensing time flows in the physical world. A subject is an identity who can recognize its firmament object identity of a being from a distance. As self-identification initiates a subject to remain away from the spatio presence of the a priori being, a subject can be recovered to a being with the a priori spatio presence when self-identification is finished. A being is defined in the spatio-temporal presence as it realizes its presence by merging a subject identity in the temporal presence with an object in the spatio presence.

However, a being is not identified as an object to itself and time flows are sensed when a subject and an object are combined. A subject in the temporal presence is essentially nothing to contain. In contrast, an object is identified based on instant observation. A being with an object is instantiated with the continuity in time flows, which is the quintessential nature of time. For this reason, a subject in the temporal presence needs to be uni-directional so as to hold causality in the framework of continuous time flows. Additionally, Mensch [14] (pp. 6-9) explains that to know is to temporalize. Specifically, Mensch states that to temporalize is to intervene during time flow such as Kant concludes. In other words, a subject in the temporal presence does not recognize time flows and has plausible instances when it is recovered to be a being. This plausibility also requires the temporal referent to have an object matched. With this probabilistic identity, arrow diagrams are adopted from Feynman [6] to denote the probabilistic presence of identities. In Figure 9, the dotted arrow represents a subject identity in the temporal presence, the dashed-dotted arrow stands for an object identity in the spatio presence, and the solid arrow goes for a being in the spatio-temporal presence. The diagrams for the recovery and separation of a being are also presented in Figure 10. A being is denoted by the pair of the dotted and the dashed-dotted arrows. When the separation of a being is initiated, arrows depart from a being. In contrast, arrows put together to become a being. From Figure 10, tail(s) to head(s) diagrams describe a being to become separated or recovered.

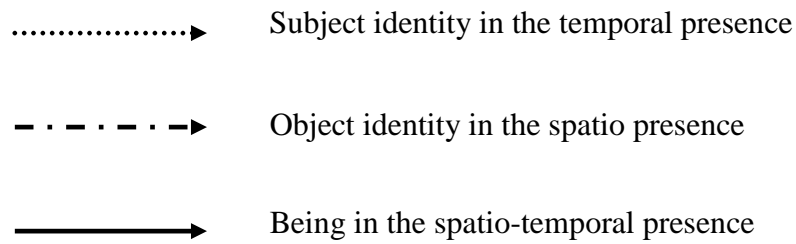


Figure 9 Arrows for Subject, Object, and Being in the Temporal and Spatio Presence

Further to this, arrow heads depict the directions of arrows and indicate that each identity substantiates its own entity as if they might reveal what intrinsic capabilities they have. The heads of arrows signify that their play in subject and object is activated. When an observer begins to perceive an object, not only an observer is realized to be a subject but also an object is brought to a realization of its role to be observed.

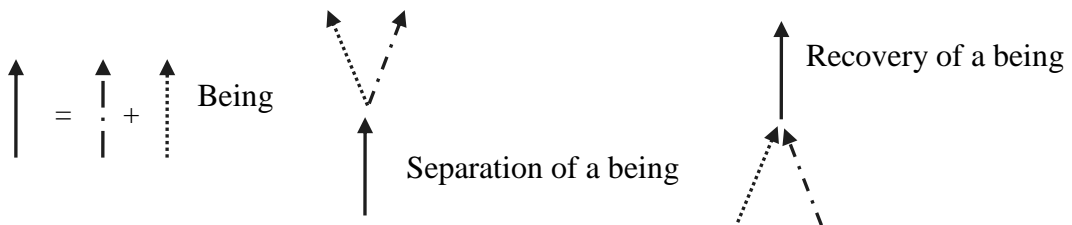


Figure 10 Arrow Diagrams for Separation and Recovery of Subject and Object

The recovery of a being is defined such that a head of a subject is engaged with a head of an object from Figure 10 because a being is realization to consist of a subject to perceive and an object to be perceived. While head to head aims at realization of intrinsic potentialities to observe and be observed, their engagement needs to elaborate on the depiction of observation process.

When it comes to observation, the 3rd arrow diagram from Figure 10 could be understood that both subject and object are recovered to a being as soon as a subject perceives an object. A detailed scheme is specifically referred in section 4.2. If the being's head is introduced to meet up with the head of a subject, the convocation of the heads is defined as self-identification. In Figure 11, the arrows of a subject and a being are gathered.

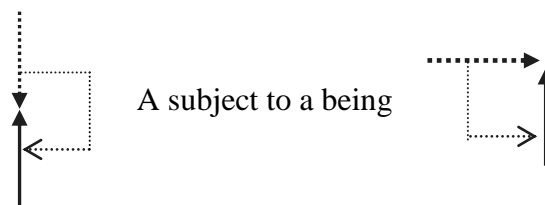


Figure 11 Self-identification

As a subject perceives a being itself, their roles are activated to observe, be observed, and be a being which has been turned out and includes an object. Given that a being includes an object, a being could be observed. A supplementary process needs to be added so as to show that a subject comes from a being to be observed. Then, self-identification process is elucidated. The separation and recovery of a being is combined in arrow diagrams in Figure 12. In Figure 12, the 2nd diagram is also valid if an object is able to move in the opposite direction. The 3rd diagram describes a self-identification as if subjects would be identical ones and a subject observes a being itself from a distance.

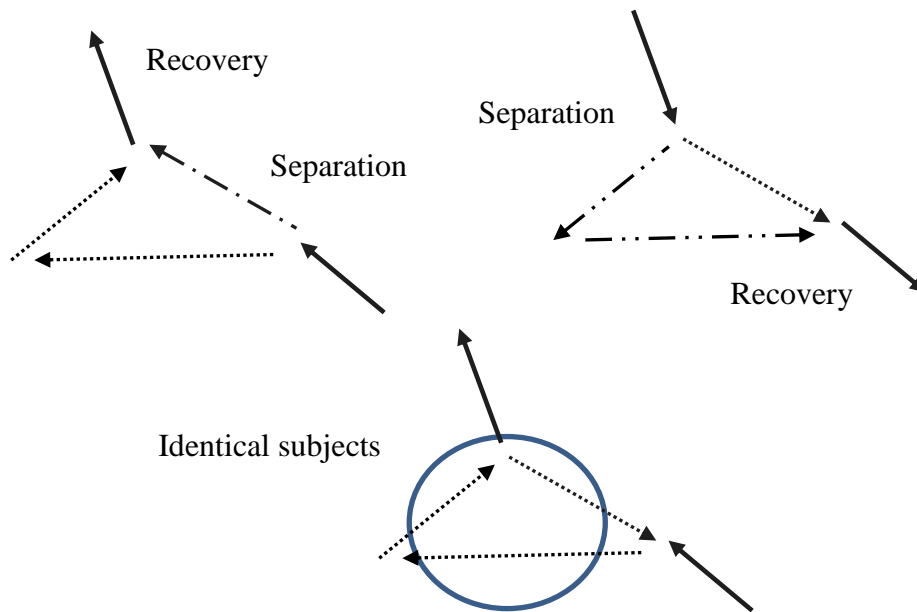


Figure 12 The Separation and Recovery of a Being in Arrow Diagrams

4.1 A Dream in a Dream through Two-timed

To be simple, let the wings of hairs from section 3.2 represent a being. So, the wings of hairs are defined as the a priori identity (being or dream) when it is mentioned. Likewise, let a tree out of the window stand for the a posteriori identity (being or dream). First, the wings of hairs are assumed to be a being because they are sensed as actuality before the a posteriori subject emerges and recognizes them. Therefore, the wings of hairs are depicted with a solid arrow in Figure 13. As the a posteriori being perceives the wings of hairs to be a dream on the time line, the wings of hairs are viewed as an object from the a priori presence. Thus, the successive transition in subject identities is regarded to be the subject shift from the a priori identity to the a posteriori being.

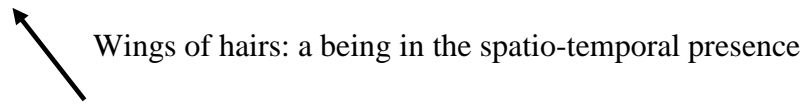


Figure 13 A being: The Wings of Hairs

Accordingly, the a posteriori being has the same intrinsic identity with the a priori one in the form of a dream. The a posteriori being involves a subject to observe and an object to be observed inside of its identity. However, the a posteriori being is not recognized by the a priori one, which needs a subject identity to observe it. Therefore, the a posteriori being is not represented by the separate arrows but by the solid arrow to depict a being. And a subject identity in the a priori one is assumed not to contact the a posteriori being which is not perceived. Figure 14 illustrates arrow diagrams relating the a posteriori being and the a priori dream that is viewed as an object in the past. In Figure 14, the tail of a being to the head of an object describes that a being comes to realization and a dream appears as an object. And, a leaving subject from the a priori dream demonstrates that the a posteriori being is not perceived. A leaving subject could not explain subject shift from the a priori dream to the a posteriori being in the figure.

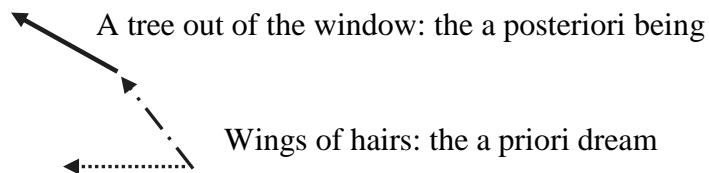


Figure 14 A Being and a Dream

Recalling self-identification from section 3.1, a being is recovered from separated subject and object when an outer observer comes into contact with. To be more specific, an object is a crisp identity in the spatio presence to build up a being. A spatio identity acts as the predicate gate to open up and for a temporal identity to enable to communicate with the outer system. After a while from section 3.2, the new being emerges in the morning again, identifies a tree out of the window to be a dream, and is denoted by the solid arrow in Figure 15. As the a posteriori being is identified as a dream by a newly emerging being in the morning, the a posteriori identity is denoted by separated dashed-dotted and dotted arrows in Figure 15.

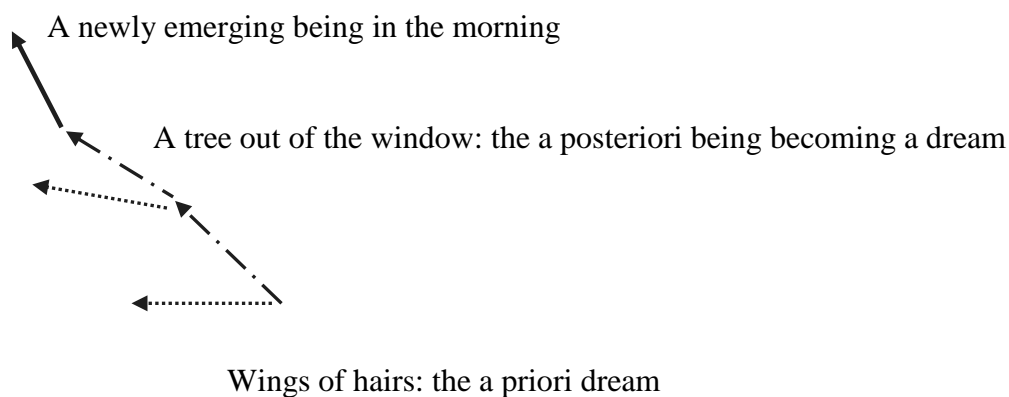


Figure 15 A Being, the a Posteriori, and the a Priori Dreams

Although the a posteriori identity is a being who observes the a priori one as a dream, the a posteriori identity is assumed to be composed of the separated a posteriori subject and object to distinguish the a priori subject and object from the wings of hairs. Furthermore, as the a priori identity in a dream does not

sense the a posteriori identity in a being or a dream, the a posteriori identity in a dream does not recognize a newly emerging being in the morning. Therefore, a subject arrow from the a posteriori identity could be directed away from a newly emerging being in the morning such as Figure 15. But Figure 15 does not illustrate that the a posteriori identity could be an observer of the a priori dream. It is also noted that the a posteriori and the a priori identities are not perceived as dreams until the successive identities emerge and determine them. Before following beings identify previous identities as dreams, previous ones seem to reveal subject identities in beings to be actual in time flows. The same subject perceives the a priori identity as a being, recognizes it as a dream from the a posteriori identity, and then concludes that the a priori identity could be a dream in a dream. Also, each object is identical from the a priori identity to a being in the morning via the a posteriori one, recognized by a successive being, and belongs to a being. When a newly emerging being in the morning is not determined to be a dream, an object is required to be included in a being to recognize time flows. In other words, the identical 'I' or a being initiate identification process as a being to observe and a dream to be observed. Thus, the indigenous genesis identity would remain unchanged through the a priori identity and a being in the morning. Moreover, the a posteriori identity perceives the a priori identity as a dream even though the a posteriori one is concluded to be a dream afterward. Therefore, the a priori one could be difficult to be defined as a dream, which is recognized by the a posteriori identity in dreaming state. From Figure 16, the 1st arrow diagram illustrates

identical subjects and an object through the a priori being and a being in the morning along with separate subject and object to depict a dream.

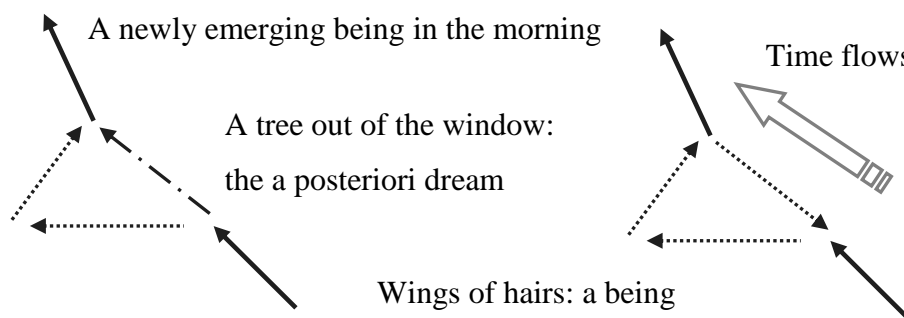


Figure 16 A Being, the a Posteriori Dream, and the a Priori Being

Identical subjects and an object signify state transition from the a priori being to a being in the morning. State transition is explained such as wake-up state after a dream evolves from a being. However, as a subject identity from the a posteriori dream does not appear to the a priori being, the a posteriori dream could not perceive the a priori being. Likewise, the 2nd arrow diagram from Figure 16 describes that the a posteriori identity becomes a subject to the a priori being. Meanwhile, the a posteriori one is not asserted to be a dream because a separate object is absent. In Figure 17, two arrow diagrams from Figure 16 are combined to briefly show how the a posteriori identity in dreaming state perceives the a priori being. Coexistence of separated subject and object in the opposite directions depicts dreaming state. Hence, the a posteriori dream is enabled to perceive the a priori being. The a priori subject in a being travels out of contact with the a posteriori object in a dream,

nonetheless, the a posteriori object from the a priori identity is engaged with a being in the morning.

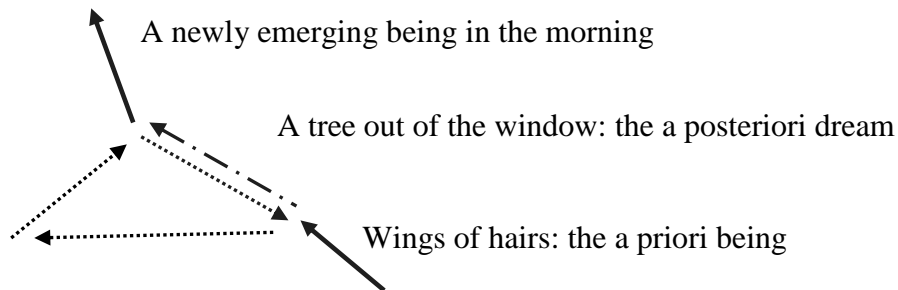


Figure 17 Beings and a Dream

Therefore, the a priori subject does not recognize the a posteriori object that is identified as a dream by a being in the morning afterward. Also, the a posteriori dream is composed of an object moving from the a priori being with an incoming subject from a being in the morning. The incoming subject is independent from the a priori being, that is, a subject of the a posteriori dream does not directly come from the a priori one. In contrast, the a priori object moves to take part in the a posteriori dream and consist of a newly emerging being again. This scheme describes how a being in the morning recognizes the a posteriori dream which perceives the a priori being. At first, the separate subject and object describe dreaming state and the arrow diagram is provided in Figure 18. Head to head depicts to observe and be observed as well. Thus, a subject from the a posteriori dream perceives the a priori being. It is also noted that a subject is temporal and able to move backward in time flows. In Figure

17, an object is obvious by emergence from the a priori being and participates in a being in the morning through the a posteriori dream.

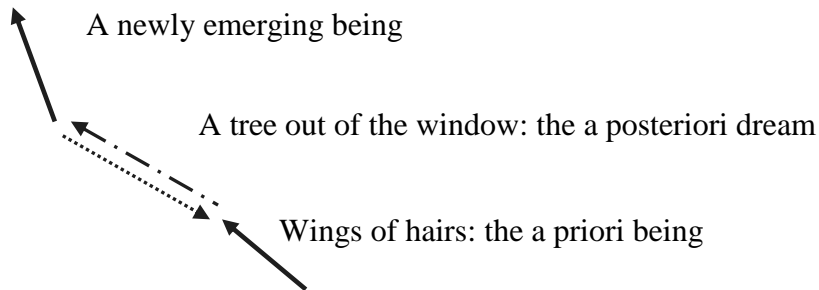


Figure 18 A Subject Moving Backward and the a Priori Being

When it comes to a subject, the incoming subject is necessary to express where it comes from and how it approaches from the right reverse direction to recognize the a priori being. In Figure 19, an incoming subject is introduced to depict where it emerges from.

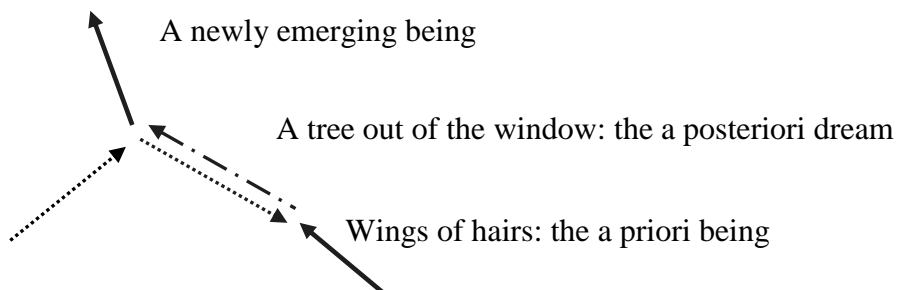


Figure 19 Incoming Subject, the a Priori Being, and the a Posteriori Dream

From Figure 19, a subject appears from the empty space. Even though a subject is temporal, the source of origination needs to be identifiably defined and include the identity of the a priori being regarding the identity transition of a subject. Therefore, a subject is added to show that it departs from the a priori

being for a being in the morning and travels backward in time flows to perceive the a priori being as a dream through the a posteriori dream such as Figure 17. Figure 20 is re-drawn from Figure 17 and provides numbers so as to express subjects in order for the iterative travel.

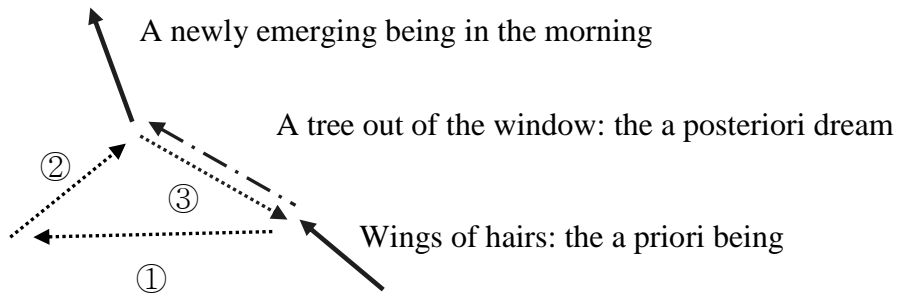


Figure 20 Two-timed: A Dream in a Dream

A subject is assumed to travel such as ① → ② → ③ in order. However, subjects seem to emerge from the order of ① → ③ → ② on the time line. A subject in ③ has nothing to do with a subject in ① without a subject in ② and leads to having trouble identifying the source of a subjects' occurrence. When it comes to incarnation, a subject is separated from the a priori being and becomes recovered a being in the morning such as the 1st arrow diagram in Figure 16. After a while, a subject from a being in the morning changes its direction backward in time flows and perceives its a priori being again. Thus, a subject in ③ appears before ② in terms of occurrences on the timeline while an object moves forward in time flows. Contrary to this, an object travels to involve in a being in the morning as the 1st diagram in Figure 16. Due to re-travelling backward in time flows, a subject and an object seem to remain

separated in time flows. The cognition through the coexistence of a subject and an object is defined as two-timed. The scheme features in time flows and what previous state or identity is or might be determined by a following identity and concluded by a successive being's identity rather than hands-on observation. It is also noted that the first arrow diagrams from Figure 12 and Figure 16 explain state transition in time flows such that the a priori being becomes the a posteriori dream who appears to be a being in the morning.

4.2 Self-identification

Let the a priori being, that is, simply the wings of hairs be a dream. Then, it may be necessary that there is an actual being without the wings of hairs. From Figure 20, a subject moving parallel on the timeline indicates that an object can emerge on the identical timeline but in an opposite direction because a subject is an observer and an object is observed. Therefore, a subject is substituted with an object moving to the opposite direction and not allowed to coexist to depict a dream. If a subject and an object are assumed to coexist parallel on the timeline, it may be complicated to identify which one is a dream as well as a being in the morning. Let a subject and an object be separated from a being while an object moves parallel on the timeline. Figure 21 provides separated subject and object moving parallel on the timeline. Substituting Figure 21 into Figure 20, Figure 22 is obtained with an additional

being who is depicted by moving to the opposite direction of the wings of hairs on timeline.

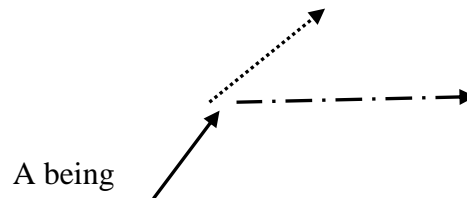


Figure 21 Object Moving Parallel on the Timeline

The opposite directions of the solid arrows on the timeline validate that they are not equal beings.

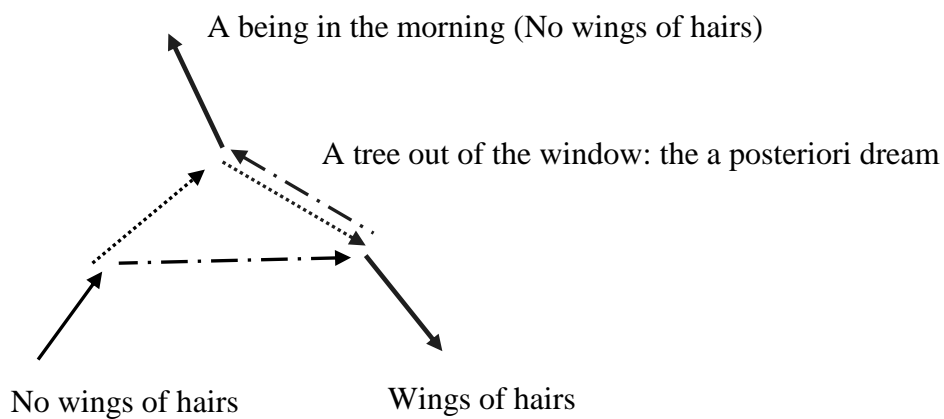


Figure 22 The a Priori Identities

Therefore, a being on the left side is assumed to be a being without the wings of hairs. It is also noted that a being without the wings of hairs is depicted by the same direction to move with a being in the morning. Hence, a being in the morning and a being without the wings of hairs are assumed to appear equally actual and different from a being with the wings of hairs whether it could be a

dream or not. Although an object as a spatio identity would not be assumed to travel backward in time flows, an object moving parallel on the same timeline possibly indicates that there could exist a twin being (or a dream) on the same timeline such as an identity with the wings of hairs. Figure 22 describes that the a posteriori dream perceives the wings of hairs as a dream instead of an actual being, which is without the wings of hairs. An object moving forward is also sufficient to be recovered to the newly emerging being in the morning. In Figure 22, there is no being observed even though a being with the wings of hairs is observed by a subject from a being in the morning through a dream. The wings of hairs are perceived by the sense of touch. Therefore, the wings of hairs could be represented by an observer as well as the being observed because a being with the wings of hairs is not only perceiving itself but also perceived by itself. Hence, the wings of hairs can be depicted as a being who contains a subject rather than the being observed in Figure 22. Figure 22 describes that the a priori subject from a being without the wings of hairs becomes a subject of a being without the wings of hairs in the morning to move backward in time flows, emerge, and become a being with the wings of hairs. This is the reason why both a priori beings are fraternal twins rather than identical ones. Additionally, the same arrow directions of a being in the morning and a big tree in the front yard are assumed to stand for beings with the same identities as no wings of hairs while the wings of hairs are drawn by the opposite direction. Let assume that two identical twin beings are located on the same timeline. If a subject from one of twin beings emerges to the other

being, then a subject appears to a being itself. Thus, self-identification is expected when a subject emerges parallel on the timeline to the other twin being. Meanwhile, an object is not taken to substitute with a subject regarding self-identification. From Figure 23, let identical twin beings be on the same timeline. Figure 23 presents the idea that a subject from one of twin beings emerges to another twin being on the same timeline.

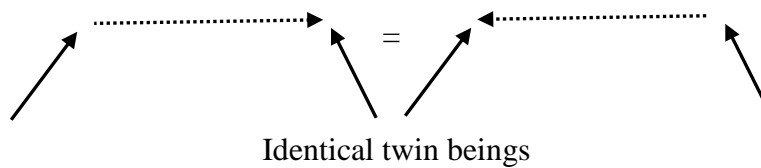


Figure 23 Identical Twin Beings on the Same Timeline

A subject is able to perceive a being itself, whereas a separate object could not appear to a being due to self-identification. An object identity is included in a being. Additionally, Figure 24 is provided to show that a subject could not be substituted with an object moving in the opposite direction for self-identification. Figures 25 is re-drawn from figures 20 and 23 for self-identification while the solid arrow in the opposite direction is taken to present the a priori fraternal twin.

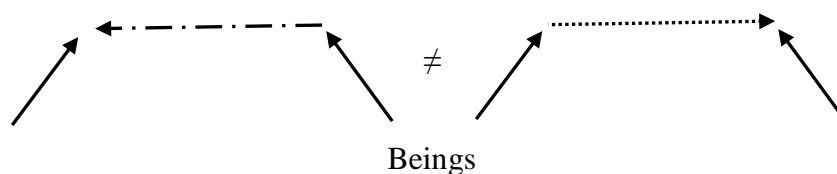


Figure 24 Multiple Beings on the Same Timeline

That is, there is the a posteriori being perceives itself which is described by the same direction as well as the a priori fraternal being exists and is depicted by the opposite direction.

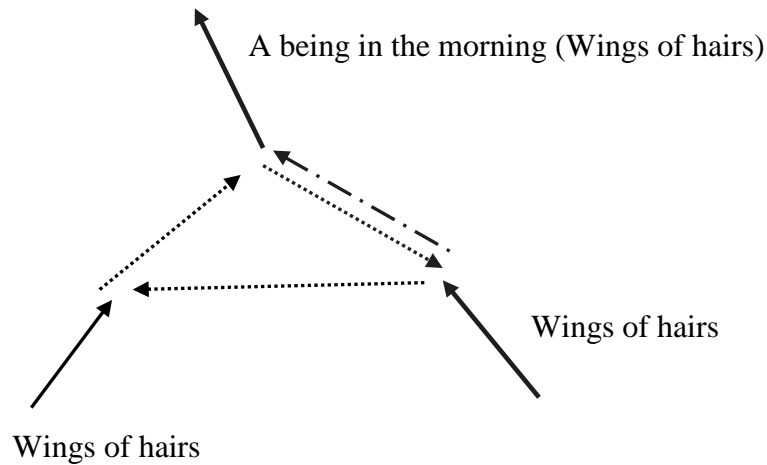


Figure 25 Self-identification

Self-identification is described by the head of a subject from the a posteriori being to the head of the a priori being. Furthermore, when the heads of solid arrows are moving to the same directions, they are determined to be the same ones such that the a priori being observed is recognized to have the wings of hairs as the posteriori a being while the solid arrow with the opposite direction depicts a being without the wings of hairs. If all solid arrows would be depicted with same directions, there should be simultaneously being observed on the same timeline by an observer from the a priori being observed which is perceived by an observer from the a posteriori being. Not only a subject is not able to instantaneously observe both being observed on the same timeline but also the being observed (wings of hairs) is not able to be an observer to the

being observed on the same timeline. In Figure 25, self-identification is explained such that the a priori being is or becomes the a posteriori being. And then, a temporal subject from the a posteriori being moves backward to perceive itself. As far as a being perceives itself through self-identification, the being observed is assumed to be a being as well. Otherwise, the a priori being without the wings of hairs becomes the a posteriori being with the wings of hairs in the morning. Afterwards, a temporal subject from the a posteriori being moves backward to perceive itself that is the a priori being observed having the wings of hairs.

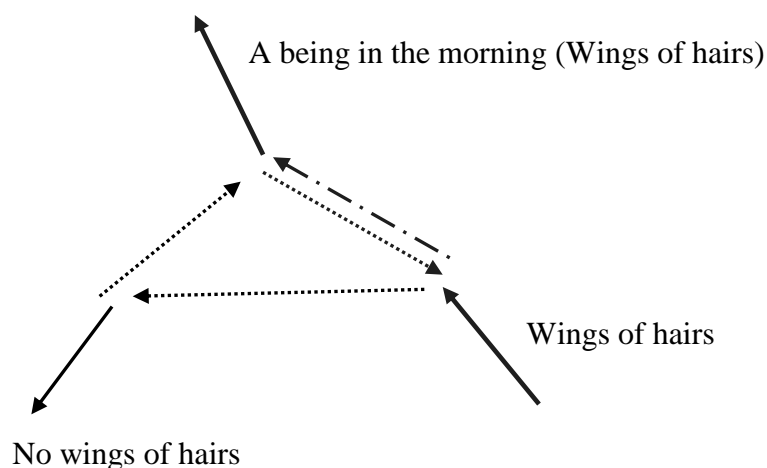


Figure 26 Self-identification on a versatile being

4.3 Temporal Determinator

When it moves backward in time flows, then it can not only observe the a priori being but also become the a priori being. If observation would be conducted to perceive itself by self-identification, then there should not become a being by moving backward in time flows. Instead, the a priori being

is observed to be. Otherwise, the a priori being is realized by moving backward in time flows and appears to be different from the a posteriori being. From Figure 2, the a posteriori being is considered to be separated from the a priori being and incarnated whether the a posteriori being emerges after some time or simultaneously from the a priori being. Hence, self-identification seems to depict that there could be two identical beings on the same timeline while no time flows. In contrast, only fraternal twins exist on the same timelines from figures 22 and 25. Thus, self-identification validates that there is no other being of a self in time flows than identical twins on the same timeline in Figure 2. Otherwise, self-identification might be realized in time flows once there are identical twins while no time flows have been sensed during observation in Figure 2. Specifically, a temporal identity moves backward in time flows from the a posteriori being through two-timed flows and perceives the a priori being which is the same being depicted by the same direction of an arrow in Figure 25. In Figure 22, a temporal identity travels backward in time flows from the a posteriori being through two-timed flows and becomes the a priori being which is different one described by the opposite direction of an arrow. Additionally, the spatio identity moving parallel in the same timeline from Figure 22 explains that there could be the fraternal being such that the identical beings exist in the same timeline through self-identification. Finally, a temporal identity emerges when there exists a being, reveals the a priori twin being depicted by the opposite direction in the same timeline, and causes to be observed or become a being. Hence, the a

priori being could appear to be a different one from the a posteriori being instead of being observed.

5. Aristotle's Paradigm and Two-timed Flows

5.1 Aristotle's Paradigm: Cretan's Liar

Aristotle claims that a subject is temporal and determines an object [14] (pp. 5-9). The temporality of a subject could be specified as now, which is stationary. Thus, the temporal distinction of a subject is maintained through observation on the move. While the sense of a subject decides the result of observation, Aristotle insists the teleological determination by the temporality of a subject. When Aristotle notes teleological determination, Aristotle considers the a posteriori and a priori beings, which are stationary actualization and potentialization after movement. Aristotle states that an object provides a crisp body to be observed and is independent of a being who is an observer. Meanwhile, a subject belongs to a being who is an observer because Aristotle speculates on an object that does not belong to a being to observe. However, a being spatializes and temporalizes itself including an object during movement. Accordingly, an object is actualized through spatialization and temporalization on the move [14] (pp. 87-95). Also, the directions of the temporal determination could be made by the temporality of a subject along with temporalization, which could not be defined on the time ground but out of the temporal envelope [14] (pp. 92-99). The temporality of a

subject causes the temporal determination to be uni-directional in time flows such as moving forward or backward. Therefore, the temporal determination is a notion from the viewpoint of a subject in time propagation while an object should be located spatially or temporally away from a subject of a being. Regardless of the uni-directional teleological determination, state could be reducible for the circularly temporal determination or irreducible for the retro-causality. This contradiction results from the Aristotelian paradigm that a being consists of spatio and temporal identities while a temporal subject is instantly defined and a being and its independent object are on the move. However, a being contains not only a subject but also an object because a being could observe and be observed during movement. To be perceived is actualized when a subject concludes what is perceived. As Descartes points out, a subject can secure the degree of certainty to be perceived in lieu of perception itself. Given that to be observed could be actual according to a subject's determination, a subject's identification is framed in terms of teleological sight [14] (pp. 91-110). Also, a subject is an observer who belongs to ongoing nows, which are respectively and equivalently no time flows. Therefore, a subject is defined to be inherently temporal. However, an object cannot avoid being ontological regardless of observation. For that reason, a number of instantaneous observations substantialize corresponding objects on the move. In this manner, the temporality of a subject appears incarnated in the spatio grid which is ontological and occupied by an object. For example, a line is able to be measured even though that is composed of infinite points

which are presumably empty [14] (pp. 82-97). Identification process of a subject could be assumed to be temporal and teleological while an object remains potential until observation. The Cartesian grid equates state with independent references of time and space. Contrary to the Cartesian grid, Aristotle argues that state could be temporalized by a subject with spatialization during observation. Aristotle also explains the teleological determination such that the past is decided by the future, which evolves from the present to emerge from the past. In other words, the a posteriori being could perform the teleological determination to observe and determine the a priori being. The teleological determination also temporalizes what should be spatialized with respect to the ontological object. That is, a being could temporalize and spatialize itself. If the a priori identity is the ontological object, then the a posteriori identity could be the teleological subject, which is temporal and performs with the temporal direction of the present through the past followed by the future [14] (pp. 104-106). In Figure 27, temporalization and spatialization are represented by arrows, which depict each subject and object in figures 9 and 10. Temporalization is described by the subject arrow. Also, spatialization is substituted with an object, which is ontological to be. As mentioned in section 1.1, Figure 28 presents the Aristotelian paradigm [14] (pp. 91-105). The recursive iteration for the Aristotle's paradigm stems from the teleological determination of the subject that is based on experiences to be known. But experiences indigenously belong to the past. Therefore, the Genesis remains ambiguous about which subject comes first.

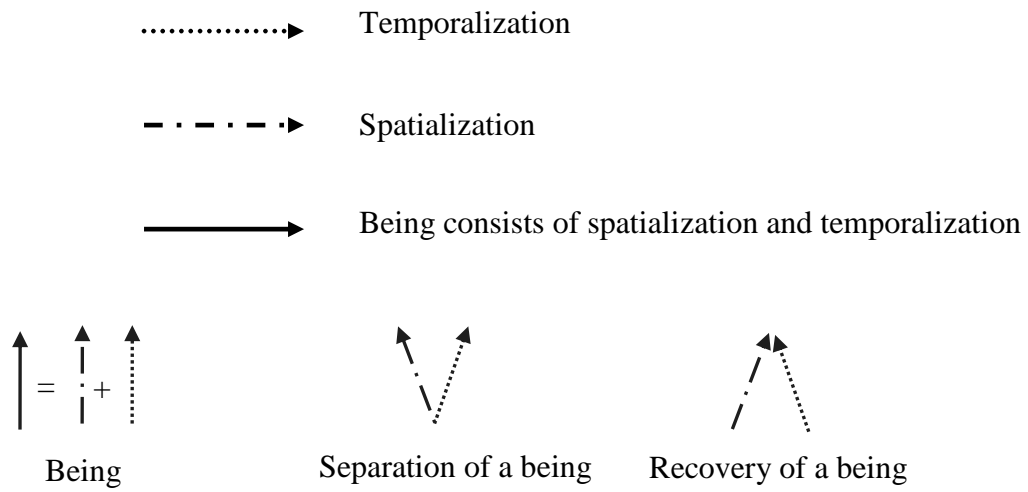


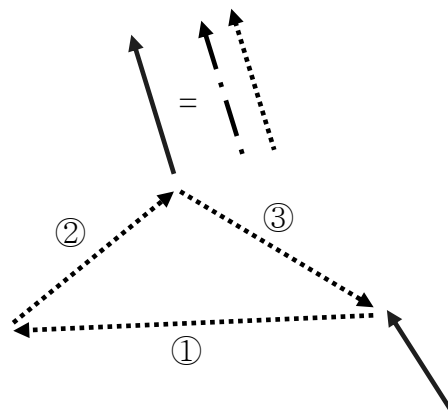
Figure 27 Arrows Denoting the Aristotelian Paradigm

I. Hypothetical proposition:

- ✓ I am Cretan.
- ✓ The incoming subject for ②.

II. Categorical proposition:

- ✓ All Cretans are liars.
- ✓ A subject backward in time flows for ③.



III. Conclusion:

- ✓ Yes, we all Cretans are liars.
- ✓ A subject in the a priori being for ①.

Figure 28 Cretan's Liar for the Aristotelian Paradigm

Ghim [7] (pp.13:2-3) explains that circular directions of time flows bring about the asymmetry of causation. Although the Aristotelian paradigm provides a fundamental philosophy to overcome logical paradoxes for the uncertainty, the paradigm invokes the uncertain determinism such as Cretan's liar. Aristotle insists the teleological determination that a being temporalizes itself. And spatialization is initiated when a being begins to move. If one of observer and the being observed moves, then temporalization and spatialization begin. Accordingly, an object is not assumed to be independent but involved by a being who contains a subject because a being is an identity to observe during movement. To be simple, Aristotle claims that a being temporalizes and spatializes itself as well. Specifically, spatialization and temporalization cannot be separated but brought together such that they are defined on the move. A subject and an object need to be combined as a being for temporalization and spatialization. If one of them is left out, either temporalization or spatialization is difficult to be expected. A subject is an observer who temporalizes; however, an object provides a spatio ground to be physically incarnated and be observed. If the a priori being is observed by the a posteriori being and they are compatible or identical, then the a priori being is teleologically determined along with temporalization. From Figure 2 and section 4, the Aristotelian paradigm signifies self-identification in Figure 28. The a priori and a posteriori beings are identical while an object should be separated from the a priori one and stay recovered to the a posteriori one. As an object remains in a being, an object enables a being to be observed. From

Figure 28, the a posteriori being is also sufficient for self-identification such that the Aristotelian paradigm requires the a posteriori being with respect to the teleological determination. Thus, self-identification equivalently suffices the paradigm from the teleological viewpoint. When the Aristotelian paradigm is applied to self-identification, the separated object is not required. Moreover, time flows are not recognized when a subject from the a posteriori being perceives the a priori being during self-identification. Repeatedly speaking, if a subject is temporal, then an observer is able to perceive a being from a distance during unidentified time flows. An object acts as the spatio predicate to be observed and let time flows be recognized. Thus, a being needs an object to be incarnated as being observed. While what a subject perceives becomes temporalization, the identifiable time flows are initiated when a subject is incarnated in a being with an object after observation. In a nutshell, temporalization and spatialization signify that what is observed by a subject becomes a being, which is to be. Self-identification does not reflect the outer system because of no outer observer and being as well as no time flows. Thus, the Aristotelian paradigm may be difficult to guarantee certain state or a being such as the irreducibility if the outer system is considered. By using figures 12 and 16, a subject could be substituted with an object heading to the opposite direction. Thus, Figure 29 is revised from Figure 28 and presents the arrow diagram to depict the Aristotelian paradigm. Separated subject and object signify the notion of a dream in Figure 29. Even though it is not distinct from Figure 28, dreaming is generally conducted in time flows. As mentioned

earlier in section 1.2, the Aristotelian paradigm is explained by dreaming state. From Figure 28, the paradigm shows reducibility with the reverse causation regarding the teleological determination or retro causation if causal asymmetry in a circular direction is not considered [7] (pp. 2-3).

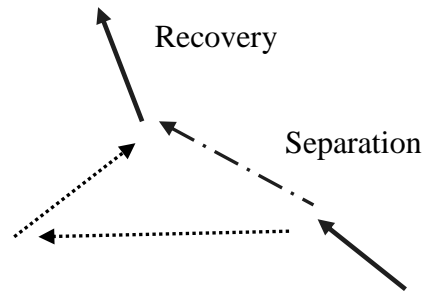


Figure 29 Dreaming State

As Hameroff [8] (p. 204) proposes in section 1.2, bi-directional process could be considered to represent dreaming state. Then, the Aristotelian paradigm is described by Figure 20 such that Figure 28 and Figure 29 are combined to make up a dream with two-timed process. From Figure 20, a subject recognizes the a priori being in a continuous form of time flows. Therefore, no time flows for self-identification could be converted to dreaming state in time flows. In this manner, self-identification is realized in time flows through a dream and the Aristotelian paradigm could be asserted to be flawless. The paradigm could be complemented when the notion of a dream in two-timed is employed to maintain the teleological determination. The Aristotelian paradigm takes Heisenberg by storm regarding the teleological determination because the a priori being could be specified as potentiality, which might be

stated with probability [10]. However, the paradigm also quintessentially states that they need to interact with the outer physical systems including the outer observer. Therefore, the Aristotelian paradigm needs to be corrected and reflect time flows by adopting two-timed process for dreaming state as presented in section 4. Thus, what Heisenberg attempts could be achieved to elaborate the uncertainty through the Aristotelian paradigm. Finally, a reciprocal determinism is also avoided, that is, experiences to be known is not essential to provide a basis for teleological determination.

5.2 Determination on the a Versatile Priori Beings through Two-timed

As Aristotle argues that the a priori being could be potential so as to provide resources for the a posteriori one, then the potentiality could be versatile. Accordingly, the a priori potentiality indicates that there are multiple options to be chosen according to the a posteriori one. The versatility enables the a priori being to be represented by the being observed as it was or as if it were. As the Aristotle's teleological determination provides a basis for the a priori potentiality, the a posteriori being determines the a priori one that would become the a posteriori being itself among potential candidates. In other words, the a priori one is observed in order to recognize the identity among the a priori potentiality and realized according to teleological determination. The process is explained that an observer becomes the a posteriori being in order to decide on the a priori one in the Aristotelian loop from figures 2 and 5. And,

the a posteriori being is realized as the being observed a priori one. For example, the a priori potentiality consists of the wings of hairs and no wings of hairs from section 4.2. And an observer recognizes the wings of hairs between the a priori beings. When the wings of hairs are observed, the a priori potentiality emerges as the wings of hairs as it was and no wings of hairs as if were according to observation. And let a being in the morning be not acceptable to have the wings of hairs, which is depicted by Figure 22. This also results in complete observation because the a priori beings remain potential to be. Otherwise, the a priori being with the wings of hairs are perceived by an observer who has the wings of hairs and becomes the a posteriori being. And, observation is complete such that a being with the wings of hairs perceives itself and appears to be the a posteriori being, which is brought by self-identification.

6. Conclusions

Aristotle maintains that a being is a spatio-temporal one who should be considered while moving in time flows even though Aristotle considers a temporal subject which is instant. Also, Aristotle's teleological determination leaves versatile ontological candidates in the past. As such, two-timed flows present that only identical beings remain alike on the same timeline in no time flows unless the a posteriori being moving backward in time flows causes potentially ontologies of the a priori being. In conclusion, the a posteriori

being is determined among versatile candidates of the a priori being in time flows while observation is complete when Aristotle's paradigm is understood through self-identification by introducing a notion of a dream.

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