



THE SHIP OF THESEUS, INDIVIDUAL ESSENCES AND ARTIFACT IDENTITY

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Abstract

In this paper, I will defend the view that the puzzle of Theseus' ship is not paradoxical from the viewpoint of an individual artefact-essentialist account. After introducing two marginal/opposite solutions – spatio-temporal continuity and original part as conditions of identity – I will argue in favour of a revised version of spatio-temporal continuity of form account. To do this, I will present the necessity of revision in virtue of Carter's counter-argument through the introduction of two possible worlds containing different combinations of these processes. The same line of reasoning, which defends original part as an identity criterion, will be used to challenge his argument. Instead, an individual essential property will be presented by expressing two significant concepts in the artefact's identity: possessing a certain timeline and a particular function. I will conclude that this property is the individual essence that enables identification of single individual artefacts in terms of temporal possibility.

Keywords: Metaphysics, essentialism, artefact, identity, atomism.

THESEUS'UN GEMİSİ, FERDİ ÖZLER VE ESER ÖZDEŞLİĞİ

Öz

Bu makalede Theseus'un Gemisi muammasının tekil özcü-eser bakış açısından paradoksal olmadığı görüşünü savunmaya çalışacağım. Eserlerin özdeşleştirilmesi için zaman-uzamsal süreklilik ve orijinal parçaları şart olarak sunan, böylelikle bu muammaya getirilen iki çatışan çözümü ortaya koyduktan sonra; zaman-uzamsal süreklilik argümanının değişik bir versiyonunu savunmak için deliller getireceğim. Bunda muvaffak olmak için, bu değişikliğin gerekliliğinin; Carter'ın yenileme/tekrardan inşa etme süreçlerine dikkati, bu süreçlerin iki ayrı alternatif dünyada gerçekleşen kombinasyonları aracılığıyla, çeken karşı-delili sonucu olduğunu göstereceğim. Bu kapsamda, orijinal parçaların (yani salt maddenin) özdeşlik kriteri olduğunu savunan aynı mantık onun delilini karşılamak için kullanılacaktır. Ayrıca, Theseus'un Gemisi örneğini muammaya ve paradoksa çeviren sürekli olmayan varoluş sorunu da zaman-uzamsal süreklilik argümanını geliştirmek için kullanılacaktır. Bu bağlamda, ferdi bir temel özellik ortaya konulacaktır ki bu da eser özdeşliği için iki mühim kavramı ifade edecektir: belirli bir zamansal çizelgeye ve fonksiyona sahip olmak. Sonuç olarak, bu özelliğin ferdi tekil eserlerin özdeşleştirilmesini sağlayan ferdi öz olduğunu ortaya koyacağım.

Anahtar Kelimeler: Metafizik, özcülük, eser, özdeşlik, atomculuk.

I. Introduction

Ordinary artefacts are composed of matter, which is designed in a particular way to realize a certain function. They are distinguished from other works of art with this characteristic, which expresses the utility and function of an object. Although this feature is of importance in the case of distinguishing ordinary artefacts from other works of art, it is not of use in identifying artefacts individually on temporal terms. It might seem, *prima facie*, superfluous to search for a property that would enable the identification of individual artefacts, since it is a solid fact that everything is identical with itself and with no other thing.¹ However, *time* and its most salient implication *change*, which is itself another of aspect being; make this solid fact of logic a bit fuzzy. Effects of change, in the sense that artefacts age gradually and preserve the marks of its interaction with temporality, imply the need for the renovation of the artefacts. This led metaphysicians to pose such marginal questions as “Can an object be identical to two distinct objects at the same time?” The discussion of Theseus’ ship is one of the puzzling cases, which has led many philosophical disputes in the metaphysics and called for identification of the necessary and sufficient conditions of identity for artefacts.

This paper will attempt to articulate and defend the view that the puzzle of Theseus’ ship is not paradoxical from the viewpoint of an individual artefact-essentialist account. To demonstrate the necessary and sufficient conditions of identity for artefacts, this paper will focus on individual essences. Firstly, the problems in the Theseus’ Ship case will be recalled. Secondly, the inadequacy of two marginal solutions proposed to solve the puzzling case will be presented. Furthermore, on the very existence of Theseus’ Ship, the view will be defended that an individual essence would be instrumental in the case of re-identification of artefacts diachronically. After evaluating the possible candidates for such an individual essence; the property of possessing *a certain timeline and the potential to function in a certain way* will be articulated and defended as the most reasonable candidate to function as an individual essence for artefacts. In this regard, Mackie’s two arguments, which depend on recycling and tolerance problems against individual essences, will be recalled. I will attempt to defend the view that this individual essence is solid enough to survive such problems. Finally, it will be concluded that this property is the individual essence that enables identification of single individual artefacts in terms of temporal possibility.

¹ Edward J. Lowe, *A Survey of Metaphysics*, (Oxford: Oxford University Press, 2002), p. 24.

II. The puzzle of Theseus' Ship

One of the key principles behind the conditions that make the Theseus' Ship case a puzzle, or a paradox, is that "a ship may survive gradual but total part-replacement" (Hughes, 1997: 53).² Although it seems like an intuitive principle, the case of Theseus' Ship demands a philosophical analysis for this intuitive position.

The ship wherein Theseus and the youth of Athens returned had thirty oars, and was preserved by the Athenians down even to the time of Demetrius Phalereus, for they took away the old planks as they decayed, putting in new and stronger timber in their place, insomuch that this ship became a standing example among the philosophers, for the logical question of things that grow; one side holding that the ship remained the same, and the other contending that it was not the same.³

As the ship undergoes change due to the abrasive effects of the time, the replacement of the parts of the ship becomes a requirement. However, a total-part replacement will call for the philosophical question "whether the renovated ship (henceforward the totally-replaced ship will be called "renovated ship") is the numerically identical ship that Theseus and youth of Athens sailed".⁴ If a total-part replacement is allowed, then the answer to this question is that the renovated ship and the ship of Theseus are numerically identical.

Also, if a total-replacement is not allowed then either it should not be allowed to replace any part or it should be allowed to replace some parts of the ship. Indeed, an arbitrary limit to the replacement won't be logically possible due to the transitive characteristic of identity.⁵ For, whatever percentage of part-replacement is set as a limit, due to the transitivity of identity, this limit will amount to a hundred per cent of the parts. Thus, there are two options remained: either to allow total-replacement or to deny any replacement at all. The latter option does not seem to be tenable since it would make the concept of repair impossible for artefacts. Therefore, Theseus' Ship, or any composite artefact, may survive a gradual total-replacement.

Another key principle behind the conditions that make the case of Theseus' Ship puzzling is the convention that a ship may survive disassembly and

² C. Hughes. "Same-kind Coincidence and the Ship of Theseus", *Mind, New Series* 106/421 (1997): 53-67.

³ Plutarch. *Plutarch's Lives*, with an English Translation by Bernadotte Perrin. (Cambridge MA: Harvard University Press, 1914) Chapter 23, section 1.

⁴ Lowe, *A Survey of Metaphysics*, p.25.

⁵ Lowe, *A Survey of Metaphysics*, p.26.

subsequent reassembly of its parts.⁶ This principle does not seem to be problematic, as the ship can be compared to a watch. The watch undergoes the processes of disassembly and reassembly in case of a repair. However, this simple and basic fact turns the case of Theseus' Ship into a puzzle. For in the real puzzle, presented by Hobbes, these two processes happen synchronically. With this contribution of Hobbes, the case turns into a puzzle:

For if, for example, that ship of Theseus, concerning the difference whereof made by continued reparation in taking out the old planks and putting in new, the sophisters of Athens were wont to dispute, were, after all the planks were changed, the same numerical ship it was at the beginning; and if some man had kept the old planks as they were taken out, and by putting them afterwards together in the same order, had again made a ship of them, this, without doubt, had also been the same numerical ship with that which was at the beginning; and so there would have been two ships numerically the same, which is absurd.⁷

Thus, in the final case there are apparently two similar ships, with the same structure and matter. To be more precise, at the beginning, there is the ship of Theseus. Subsequent to two distinct processes of gradual total-replacement and re-assembly of the parts of Theseus' ship, there are two distinct ships (one will be called renovated ship and the other reconstructed ship) having the claim to be identical with the original ship, namely the ship of Theseus.⁸ As has been mentioned, the principle behind the rationale of these claims is deeply rooted in allowing gradual total-replacement and re-assembling of the parts of the ship.

The renovated ship has the claim to be identical with the ship of Theseus due to the fact that a ship will survive a total-replacement. Also, the reconstructed ship seems to have a solid claim that it is exactly the same ship due to the fact that a ship can survive disassembly and reassembly of its parts.⁹ Thus, these admitted principles leads the case into a conundrum, in which one ship can be in two places at the same time, contrary to the logical principle that one thing cannot be in two places at the same time.¹⁰ Indeed, both the renovated ship and the reconstructed ship cannot be identical with the original ship of Theseus due to transitive characteristic of identity and this logical principle. Therefore, there are three mutually incompatible possible options: i) Theseus' ship is the same ship as renovated ship, ii) Theseus' ship is the same ship as reconstructed ship, and iii) the ship of

⁶ Hughes, "Same-kind Coincidence and the Ship of Theseus", p. 53.

⁷ Wiggins, D. *Sameness and Substance*, (Oxford: Basil Blackwell, 1980), p.94.

⁸ Lowe, *A Survey of Metaphysics*, p.27.

⁹ Lowe, *A Survey of Metaphysics*, p.27.

¹⁰ Simmons, P. "On Being the Same Ship(s)-- or Electron(s): Reply to Hughes". *Mind, New Series*. 106/424 (1997): 761-767.

Theseus is not the same ship as either renovated or reconstructed ship, but it has ceased to exist.¹¹

III. Possible Solutions to the puzzle

Proponents of the first option consider spatio-temporal continuity of the form as the necessary and sufficient identity condition for the artefacts. On the contrary, adherents of second option argue that a watch can be dismantled and re-assembled without losing its identity. Thus, spatio-temporal continuity of form would not be the necessary and sufficient condition of identity.¹² They defend the view that identity of parts, which is not violated in the process of re-assembling, is the necessary and sufficient condition of identity. On the contrary, identity of parts does not allow any part replacement since any attempt to repair a ship results in the destruction of that ship if it is taken as the condition of identity.¹³ Such a position does not seem to be tenable for the persistence of the artefact when the irreversible effects of time are taken into account, and thereby the necessity to replace parts in the case of composite artefacts. However, it seems that both positions are vulnerable in other possible situations.

A strong counter argument against considering the spatio-temporal continuity of form as the identity condition is given by introduction of two possible worlds. Carter¹⁴ presents two possible worlds with the same ship (S) at the beginning. In possible world one (W1) only reconstruction happens, namely all of the original parts of the ship are removed but not replaced and then all parts are reassembled at t1. Let us call this ship S1 (reconstructed ship) in W1 at t1. Thus, there is not any renovated ship in the W1. In possible world two (W2) both renovation and reconstruction happens as in the case of Theseus' ship. Thus, there are two ships: S2 (renovated ship) and S3 (reconstructed ship) in W2 at t1. It is a solid fact that S is identical with S1 (reconstructed ship) in W1. Also, S1 (reconstructed ship) in W1 is identical with S3 (reconstructed ship) in W2, since they have exactly the same structure and matter. Thus, by the transitivity of identity, S is identical with S3 (reconstructed ship) and thereby is not identical with the renovated ship S2 in W2¹⁵. Therefore, it is argued that spatio-temporal continuity is not a necessary and sufficient condition of identity. Instead, identity of original parts is presented as the necessary and sufficient condition of identity.

Although this line of argument seems to be valid and sound at first glance, its validity and soundness depend on the premise that S1 (the reconstructed

¹¹ Lowe, E. J. "On the Identity of Artifacts". *The Journal of Philosophy* 80/4 (1983): 220-232.

¹² Smart, B. "How to Reidentify the Ship of Theseus". *Analysis* 32/5 (1972): 145-148.

¹³ Barnett, D. "The problem of Material Origins". *Noûs* 39/3 (2005): 529-540.

¹⁴ Carter, W. R. "Artifacts of Theseus: Facts and Fission". *Australian Journal of Philosophy* 61/3 (1983): 248-265.

¹⁵ Carter, "Artifacts of Theseus: Facts and Fission". p. 249.

ship) in W1 is identical to S3 (reconstructed ship) in W2 at t1. If this premise turns out to be false, then validity and soundness of the argument will be endangered. In this regard, it can be argued that the process of reconstruction in W1 is different from the reconstruction process in W2.¹⁶ For, the difference turns on the fact that in W1 none of the original parts of the original ship are ever appropriated by another distinct ship.¹⁷ Moreover, it can be held that if the original parts of a ship have been appropriated by another ship, they cease to be parts of that original ship; and when those parts are later reassembled to construct a ship, the ship constructed will be a new, numerically distinct ship.¹⁸ This is what happens in the reconstruction process of S3 in W2. Thus, S1 is not identical with S3. Therefore, S is not identical with S3 but S2 in W2. To be more precise, a replaced part is not an actual part of the ship anymore and what happens in W2 is that one object (S2) continues to exist but another, a new numerically distinct, object (S3) is created from some of the old object's former parts.¹⁹

Another way to express the weakness of Carter's argument can be presented by using the same line of reasoning without limiting the number of possible worlds to two. Let us imagine the same two possible worlds presented by Carter, plus a third possible world (W3) where two renovation processes occur (See below Figure 1). In W3, in the first total-replacement, all of the planks of the original ship (S) have been replaced with the same new planks used in the process of S2 in W2 and in the second total-replacement those old planks are used to replace the ship's (S4) planks. Thus, the original planks of S have been used to renovate S4. At the end of the second renovation, all of the planks of S5 are identical with the planks of S.

¹⁶ Lowe, E.J. *A Survey of Metaphysics*, p. 31.

¹⁷ Lowe, E. J. *A Survey of Metaphysics*, p. 32.

¹⁸ Lowe, E. J. *A Survey of Metaphysics*, p. 31.

¹⁹ Smart, B. "How to Reidentify the Ship of Theseus". p. 148.

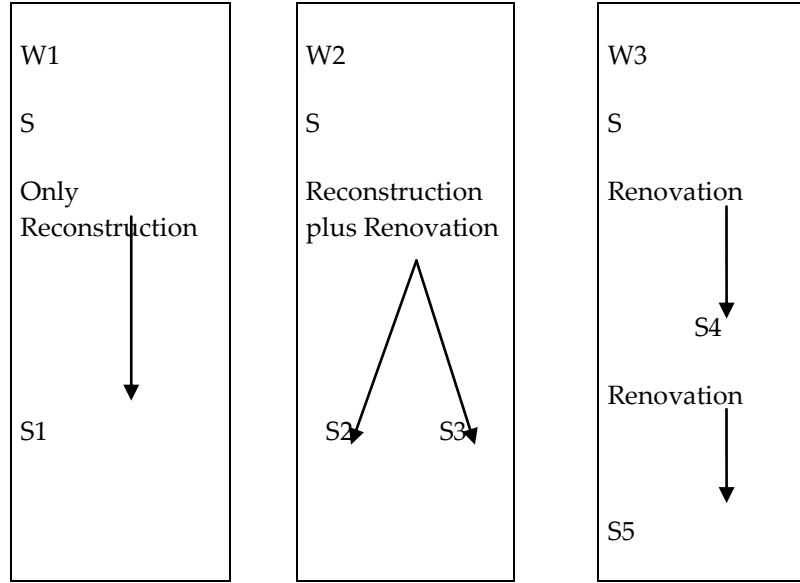


Figure 1

With the reasoning used in Carter's argument, since they are all composed of the same planks it is a solid fact that S is identical with S5. Also, S is identical with S3. However, it is also a solid fact that S4 is identical with S5 since there is only one numerical ship throughout the process. Also, S2 is identical with S4 since they are both composed of the same planks. Indeed, this leads the picture to an absurdity due to transitivity of identity. According to this principle, S2 is identical with S3, which is not possible since they are obviously two distinct objects. Therefore, this line of reasoning is not valid. However, it is useful in terms of expressing the inadequacy of the second possible solution, which argues that Theseus' ship is identical with the reconstructed ship due to the identity of original parts. This situation leaves the first solution, that Theseus' ship is identical with the renovated ship, as the remaining option since it does not suffer from such absurdities. However, the rationale behind this solution is also still questionable due to the problem of intermittent existence. Thus, this solution requires a revision and such a revision needs to reveal the relationship between the persistence (identity) and functions of the artefacts.

IV. Individual Essences and the ship of Theseus

The role individual essences play in contemporary metaphysics is another case in point on the discussion of identity of artefacts. Historically, philosophers used individual essences to individuate objects in space and

time.²⁰ Besides, the existence of individual essences is formed on the basis of the view that there is a distinction between the properties that an object has essentially and that an object has accidentally.²¹

A property (P) is an individual essence property of an object (O) if possessing that property is necessary and sufficient for being that object.²² Indeed, it must be an essential property so that there is no world in which the object O exists and does not have the property P. Thus, it is a necessary condition for being O that it possesses the property P²³. Also, if any object possesses P, then it must be identical to O. Thus, it is also a sufficient condition for being O. Therefore, individual essence properties are selfish properties.²⁴ So, an individual essence property is instrumental to re-identify the ship of Theseus, since Theseus' ship will not share its individual essence property with any other distinct object.

The property of *being identical with the ship of Theseus* is the first property that comes to mind after such a definition, since in the actual world the ship of Theseus possesses this property and there is no world Theseus' ship exists and lacks possession of this property. However, neither this property can be counted as an individual essence property nor can it enable re-identification of Theseus' ship. According to Mackie²⁵, this kind of individual essence property is trivial since every object in every possible world possesses such an essence. What can be counted as an individual essence property according to Mackie, is "a set of essential properties that are (together) non-trivially necessary and sufficient for being Theseus' ship".²⁶ Besides, this property is not instrumental in re-identification of Theseus' ship since both the renovated and the reconstructed ship have the claim to possess the property of being identical with the ship of Theseus. Thus, another property should be presented to point out the validity of such a claim.

Artefact essentialism is another position in point on the discussion of identity of artefacts. According to Denkel artefact essentialism holds the view that artefacts have the same specific function in every possible world governed by the same physical laws²⁷. Indeed, "identity as an artefact is determined in all nomologically equivalent possible worlds by the object's potential to function the way it is designed in virtue of its structure"

²⁰ Losonsky, M. "Individual Essences". *American Philosophical Quarterly*. 24/3 (1987): 253-260.

²¹ Brody, A. B. *Identity and Essence*, (Princeton: Princeton University Press, 1980), p. 84.

²² Warmke, B. "Artefact and Essence", *Philosophia* 38 (2010): 585-614.

²³ Warmke, B. "Artefact and Essence", p. 596.

²⁴ Warmke, B. "Artefact and Essence", p. 596.

²⁵ Mackie, P. *How Things Might Have Been*, (Oxford: Oxford University Press, 2004), p. 21.

²⁶ Mackie, P. *How Things Might Have Been*, p. 21.

²⁷ Denkel, A. "Artefacts and Constituents", *Philosophy and Phenomenological Research* 55/2 (1995): 311-322.

(emphasis is mine).²⁸ Thus, according to artefact essentialism losing the potential to function the way the object is designed, can be counted as that object's losing identity as an artefact. An individual essence property for an artefact, thus, should be presented from an artefact essentialist point of view. This would enable re-identification of Theseus' ship and its identity conditions diachronically as well.

Another property that claims to be non-trivially necessary and sufficient for being an individual essence property is the property of *being originally composed of a certain parcel of matter according to a certain plan*.²⁹ This property seems to cover all the conditions Mackie presents. It is, also, compatible with the artefact essentialist view since it expresses being composed of matter *according to a certain plan*. This expression points to the design of an artefact in virtue of its structure. However, this property is not instrumental in the re-identification of Theseus' ship since both reconstructed ship and renovated ship are originally composed of the same parcel of matter according to the same plan. It seems that a focus is overly given to material and structural properties. For, in the puzzling case the same material of the Theseus' ship is detectable at different times in different ships. To avoid that kind of epistemological *schein*, a focus on spatio-temporal properties should be given.

An artefact possesses many properties such as being composed of certain matter, being designed according to a certain plan, possessing a certain structure, being been to different places etc. Thus, the same individual artefact has many distinct properties but "all these distinct properties have a dynamic unity".³⁰ The reason behind this unity would not be the mere fact that all these properties belong to the same artefact but it should be some underlying property that either determines that these properties belong to the artefact or this underlying property makes this possession physically possible.³¹ Such a dynamic unity, and accordingly the underlying property, can only explain the concept of persistence to change and identity of an artefact over time. It can be plausibly suggested that this underlying property is the individual essence property of that artefact. Also, it can be defended that a timeline provides such a dynamic unity for the artefacts.

A plausible candidate for individual essence property, at least for artefacts, is the property of *possessing a certain timeline which is composed of slices that provide the object the potential to function in a certain way*. It can be argued that the case of Theseus' ship will not be puzzling if an individual essence property can be identified for artefacts, a property which allows total-

²⁸ Denkel, A. "Artifacts and Constituents", p. 312.

²⁹ Warmke, B. "Artefact and Essence", p. 597.

³⁰ Losonsky, M. "Individual Essences", p. 254.

³¹ Losonsky, M. "Individual Essences", p. 255.

replacement of ship's parts and disassembly and re-assembly.³² On this basis, it can be articulated that this proposed individual essence property allows a total-replacement of the parts of artefacts and disassembly and re-assembly of its parts as well. On the basis of this individual essence property, the ship of Theseus is identical with the renovated ship since they are the same ship possessing a certain singular timeline³³ in which a total-replacement occurs. However, the reconstructed ship is not identical with the ship of Theseus since the timeline of reconstructed ship is not identical, actually cannot be identical, with the timeline of Theseus' ship.

As it may be recalled, the puzzle was the case that, from the time t1 on, the ship of Theseus was undergoing a total-replacement process, which ended up with the renovated ship at t2. But at t2 there was another ship, which was built with the old planks of Theseus' ship. The claim is that the ship at t1 seems to be identical with the ship t2. However, if the individual essence property of *possessing a certain timeline which is composed of slices that provide the object the potential to function in a certain way* is taken into account, it is obvious that the ship that is present at t1, namely Theseus' ship, is not identical with the reconstructed ship that is present at t2. For, the reconstructed ship possesses a certain timeline which starts at t2 and the ship of Theseus, in other words the renovated ship, possesses a certain timeline that starts well before t1.

A crucial question in point on the discussion of identity of Theseus' ship with the renovated ship is the question that: 'Can two distinct artefacts have the same timeline?' For, this question points out the possibility that timeline of the reconstructed ship is identical with the timeline of Theseus' ship. If the reconstruction process in the case of Theseus' ship is seen as an ordinary process of disassembly and re-assembly, then the claim that the timeline of the reconstructed ship can be traced back to the construction of Theseus' ship would be tenable. For, if those planks used in the construction of the reconstructed ship belong to the original ship, then the process of reconstruction can be seen as a prolonged process of re-assembly. This would lead to the conclusion that the timeline of Theseus' ship is identical with the timeline of the reconstructed ship.

However, it has been articulated that if the original parts of a ship have been appropriated by another ship, they cease to be parts of that original ship; when those parts are later reassembled to construct a ship, the ship constructed will be "a new, numerically distinct ship".³⁴ Thus, in the case of Theseus' ship it is a fact that there are two distinct ships, which is in line

³² Wiggins, D. *Sameness and Substance*, p. 96.

³³ This timeline is spatio-temporally continuous ship-path of Theseus' ship. This timeline provides a dynamic unity for the possession of all other properties a ship has, including the property of possessing the potential to function in a certain way.

³⁴ Lowe, E.J. *A Survey of Metaphysics*, p. 31.

with the commonsensical intuition, and these two distinct ships possess certain distinct timelines. It is also a solid fact that the timeline of the renovated ship is identical with the timeline of Theseus' ship. Therefore, the renovated ship is identical with Theseus' ship since the ship of Theseus possesses a certain timeline which is composed of slices that provide the ship the potential to function in a certain way it is designed.

One of the key positions the opponents of individual artefactualism might often adopt is the claim that possessing a certain timeline, also, does not survive the problem of intermittent existence. Spatio-temporal continuity of the form was rejected as being the necessary and sufficient condition for identity of artefacts due to this problem since such a condition would not allow the process of disassembly and reassembly. Because, in the disassembled state, the form of the ship is not conserved. One of crucial replies to this problem is the argument that "an artefact goes on existing in a disassembled state during these processes".³⁵ However, a disassembled state is possible for an artefact only if it has the individual essence property of *possessing a certain timeline which is composed of slices that provide the object the potential to function in a certain way*. For, the ship can survive the disassembly only if it does not lose its *potential to function* as a ship. And as long as the ship has the potential to function as a ship, its access to time is not lost. Thus, its timeline continues to exist. Since possessing this timeline is an individual essence property, an artefact would not cease to exist as long as it possesses this property. Therefore, such an artefact does not suffer from an intermittent existence.

Indeed, if the parts of the ship would be destroyed during the disassembled state or they would be appropriated to another object that lacks to function as a ship, then the ship would lose the potential to function as a ship. Its access to time would also be lost. In such a case, the beginning and the end of ship's timeline would be present. Indeed, such a case would not be a process of disassembly and reassembly but it would be a process of disassembly and destruction. On the contrary, under a normal process of disassembly and re-assembly, the ship's property of possessing a timeline and the potential to function as a ship would continue to exist (persist the disassembly). So does its identity. Therefore, from the view point of an individual artefactualist account, there is no such problem as an intermittent existence for artefacts. Thus, the puzzle of Theseus' ship is not paradoxical for an individual artefact-essentialist account.

The last, but not least, position an opponent of individual artefactualist account would adopt is the claim that "an individual essence property must

³⁵ Lowe, E.J. *A Survey of Metaphysics*, p. 34.

be both weakly and strongly unshareable".³⁶ As has been argued, the first requirement will not be a problem for the property of *possessing a certain timeline which is composed of slices that provide the object the potential to function in a certain way*. For, any two distinct objects cannot share a certain timeline. Indeed, opponents of this account could argue that if two distinct artefacts (let us call them the renovated ship and reconstructed ship) are composed at the same time t_1 , then they could have the same timeline. For, if two distinct artefacts have their first moment of existence shared, then it is possible for them to share a certain singular timeline. This argument can be compared to the "Recycling Problem" Mackie presents for individual essence properties. However, the action of composing an artefact cannot be recycled since "all token actions are token events and token events occur at most once in a world".³⁷ Therefore, this property cannot be possessed by two distinct objects within a single possible world.

The concepts of temporal possibility and counterfactual possibility are also in point on the discussion of strong unshareability requirement. According to the first notion, "an object always possesses an individual essence property and it cannot cease to possess this property without thereby ceasing to exist".³⁸ The notion of temporal possibility is not problematic for the individual essence property, which is proposed to solve the puzzle. That is actually what is defended by the property proposed: losing its function and losing its access to time would amount to losing its identity. On the contrary, according to the second notion; "an essential property of an object is a property, which that object possesses at all times in every possible world in which it exists".³⁹ On the fulfilment of this requirement, neither a positive nor negative statement can be made since only an access to the actual world, which is one of the possible worlds, is possible.

All that can be proposed is that identity of artefacts through possible worlds cannot be the case since an agent only has spatio-temporal access to the actual world. However, the notion of trans-world identity is completely a vexed issue itself. Thus, it is not possible to reach a clear-cut conclusion within the scope of this essay. Nonetheless, it can be concluded that, the property of *possessing a certain timeline which is composed of slices that provide the object the potential to function in a certain way* is the individual essence that enables identification of single individual artefacts in terms of temporal possibility.

³⁶ Warmke, B. "Artefact and Essence", p. 596.

³⁷ Warmke, B. "Artefact and Essence", p. 603.

³⁸ Lowe, E.J. *A Survey of Metaphysics*, p. 96.

³⁹ Lowe, E.J. *A Survey of Metaphysics*, p. 96.

V. Conclusion

This paper has attempted to demonstrate that the puzzling case of Theseus' ship is not paradoxical if one focuses on the individual essence properties of artefacts. The case of Theseus' ship and attempts in finding a solution to it are significant in explaining the problem of renovation/reconstruction of an individual artefact at the micro-level, and also in revealing the underlying assumptions for the problems of change/becoming at the macro-level of the metaphysical issues. In this regard, this paper might lead to some indications for the discussions in Kalam cosmology from the point of the view of atomism since "atomism in the form in which it emerged in Ancient Greece was a metaphysical thesis, purporting to establish claims about the ultimate nature of material reality by philosophical argument".⁴⁰ Moreover, atomism claims to explain such problems of change/becoming at the macro level, and renovation/reconstruction at the micro level "by referring to essential units, which cannot be divided further and thereby called atom".⁴¹ According to this, "although such atoms does not undergo any change whatsoever, the variety in their formation corresponds to the observed change, becoming, and transformation".⁴² Thus, Theseus' ship might cause some problems for the atomism in explaining why the reconstructed ship cannot be identical with the Theseus' ship although the original parts of the reconstructed ship and the original Theseus' ship simply share the same essential units, namely atoms. This would imply that the case of Theseus' ship reveals some aspects atomism unable to shed light on.

However, within the scope of this paper, it has been shown that two proposed solutions, without the consideration of individual essences, are also inadequate. In addition to this, the utility of individual essence properties has been introduced in the case of identification of artefacts. Thus, a non-trivial and plausible candidate for the individual essence property has been presented. It has been articulated and defended that the property of *possessing a certain timeline which is composed of slices that provide the object the potential to function in a certain way* is an individual essence property of artefacts and this property is weakly unshareable. Therefore, it is reasonable to conclude that in terms of temporal possibility this property enables identification of single individual artefacts. On the contrary, the counterfactual possibility requires an examination of trans-world identity, which is another paper topic to be discussed.

- ⁴⁰ Chalmers, Alan, "Atomism from the 17th to the 20th Century", The Stanford Encyclopedia of Philosophy (Winter 2014 Edition), ed. Edward N. Zalta, <http://plato.stanford.edu/archives/win2014/entries/atomism-modern>.
- ⁴¹ David Furley, *The Greek Cosmologists: The Formation of the Atomic Theory and its Earliest Critics*, (New York: The Cambridge University Press, 1987), p. 115.
- ⁴² Mehmet, Bulgen, *Klasik İslam Düşüncesinde Atomculuk Eleştirileri*, (İstanbul: Pasifik, 2016) [*Criticism of Atomism in Classical Islamic Thought*], p.17. (translation is mine).

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