

All Hands!

A Unifying Framework for
Responses to Theseus's Ship

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I. Same Ship?

The puzzle of Theseus's Ship addresses the question of how to ascribe a ship's identity if its parts are changed over time. In the original puzzle, a ship sailed by the great Athenian hero Theseus is kept in harbor, but its rotting wooden pieces are replaced by new ones. Eventually, all the pieces are eventually replaced; furthermore, all of the stored rotten pieces are all put together to recreate a whole ship. Three questions arise:

1. Is the ship that had all its parts replaced one by one (which we will call Ship A) still the same object as the original ship?
2. Is the ship recreated from all of the original pieces (Ship B) still the same ship as the original? Is it the same as Ship A?
3. What if all of the wood rot is removed from the wood in Ship B?

Responses often utilize different approaches regarding how changing physical concepts and the passage of time factor into how identity is determined, extended, and held equal. In this paper, we will first analyze three frameworks for responses: four-dimensionalism, a medium ground similar to regular human comprehension, and three-dimensionalism. These frameworks progress from having more structure to having less. We will remark on how each framework might be compared and coexist alongside each other, and present a unifying conclusion that might accommodate the vagueness provided by the existence of all three arguments. Each framework largely centers around the classic metaphysical discussion of determining what "identity" is. In each situation, it is most important to first declare what *the* "ship" is first and foremost, how it answers the three questions, and further implications for confusion that might arise from that decision.

II. Four Dimensionalism (High Order):

Four dimensionalism applied to Theseus's ship communicates that objects extend across time. This response's viability relies on the fact that individual, infinitely-thin time slices all come together to form the object's "history." Thus, regarding what the ship is, the ship's identity is continuously rooted in what the ship was in the previous time state, and whether that miniscule change causes the identity to still hold. This approach of four dimensionalism allows multiple paths to transpire relative to what change occurs, such as when a single part is removed or a molecule of rot develops on a single piece of wood. We will explore one take that falls squarely within four-dimensionalism, and its responses to the three questions.

Continuous Identity with All Parts

This response argues that, eventually, both ships comprise Theseus's ship together, even if they might be considered different objects in some other comparison. This conclusion is reached through the aforementioned idea of small changes over time but maintaining identity. At the end, by this theory, Theseus's Ship is considered as made up of anything that was part of Theseus's Ship at any point of time. Even when a part is removed from the main ship, that part is still considered part of Theseus's ship, as is a new piece of wood that is added to the main ship. So, neither Ship A nor Ship B are Theseus's Ship by themselves; they are altogether what

make up Theseus's Ship. The identity of Theseus's Ship is extended every time step when another part is added to it

This argument is effective in specifically answering the problem and making determinations on each ship, but still relies on additional human consideration of what a part might be, similar to the first argument. Thus, this vagueness still allows disagreement.

One side effect of this argument is also how it may not be scalable. Many objects can become entangled overtime, much like the "overlap" traditional to what are considered different objects in four dimensionalism. For instance, what if those removed ship parts are recycled to become part of a house?

This argument shows how four-dimensionalism shines; it shows how human determinations of objects are simply rooted in our desire to characterize objects as such identities, and to talk about them in such a relevant manner. This unrestricted comprehension is robust, but an attempt to wade into organization does result in increased confusion. A key question that arises from this is whether the existence of an object ever "ends." Furthermore, between competing philosophies, there is still no way to unify conflicting opinions and responses. Four-dimensionalism with this perspective is nice in that it makes headway into organizing the world, but may not be appropriate for human agreeability and communication. Next up, we will discuss a more milder version.

III. Non-continuous Identity (Middle Ground)

We will now explore a middle ground that accommodates similar ideas to human concepts of categorizing objects. It utilizes parts of four-dimensionalism in that the ship's identity can continue through time, but our qualification of what breaks identity through those thin time-slice changes can be different. Furthermore, this flexibility allows the framework to even accommodate a three-dimensionalist interpretation, because the definition of when exactly "change" occurs results in this framework approaching a three-dimensionalist interpretation of identity not existing over time.

Broken Identity for Removed Parts

One argument we will analyze is that parts that are removed from Theseus's Ship are no longer part of what we identify the "ship," and the new replacement parts are wholly incorporated into Theseus's Ship. This is more traditional to what we usually think about on a daily basis; when we "fix" an object, it is still the same object, and usually we no longer consider parts we throw away. In rough description, "Theseus's Ship" is really the physical ship-like object that we've held to be the ship through those time-slice changes.

As the parts are replaced, our concept of the ship no longer applies to each part as it is removed, but rather the main "original" ship that continuously edited. Within four-dimensionalism, this means that the change that cuts off a continuous identity is when a

human-recognized part is removed. Even with each edit, it is still claimed to be the same ship. Thus, our determination is that Ship A is still the same ship as Theseus's, whereas Ship B is *not* the same ship; it is simply a ship put together by parts discarded from Theseus's Ship. To answer the third question, removing the wood rot does not have any effect on the fact that Ship B is not Theseus's Ship, as it was long ago removed.

This does lead to some vagueness, and this view is what results in the confusion with the original thought experiment. Humans, being more visual species and having an attachment to stories and labels we put reality into, feel that the reassembled parts *should* have some relevance to what we have previously thought of as Theseus's Ship.

Furthermore, the specificity of the change is also a challenge. How fine must we define the occurrence of a "part" being removed; what time slice does it exactly occur at? When a block is further than 5 centimeters from the ship? What of when a small speck of wood falls off a piece of the ship, or when a block is temporarily removed and put back, or slightly altered between that?

Towards Three-Dimensionalism

This framework's vagueness of "what is important enough to be considered as a part" even allows a progression towards the spirit of three-dimensionalism. If any slightest change is considered a part (and thus the object almost always continuously changes identities), this begins to approach a classic three dimensional view of identities not existing through time, rejecting regular human concepts of object identities.

To this degree, one way to sum up the vagueness is that we may need to fall back on reasonable human appreciation for what is important enough to consider. Still, this vagueness is largely what allows confusion and does not quite fully solve Theseus's Ship. We will next analyze a full three dimensionalist view of Theseus's Ship.

IV. Three-Dimensionalism and Instantaneous Identities (No Order)

The main argument I will support in this paper is a three-dimensionalist interpretation, as I believe it provides a unifying theory that can even accommodate other responses and properly acknowledge confusion and conflicts. "Theseus's ship" can only be considered so at an infinitesimal sliver of time; identities do not exist through time, and everything at a different moment is a separate identity. This of course refutes the traditional idea of what an object is and how things are largely is called the same thing over time. If one imagined if this was implemented, it would be an incredible inconvenience for human communication.

Under this framework, we argue that Ship A is different from Ship B is different from the Theseus's Ship. Furthermore; due to the infinitesimal time element, one can never particularly specify which items the phrases "Ship A," "Ship B," or "Theseus's Ship" really refer to, as one

can consistently get more specific regarding time slices or the momentary physical movement of atoms.

A Unifying Framework

However, this appreciation offers a flexible response that can fit itself into various solutions to the general problem of Theseus's ship. While other solutions specifically determine what an individual change or identity is, one should remember that the mere existence of arguments and disagreements on this problem hints that it is just as much an individual, person-by-person basis problem regarding the disagreement of human psychology.

Three dimensionalism is effectiveness in light of Theseus's Ship because it acts as a type of least common denominator towards other responses to the thought experiment; it accommodates different theories by identifying those theories through the arbitrary categories they decide utilize. By first claiming complete disorder and discontinuity among instantaneous object identities, it forces the acknowledgement that human grouping of those objects will always be vague and individually determined, and as a result endlessly argued about. This offers an "agree to disagree" type solution, where any arbitrary grouping is prefixed with the acknowledgement that it is vague and will result in disagreements--and that is acceptable.

Admittedly, this argument does not bode well in casual conversation--you would receive strange looks for vehemently adhering to this in all aspects of life. But philosophically, this is what reality truly is; objects and physics are just so and care not about human externalism and labels. Thus we need to acknowledge that the problem of Theseus's Ship is as much rooted in a side effect of effective human communication as much as considerations of metaphysics: we have defined terms that are practical for the level of functionality that human communication requires day to day, and need not be concerned with specifics. Only when we purposefully stretch terms beyond their useful bounds do conflicts arise. We are then forced to admit that the world of course does not have the degree of order we ascribe it; we have only foolishly projected human ideals while mistakenly attempting to have them work perfectly.

But one can rest easy in accepting that our current definitions of "objects" and "identities" serve human communication perfectly well. Should we desire to increase our communication's specificity regarding the world around us, human language will undoubtedly evolve to accommodate.