



Boats, proper names, and identity: an experimental study

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Abstract

The identity-talk is a pervasive element in both philosophical inquiry and everyday life. The aim of this paper is to provide an initial analysis and ordering of characteristics that must cease to be the same for there to be a shift in people's overall perceptions of the object's identity. In contrast with the existing literature, our main interest lies in examining the interconnection between the change of an object's name and the phenomenon of identity. The study consists of vignettes, which were designed to examine three variables: material constitution, name, and function. The undertaken research is conceived as a preliminary to the construction of the hierarchy of principles governing (re)identification. The most salient of our findings are the reveal of a significant influence of name changes on people's identity statements, and the absence of an influence from functional changes.

Keywords Experimental philosophy · Identity · Proper names · The Ship of Theseus

1 Introduction

The identity-talk is a pervasive element in both philosophical inquiry and everyday life. To illustrate the latter, one might state that the same food was consumed for lunch on both the previous day and today (perhaps with the same meal planned for

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tomorrow). Alternatively, it could be said that the food in question was, in fact, different. As competent language users, we tend to take for granted the linguistic means we use to describe the facts of our daily lives. We simply understand the appropriate use of identity statements, that is to say, the *how* and the *when*. However, as philosophers, we are more cautious when it comes to identity.

There are numerous reasons for this, and illustration of one could even begin with the aforementioned example. What does it mean that the food in question was the same? It is evident that the statement is not intended to be interpreted literally, but rather in a manner that incorporates certain practical considerations. Typically, it means that the food in question was prepared using the same method and ingredients, and in some cases, even the same recipe. Alternatively, it could be the same particular item on the menu of a local restaurant. It is important to recognize the presence of a potentially unsettling philosophical quandary. In order to elucidate our everyday usage of the term “the same” with regard to food, we have utilized this very notion in our understanding of other culinary phenomena. So, what does it mean that the method of preparation in question was the same, anyway?

One might recall Quine’s famous slogan, namely “no entity without identity” (Quine 1957, p. 20), and attempt to apply it to the task of making philosophical sense of our everyday linguistic practices. At some point, it would be necessary to address the question of the rudimentary meaning of the statement that such-and-such are the same. It is to be hoped that this would prove sufficient to provide understanding of all other identity statements. We intend to pursue this idea to an extent, but with some important caveats. Firstly, rather than basing our approach on culinary considerations, we will instead turn to the well-known case of the Ship of Theseus as a source of philosophical inspiration. In addition to this, in contrast to a mere theoretical examination of the subject, we will employ the tools of experimental philosophy,¹ in order to shed some more empirical light on the problem.² Our idea is to focus not on the examination of the concept of sameness in and of itself, but rather on investigating the impact of other phenomena (details to be provided in the next section) on individuals’ identity statements. To reiterate, the general approach would be to identify the perceived metaphysical flow of “sameness” from one object to another. For example, one might consider how the sameness of the method of preparation impacts the sameness of the meal. The aim of this paper is to provide an initial analysis (and ordering) of characteristics that must change (cease to be the same) for there to be a shift in people’s overall perceptions of the object. As noted in Scaltsas 1980, p. 157:

[W]e do not employ a sharply defined code of sufficiency conditions and overruling hierarchies between these conditions when deciding questions of artifact reidentification. [...] But this does not mean that in the face of the lack of such a code we can assume or impose a code which we happen to find appealing and

¹ For the *locus classicus*, see Knobe & Nichols, 2008. For the more recent introduction, see Kornmesser et al., 2024.

² For the recent experimental work on this topic, see Rose et al., 2020. For the latest work on whether the Ship of Theseus is a genuine problem, see Dranseika, 2024.

convincing; only the need for making such decisions in everyday life will force us to develop a functionally acceptable code of artifact reidentification.

Moreover, in contrast with the existing literature (e.g. Blok et al., 2001; Rhemtulla & Hall, 2009; Nichols & Bruno, 2010; Leonard & Rips, 2015; Strohming & Nichols, 2015; Berniūnas & Dranseika 2016), point of interest of this paper lies in examining the interconnection between the change of object's name and the phenomenon of identity. It is a relatively straightforward observation that we name some objects in the world and, on some later occasion, change their names. A variety of potential outcomes may result from such a linguistic maneuver. In one scenario, one would argue that the object in question remains the same despite a change of its name. In another, one would argue that the object is different in virtue of the name change. In a yet further scenario, one might argue that the object fails to remain the same, but this is not a consequence of a change of its name. The objective of this paper is to initiate a philosophical investigation into the underlying intuitions that underpin the above possibilities. To this end, we employ an experimental methodology. It is designed to offer sufficient motivation and facilitate a smooth transition between our initial, intuitive linguistic practices and a comprehensive, rigorous philosophical examination.

The structure of the paper is as follows. Section 2 introduces the philosophical context of the issue at hand. Then, in Sect. 3, the methodological preliminaries describing the experimental investigation are laid out. The research hypothesis is also fully formulated there. Then, in Sect. 4, the experiments are presented and the results detailed. Section 5 is a discussion and a summary which provides points for the future research.

2 Philosophical preliminaries

The objective of this section is to present the most important philosophical factors that are relevant to the issue at hand. In Sect. 2.1, the Ship of Theseus problem is described and the most recent experimental considerations are outlined. Following this, in 2.2, the crucial distinction between two kinds of sameness, namely qualitative and quantitative, is presented. Sections 2.3 and 2.4 addresses the role of proper names in the literature on the issue and our novel approach to it. Finally, Sect. 2.5 presents preliminary considerations regarding the concept of functional change. It goes without saying that none of the following is intended to provide a comprehensive analysis of the subject matter. Instead, the idea is to offer a general overview of the key issues at play. Although introductory in nature, the content of this section is not elementary, as “[t]here is no such thing as elementary philosophy. There is no shallow end to the philosophical pool” (Strawson, 1992, p. 7).

2.1 The ship of theseus problem

The Ship of Theseus case presents a problem regarding persistence, i.e. the continuous identity of an object over time. The origins of the problem can be traced back to

antiquity, and one of the accounts of the problem has been translated to English as follows:³

The ship on which Theseus sailed with the youths and returned in safety, the thirty-oared galley, was preserved by the Athenians down to the time of Demetrius Phalereus. They took away the old timbers from time to time, and put new and sound ones in their places, so that the vessel became a standing illustration for the philosophers in the mooted question of growth, some declaring that it remained the same, others that it was not the same vessel. (Plutarch, 1914, p. 49)

It can be reasonably held that the Ship of Theseus is capable of surviving the gradual replacement of its constituent parts. It can persist through time, and thus it seems that the ship in its current state and the ship back then are, in fact, one and the same. Conversely, it can also be reasonably argued that at the point where there are no longer any of the parts that originally constituted the body of the ship, the object that would be referred to as “The Ship of Theseus” ceased to exist (probably not with the last plank being changed, but somewhere along the way). Obviously, the two conclusions cannot be considered valid simultaneously.⁴

The literature indicates that two conflicting principles might be at play:⁵ (i) the continuity of form and (ii) the continuity of matter. The former postulates that the correct reidentification hinges on the preservation of a metaphysical form across concurrent instances of time. In contrast, the latter is exclusively concerned with the (meta) physical aspects of constituting parts. Thus, the issue can be framed as the question of correctly assessing the relative importance of the two principles in a troublesome context. While both principles can be an important tool in navigating most everyday situations, it is necessary to determine what is the correct ordering in regard to peculiar situations such as the one in the Ship of Theseus case. It should be noted that our study is only inspired by the Ship of Theseus example and does not engage with that particular case. The primary focus is on boats⁶, and an examination of the idea of the underlying hierarchy of principles governing (re)identification, as “it might be argued that it is an open question whether there is a hierarchical order between the principles that govern identification and reidentification of objects” (Campdelacreu et al., 2020, p. 556).

³The problem’s contemporary form, which features a reassembled ship constructed from the original components, is a modern twist due to Hobbes. Note that in the Hobbesian story the primary question asked is different, namely which of two objects is the original. We will not deal with this problem because in neither of our vignette stories is there a second object that is reassembled. Consequently, in order for the findings of the study to be directly applicable to the existing literature on the ‘Ship of Theseus’-like cases proper, some further research is required (cf. Sect. 3.1 and Footnote 36).

⁴For more details on additional elements needed for this type of puzzle(s) to occur, see Haslanger, 2009.

⁵For the ongoing discussion, see Rose et al., 2020, Campdelacreu et al., 2020 and Dranseika et al., 2024.

⁶This is also the case in contemporary literature on the subject, e.g. Rose et al., 2020. The idea is that boats are more commonplace and therefore less suspicious than an ancient ship, especially one belonging to a mythological character.

It is vital to emphasize that there is a practical importance to this task, as there are instances resembling the problem in the “real world”. Though they are not common, they are interesting. For example, consider a music band. During the course of the band’s career, there is a typical turnover of members. Some depart to pursue other projects, while others remain. After some time, the band no longer comprises any of its original members, yet it continues to perform music of the same genre, maintains the same logo and still uses the same name.⁷ Two questions immediately arise: firstly, whether the public would consider the band as surviving the changes (i.e. persisting), and secondly, whether this should be the case. One might argue that the current band is no longer the same, as it does not have enough in common with the originally formed band. The challenge, then, is to identify the appropriate scope of this “enough in common” clause. That being said, even without this mundane task rigorously completed, people would surely argue over this identity-talk. Nevertheless, competent speakers of a given language appear to depend on an intuitive grasp of identity statements, particularly in more natural, everyday contexts.⁸

2.2 Two types of sameness

The English term “the same” is polysemous, denoting at least two distinct meanings. The criteria outlined in the previous subsection can be conceived as emerging from this phenomenon. In one understanding, there is qualitative identity, which can be defined as the possession of the same properties. Ultimately, it is the practical context that determines which qualities are relevant and, as a consequence, which objects are identical in this sense. Consider the following example: if one is shopping for shoes and would like a particular pair, but the one they have tried do not fit, they can simply say “Give me the same shoes but in a different size”. It would be somewhat wrong to respond with “Well, if the shoes are of different sizes, then they are not the same”.⁹ In the second understanding, there is a quantitative identity, which can be defined as being numerically the same object. In this instance, the shoes example will also do: if one were given different size of the particular pair of shoes, then it would clearly (in consideration of all the extant knowledge about the internal mechanisms of the shopping situation, anyway) not be quantitatively the same. Nonetheless, it should be noted that for an object to be considered the same from a quantitative point of view, it does not necessarily have to retain its qualitative identity. This is what is meant by “persistence”. While some of the properties of the object may change, it remains numerically the same. To illustrate, if one were to change the color of their hair (i.e. a property) it would be implausible to claim that this person is not, in quantitative terms, the same. That is, obviously, as long as we want to claim that objects do actually persist.

⁷ In the context of musical bands, it could be argued that the sameness of the frontman play an crucial role. Note that artifacts such as ships or boats do not appear to have such an identifying core.

⁸ To illustrate this everyday-ness further, with the somewhat perverse example: on 16 December 2023, the Wikipedia article “Ship of Theseus” has been edited 1792 times since its creation in July 2003. At this time, 0% of the original article’s phrases remained.

⁹ Although, as philosophers, we would probably smile at a cheeky joke. And just then get understandably annoyed.

The above is an important philosophical distinction. The connection between properties and numericality is codified in the formal ontology by the following principles:

- (1) THE IDENTITY OF INDISCERNIBLES PRINCIPLE. For any property P the following holds:

$$\forall x \forall y (\forall P (P(x) \equiv P(y)) \rightarrow x = y);$$

that is, for any objects x, y , if they have every property in common, then they are the same object.

- (2) THE INDISCERNIBILITY OF IDENTICALS PRINCIPLE. For any property P the following holds:

$$\forall x \forall y (x = y \rightarrow (\forall P (P(x) \equiv P(y))));$$

that is, for any objects x, y , if they are the same object, then they have every property in common.

There is a great deal of literature on the status of the above principles.¹⁰ Let us note here only two things. First, both principles can be stated in terms of the distinction in question, namely (i) the former principle says that if objects are qualitatively identical, then they are quantitatively identical, (ii) the latter principle says that if objects are quantitatively identical, then they are qualitatively identical. Second, both of those principles are problematic when one considers the phenomenon of persistence. In the case of identity of indiscernibles, one wants to consider only some crucial properties (or a degree of a particular property, if it is not a binary one) that change, in order to conclude that objects are numerically identical. In the case of indiscernibility of identicals, one wants to state that two objects distinct in time are the same, even though they do not share every single property. When temporality comes, there are difficulties in determining how to factor it in.¹¹ While there obviously exist temporal logics, this paper is not concerned with them. However, the investigation concluded in this paper can be viewed as an attempt to harvest data on how to properly (i.e. in a way that makes them philosophically sound) construct such logics. In particular, it seeks to answer the question of which properties matter.

In the context of this section, the following concern could be reasonably advanced: if people's identity statements are to be regarded as indicative of the underlying concept of identity, then to which of the aforementioned types of identity should this regard apply? It is our supposition that the ordinary concept of 'identity' is neither solely qualitative nor solely quantitative, but it is also not either some third type of sameness, or identity *simpliciter*. Consequently, the phenomenon of 'identity' under

¹⁰ For the overview, see Loux & Crisp, 2017.

¹¹ For more details on the problem, see Lewis, 1986, pp. 202–205. For an account of temporal logics, see Meyer, 2013.

investigation is taken to be an amalgamation of both types of sameness.¹² It is therefore important to consider the qualitative/quantitative distinction presented in this section as an explication rather than an analysis. It is introduced for two main reasons: (i) to address certain methodological concerns related to question formulation, and (ii) to provide the conceptual framework required for the detailed philosophical analysis.

2.3 Proper names

One method of tracing the identity of objects through time, without delving into the intricacies of temporal logic, is the use of proper names. Proper names are linguistic devices that are intended to facilitate the reference to a particular object. Such names are typically reserved for those objects whose identity over time is of interest. Consequently, not every object in the world is given a proper name or requires one. To illustrate, consider the case of a young kid who is gifted a teddy bear. The bear is not remarkable; it is simply a plush toy purchased from a local retailer. The bear exhibits a multitude of characteristics that are shared with other bears manufactured in the same factory, potentially even on the same machine-person assembly line. It is therefore important for the kid in question to differentiate this specific bear from any other teddy bear in existence by some other means. Accordingly, a name is assigned to it, for example “Ned”. This allows any individual with knowledge of the name to trace the teddy bear through changes in time, possibly even to a point in the past. This is the idea.

The semantics of proper names – that is, the question whether they refer to something and, if so, by what means and to what – was a prominent topic of inquiry in the early days of analytic philosophy (*loci classici*¹³ are descriptivist accounts of Frege, 1892 and Russell, 1905). This was later reinforced by seminal (Kripke, 1972), which changed the course of the debate, giving rise to contemporary non-descriptivist accounts of proper names. The above is mentioned here as a reminder that we are not dealing with a unified theory. While considerable insight and new tools to address some philosophical issues have been gained, a comprehensive understanding remains elusive.¹⁴ In other words, there is no all-embracing semantic theory of the natural language, only a certain degree of insight into its local phenomena. Nevertheless, it is important to recognize that proper names are not merely a philosophical or technical construct, nor are they simply familiar expressions of natural language. Rather, they are a fusion of those two. This makes them an ideal vehicle for testing vari-

¹² Furthermore, given that amalgamations are devoid of clear-cut distinctions, the lay people’s ‘identity’ would manifest as a mixture of intuitions pertaining to either type of sameness. The decision to refrain from explicitly introducing the qualitative/quantitative distinction on the vignettes-level was a deliberate one (see Sect. 3.1).

¹³ One could want to track the discussion back to Mill, 1843, although whether Mill was even a proto-analytic philosopher is a contagious matter. For more details, see Caplan, 2007.

¹⁴ For a recent experimental work on the topic, see Genone & Lombrozo, 2012, Nichols et al., 2016, Tobia et al., 2020 and Haukioja et al., 2021.

ous philosophical ventures using the intuitions of laypeople regarding proper names' appropriate use.¹⁵

The relationship between people's identity statements and their use of proper names has been the subject of extensive investigation in the experimental literature. In the majority of studies, the authors assume that proper names function as Kripkean rigid designators. This is because the primary objective in their cases is to utilize proper names as performing their intended function, namely to track the object over time.¹⁶ Moreover, despite the fact that most studies examine personal identity, it is generally accepted that these results could be extrapolated to cases of object identity – such as a teddy bear, a ship, or a boat – in general (e.g. Leonard & Rips, 2015). Obviously, any extrapolations from results on personal identity to cases of object identity are more plausible than the other way around. However, it is not our intention to engage in speculative conjectures and highly theoretical speculations.¹⁷ Theories of proper names are numerous, but in this paper we wish to align with the Strawsonian paradigm, therefore “[w]e do well to approach discussion of the matter in a low key” (Strawson, 1974, p. 35). Consequently, it is imperative to approach the subject in a reserved manner, avoiding speculation concerning the intricacies of the inner workings of proper names (i.e. their nature). Instead, the emphasis should be directed towards their practical utility.¹⁸ In order to walk the Strawsonian talk, it is necessary to establish the criteria that a useful proper name must fulfill. Strawson proposed the following:

Consider the following three conditions: (1) there is a circle or group of language-users among whom there is a frequent need or occasion to make identifying reference to a certain particular; (2) there is an interest in the continuing identity of the particular from occasion to occasion of reference; (3) there is no short description or title of that particular which, because, say, of some fact about the relation of the particular to the members of that circle, is always available and natural within the circle as a constant means of identifying reference to that particular. These are surely conditions under which we might expect a proper name of that particular to have useful currency withing that circle. (Strawson, 1974, p. 36)

¹⁵ Proper names are far from the only notion of this kind, e.g. truth can also be seen in this way. For such an account, see Ulatowski, 2018.

¹⁶ As an example, consider the following: “[w]e assume [...] that proper names like *Jim* are rigid designators that always refer to the same individual across situations or possible worlds [...] Participants who state that the transplant recipient is no longer *Jim* are, therefore, affirming that the recipient is no longer the same individual” (Rips et al., 2006, p. 7) and “[i]n doing this, we assume [...] that folk judgments about identity can be read off one's use of proper names” (Berninas & Dranseika, 2016, p. 96).

¹⁷ For a detailed analysis of various problems with treating proper names as rigid designators in experimental studies, see Dranseika et al., 2020.

¹⁸ To quote Strawson further: “I think, we have to bear in mind that an understanding of linguistic function pre-eminently involves an understanding of the UTILITY of linguistic forms in communication between human beings variously circumstanced and variously equipped” (Strawson, 1974, p. 35). Capitalization in the original.

The above constitutes a sort of minimal theory of reference to which this paper adheres. The obvious immediate gain is that it eliminates any doubts that may surround the role of rigid designators in the discussion. Furthermore, it serves to elucidate the significant similarity that proper names exhibit with regard to a different phenomenon, a topic explored in the second-to-next subsection.

2.4 Name change

Despite the fact that the investigation of proper names constitutes a big part of the tradition of analytical philosophy, it is regrettable that the phenomenon of changing a name cannot be said to be specifically covered. A re-examination of Frege's Puzzle of Hesperus and Phosphorus (Frege, 1892) reveals a notable similarity to the issue inquired about in this paper. However, it is evident that the gist of the problem lies elsewhere. In Frege's case, there are two proper names that refer to the same object, and the identity of the object is presumed. This is because the puzzle concerns the semantics of proper names and the possibility of two names having different senses and yet referring to the same object at the same time. In contrast, the focus of this paper is the situation of the elimination of one proper name (through some sort of performative act) and the simultaneous introduction of a new proper name in its wake.¹⁹ It is important to note that, given the aforementioned goal, further seminal advancements in the proper name theory made by (Kripke, 1972) and (Evans & Altham, 1973) are not particularly helpful either. The reason being that considered cases are of reference shift in scope of one proper name,²⁰ rather than renaming an object and then considering a possible change in its identity.²¹ In summary, the (non-) moving parts under investigation are different in ventured in the literature and the present paper's cases.

The present study is further complicated by the scarcity of real-life examples of object name changes that do not also entail substantial alterations to the object in

¹⁹ It is important to note that, in the majority of popular theories of proper names, it is not possible to simply assert that a name ceases to exist and is replaced by another in the outlined manner. For example, according to the causal-historical account, a proper name is not truly eliminated; rather, we simply cease to utilize one referential chain and transition to another. The former name remains, and it is possible to revert to it and successfully employ it until it is completely forgotten. However, this issue is not pertinent to the present study, as its objective is to examine situations of name change, independent of any specific philosophical background and their metaphysics of names.

²⁰ The famous, historical example of a name "Madagascar" is as follows: "Not only are changes of denotation imaginable, but it appears that they actually occur. We learn from Isaac Taylor's book: [...] "In the case of 'Madagascar' a hearsay report of Malay or Arab sailors misunderstood by Marco Polo... has had the effect of transferring a corrupt form of the name of a portion of the African mainland to the great African Island" (Evans & Altham, 1973, pp. 195–196).

²¹ It is noteworthy that this particular type of scenario has been the focus of research in the domain of developmental psychology. Consider the following:

[h]owever, it is possible that children may also rely on the gender information that is provided by the names that are used to refer to the person. [...] Since children do not clearly understand that words are arbitrary symbols for objects they believe that when names are changed properties of the object are also changed. Presumably, they would also believe that if a name was retained, properties of the object also remain the same" (Beal & Lockhart, 1989, p. 196).

Hopefully, it is clear that there is a considerable amount of philosophical unpacking to be done.

question.²² In the majority of cases, name changes are playing a merely subsidiary, somewhat symbolic role.²³ In the absence of such sole name changes it is harder to expect people to form any reliable intuitions regarding its influence on objects identity, and, consequently, to investigate those intuitions in an experimental fashion. Nevertheless, it is possible to provide some examples, such as organization re-branding, the renaming of a country or geographical location, or the change of person's name.²⁴ However, not a single aforementioned example pertains to an ordinary object, but rather more complex, somewhat societal entities, which would, in turn, even further complicate their identity criteria. What's more important, in most of these cases, change of name could be argued as a consequence caused by some other important change: in the case of countries or geographical locations it can be change of a political line, while in the case of a person it can be some profound change in their life (e.g. baptism into a new religion or a gender reassignment). The name change very rarely comes in isolation from similar external-to-internal factors, although it is surely possible.²⁵ Still, it appears that a sole name change is an infrequent occurrence. This may be indicative of the possibility that changing a name may be perceived as a result of an associated essential change (i.e. a change in essential properties), even in the absence of it, on the account of the frequency with which they are correlated.²⁶ For some work-in-progress idea on such essential properties let us turn to the last subsection of the philosophical preliminaries.

2.5 Functional change

The examination of the function of an object is one method of identifying its essential features. This is an extremely effective form of analysis, although it is limited in its ability to unproblematically address objects that are not artifacts. In general, natural objects are devoid of such functional characteristics.²⁷ In contrast, artifacts do not

²² It is assumed here that a name is not an object's property, and it is not just dependent on relation between a person and an object but rather on a relation between people in a language community or triangular relation between person, community and object. For more details, see Davidson, 1991, pp. 159–160 and Sect. 5 of this paper, especially Sects. 5.2 and 5.5.

²³ This symbolic role is evidently of great importance; however, it is beyond the focus of the present study. For details on “symbolic interactionist perspectives [which] underlie most sociological interest in the study of identity”, see Serpe & Stryker, 2011.

²⁴ Already infamous example of a second case would be politically driven push to rename the body of water in-between Mexico, Cuba and the United States to “Gulf of America”. For reference points on the first (with the symbolic account) and third cases, see Glynn & Abzug, 2002 and Law, 2003 (which is, again, the symbolic interactionist account), respectively. Have in mind that the former is abusing the concept of “isomorphism”, which is a technical, logical notion.

²⁵ As an example, consider a case where someone changes their name just because they do not like it or this particular name is badly associated (see the interesting case of Adolf “Adi” Hütter). Note that while disliking and bad association are impacted by the external factors, the impact is not profound in its nature. Thus, it is better to describe those situations as examples of external factors, yet not external-to-internal ones.

²⁶ Again, for a similar hypothesis being raised in the context of children's reasoning, see Beal & Lockhart, 1989.

²⁷ Notwithstanding, functional approach is one of the most dynamically developing strategies in contemporary biology. For more details on the use of the word “functional” in biology, see Keeling et al., 2019.

merely exist as part of a given state of affairs; they are created from the ground up and often embody an underlying idea of their intended function.

It is reasonable to presume that the above should not be met with (much) controversy. However, if one can provide a functional definition of an object, then, in consequence, one can also provide a set of distinct properties that are the basis for the object's ability to perform such functions. Accordingly, the so-constructed set may be regarded as an indispensable core of the object's identity. It follows that should any of the properties in question undergo a change, the object would cease to be quantitatively the same.

While we do not necessarily adhere to staunch functionalist view, it is reasonable to hypothesize that functional changes may influence people's perceptions of an object's identity.²⁸ Furthermore, there appears to be a significant resemblance between names and functions, namely that both are of a social importance. Consider the following commentary:

[B]ecause of the uncontroversial existence of intelligent makers in the artifact case, what the function of an artifact is and how that function is established can be easily traced to the purposes of the human agents who made and/or used it. Thus if there are any theoretical difficulties, they must lie in the analysis of intention and intentional action, not in the analysis of artifacts. On such a view, anything that needs to be said about artifacts can and should be said within the confines of philosophy of mind and action. (Preston, 2009, p. 213)²⁹

It is noteworthy that the Strawsonian approach to proper names is also somewhat functional. In the view of minimal requirements, it is not necessary to analyze the metaphysical status of proper names; instead, one should focus on their functions within the linguistic community. The same can be said of artifacts. Both phenomena have their origin in some societal need. In the case of proper names, this is a need to refer to a given object. In the case of artifacts, it is an object in itself. Thus, given that one can assign a proper name to an artifact (as illustrated by the example of Ned, and also pursued in Leonard & Rips, 2015) and that there seems to be a common ground between both phenomena, it seems to us a good idea to supplement the investigation of proper names with an interest in functional change.

3 Methodological preliminaries and hypothesis

This section presents the methodological approach employed in the study. The primary objective of Sect. 3.1 is twofold: first, to explicitly state its novel aspect, which we refer to as the direct setting. Second, to provide a detailed account of the philosophical undertaking. In Sect. 3.2, the initial hypotheses on the experimental results are presented.

²⁸ For the experimental study on functions and identity, see Rose 2015.

²⁹ It must be noted that Preston is disagreeing with this perspective, despite his diagnosis of its prevalence.

3.1 The direct setting

The motivation behind the study was to directly address people's beliefs about identity statements³⁰. In contrast to the aforementioned literature, the approach was to:

- (i) refrain from the use of proper names as means of testing intuitions about identity,
- (ii) utilize proper names as one of the changing variables to investigate their interplay with identity statements,³¹
- (iii) focus on artifacts, namely a boat, given that it is relatively uncontroversial that the name (or material constitution) of a boat is subject to plausible change in everyday life.

The objective was to check whether such changes made to the artifact would affect participants' responses. Additionally, it was hypothesized that other variables might have a comparable effect on people's responses. In this paper, a case study of a functional change is presented. The choice is motivated in two ways. Firstly, again, it is rather uncontroversial that such a change could occur with regard to the artifact. Secondly, there is an aforementioned resemblance between names and functions. Moreover, we inquired about two different kinds of sameness (lexically demarcated in Polish, but not in English). This makes it in general possible to compare the results of Polish speakers³² with those of English speakers; and studies conducted with the assumption of proper names being rigid designators and our Strawsonian approach.

In light of the above considerations, the following is the baseline scenario of the experiment, wherein no variables of interest are being altered.³³

Scenario 2.1. (Basic)

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts,

³⁰To this end the participants were not informed about the philosophical character of the study. The rationale behind this was that, in order to stimulate intuitive responses concerning identity statements (about an unassuming boat, cf. Footnote 6), participants were to refrain from philosophizing (engaging in philosophical contemplation, if one will) of the posed questions. The purpose of the vignettes is to obtain the data on participants' perspectives on the correct treatment of identity statements, from which some philosophical points (not to say the underlying philosophical theory) can be deduced by the philosophers behind the study, i.e. the authors. It is not the intention to request that participants explicitly present (or, arguably, made up on the spot) their philosophical views. It is evident that any allusion to 'philosophy' is, in general, rather peculiar in everyday contexts (cf. Introduction), which, in turn, has the potential to compromise the efficacy of the results. The philosophers behind the study would like to express their gratitude to the anonymous reviewer for highlighting the need for this elaboration.

³¹It is important to note that the name change is approached by us from a binary perspective, yet this is not obligatory. Although less prevalent, the change of a name can happen as a spectrum. For a reference point, see Aksholakova, 2014.

³²A pilot study was conducted by us in Polish, although it was not carried out with the full experimental rigor. Consequently, the results will not be presented in full detail in the main body of this paper. This comparativist approach was carried out on Lithuanian speakers in Dranseika et al. 2023.

³³Full vignettes and questions can be found in appendix.

enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has properly maintained her boat, so she didn't have to repair or replace any parts.

The primary question to the above scenario was the following:

Question 1. Is the boat now the same as the boat 10 seasons ago? (Yes/No)

In view of the adopted methodology, it is evident that further commentary on the phrasing of this question is required. Firstly, with respect to the outlined methodology, the question is not posed in the manner of using proper names, which could, for example, be “Is the current boat the Kingfisher?” or in a yet more implicit manner “Do you agree with the following statement: ‘The current boat is Kingfisher?’”. There is no consensus in the literature on the most appropriate (i.e. eliciting proper intuitions) way of asking such questions.³⁴ In the direct approach, the question regarding identity is posed explicitly. Nevertheless, it is a relatively easy idea to articulate, but implementation in practice presents its own considerable challenges. This is because there is no lexical differentiation between the two aforementioned types of sameness in English.³⁵ Thus, the phrasing of the question is of great importance, as it must be carefully considered ensuring that intuitions are not skewed in favour of any particular reading.³⁶ The above is the version to which we adhere. For comparison, consider the following possible versions:

Question 1.1. Is the boat now the same boat as 10 seasons ago?

Question 1.2. Is the boat now the same as 10 seasons ago?

In the former, the word “boat” is reiterated after the sameness clause, thereby emphasizing its importance. The question directly compares the current boat to the boat ten years ago by seeking a more detailed response regarding any changes in the boat's identity. It appears that in this manner, the intuitions regarding quantitative identity are being reinforced. In the latter, the word “boat” is used only once, thereby emphasizing the importance of the sameness clause. The question directly compares properties of the current boat to properties of the boat ten years ago by seeking a more detailed response regarding any changes in them. It appears that in this manner, the

³⁴For the general talking points, see Nadelhoffer & Nahmias, 2007 and Woolfolk, 2013. For points on proper names specifically, see Martí, 2014.

³⁵As previously noted, this is demarcated in Polish, namely (in the case of a boat, which is a feminine noun) *taka sama* for the qualitative identity and *ta sama* for the quantitative identity.

³⁶Whether such phrasing is achievable will not be considered. For reference points, see Tobia, 2015, 2016, Dranseika et al., 2020, 2023. It is important to note that the primary target phenomenon of the study is not quantitative or qualitative identity, but rather people's intuition regarding overall identity statements. Therefore, the methodological objective in the present phase is to select the most permissive framing of the question, as theorized in this section. The outcome of that decision is that the results are not readily applicable to the extant literature on the ‘Ship of Theseus’-like cases, a fact which is recognized. The authors would like to express their gratitude to the anonymous reviewer for highlighting the need for this particular emphasis.

intuitions regarding qualitative identity are being reinforced. In the question asked in the study, there is no word “boat” in the sameness clause, yet it appears later in the sentence. The question inquires whether the boat’s present state (whatever that is) is identical to its state ten years ago. The focus is neither on the properties nor on numerical identity. It appears that any reading is permissible, as it depends on the following:

Question 1.0. Is the boat now the same (boat) as the boat 10 seasons ago?

If one adds the “boat” in parentheses seems to be an optional matter. Whether there are context clues that would determine one appropriate reading is a question that requires further investigation. In this paper, only some initial observations based on a comparison of the study’s results with those of the pilot study in Polish will be presented in Sect. 5.3.

Finally, all other scenarios in the study are modifications of the baseline one with respect to the variables under investigation, namely material constitution, name, and function. This allows us to order the scenarios on a scale from the least altered to the most, and to study the interplay and significance of the subsequent changes. Building on observations from Scaltsas 1980 and Campdelacreu et al., 2020, this is intended as a preliminary step towards the construction of the hierarchy of principles governing (re)identification.

3.2 Hypothesis

The main research hypothesis (H2)³⁷ was that changing the proper name should have a significant effect on people’s underlying intuitions informing their identity attributions. That is, that individuals will alter their perceptions regarding the identity of the object, rather than merely becoming less confident in it. Further hypotheses were that (H1) naming the object for the first time should not influence subsequent responses concerning the object’s identity as much as changing its name does; (H2.1) changing the artifacts material constitution should have a significant and also stronger than a name change effect on identity-related intuitions; (H2.2) a functional change should yield a comparable to a name change, albeit weaker result. Moreover, we did not find a reason for there to be any interaction between variables, thus it is (H2.3) and the final hypothesis of the main experiment.³⁸ In addition, taking previous points on proper names and question forms in consideration, an additional hypothesis (H3) emerged, predicting that posing an identity question with a proper name would strongly enforce the quantitative reading, thereby making the positive responses to such a question (given our vignette scenarios) more favorable.

³⁷The numbering convention used in the paper follows the order of studies and not their importance.

³⁸Hence, the confirmation of (H2.3) would constitute a negative answer to the question posed in Campdelacreu et al., 2020, p. 557, namely that “[t]esting the presence of a hierarchy requires collecting data about whether certain principles are used happily on some occasions and are overridden in other occasions. Both the happy application of principles and the possibly overriding application must be tested”. In our view, there should not be any overriding.

4 Experiments and results

This section presents experiments conducted in accordance with the methodology outlined in Sect. 3.1. In Sect. 4.1, a preliminary experiment was carried out to assess the viability of the adopted minimal requirements on a theory of reference. Subsequently, in Sect. 4.2 the main experiment was conducted, in which the hypothesis concerning the impact of name change on identity attribution was fully tested. A further study was conducted in Sect. 4.3 to provide some provisional grounding for our explanation and choice of the wording of the questions.

Prolific was used to recruit participants for all three studies. For the sake of comparability and to minimize independent variables, the same screening criteria were applied to each research study. Specifically, only native English speakers from the UK and the US were eligible to participate. This limitation was implemented using Prolific's screening options. The questionnaires themselves were prepared and presented via LimeSurvey.³⁹

4.1 Preliminary experiment

Firstly, it was essential to confirm whether the aforementioned minimal requirements on the theory of reference had been met with regard to people's intuitions. This task was relatively straightforward, but with the potential for significant complications. Specifically, if it were determined that the act of initial baptism alters the identity of the object, the whole undertaking would be challenged. It would be impossible to track the identity of an object through time using proper names, as the mere act of naming would alter its identity. The consequences of this would be dire, as one would be unable to even name any object, as in the process it would cease to be this very object at all.⁴⁰

It is worth reminding that proper names are not needed to track an object's identity through time, as there are other ways to refer to the particular object (e.g. definite descriptions). They might be less handy, but they do not have that much metaphysical, symbolic, and cultural significance as proper names. That being said, (H1) predicts that naming the object for the first time should not influence people's subsequent identity statements as much as changing its name does. To test this, two analogous scenarios were considered:

Scenario 1.1 (Initial baptism).

Anna is a wildlife photographer. She is preparing for the season when she wants to photograph water birds. For this reason, she needs to buy a boat. Anna decides to buy a brand new wooden boat. After the purchase, she chooses to launch the boat into the local lake. Before the shakedown cruise, she names her boat Kingfisher. Now they are ready for the season.

³⁹ All files of the project can be found by directing the link: <https://osf.io/b7fc9/>.

⁴⁰ Keep this possibility in mind, as a similar strategy will play a major role in Sect. 5.2.

Scenario 1.2. (Name change)

Anna is a wildlife photographer. She is preparing for the season when she wants to photograph water birds. For this reason, she needs to buy a boat. Anna decides to buy a second-hand wooden boat, the Osprey. After the purchase, she chooses to launch Osprey into the local lake. Before the shakedown cruise, she renames it Kingfisher. Now they are ready for the season.

4.1.1 Preliminary experiment's participants and setting

The participants ($N = 101$, 57 females, mean age 39.17, 100% reporting English as a native language) were recruited via Prolific. All subjects were residents of the US or UK and received a £0.62 compensation for approximately 3 minutes of their time. Each participant was only permitted to participate once.

Participants were randomly presented with one of the two scenarios, that is either Initial baptism or Name change. Following a careful reading of the material, each of them was asked to respond to three accompanying questions: one assessing comprehension of the given scenario, one concerning identity of the object in the scenario, and one concerning confidence in the response to the identity question. The latter were presented on a separate screen, accompanied by the text of a scenario. The confidence level was operationalized using a 7-point Likert scale presented vertically, ranging from 3 (highest confidence) to -3 (lowest confidence), with the following labeled levels: 3 – absolutely confident; 0 – neither confident, nor unconfident; -3 – absolutely unconfident.

4.1.2 Preliminary experiment's results

All participants passed the comprehension check, and none were excluded from the analysis. The data were analyzed using a one-way ANOVA with the factor *Name* (levels: new, changed). The dependent variable for ANOVA analysis is a composite value calculated from responses to the identity and confidence questions, where the former were coded as 1 and -1 (*yes* and *no*, respectively). The error bars on the graphs represent the standard error. Figure 1 shows the percentage results of the preliminary experiment, while Fig. 2 presents the composite results. Nominally speaking, participants in the *changed* condition were significantly less likely to recognize the boat's identity (28 of 48 participants answered *yes*) than those in the *New* condition (42 of 53 participants answered *yes*). The analysis revealed statistically significant results and a medium effect of *Name* on the dependent variable ($F(1, 99) = 7.432$; $p = 0.00758$; $\eta^2 \approx 0.0698$), indicating that changes in *Name* significantly influenced participants' claims about the identity of the boat.

Thus, these results confirm (H1) and give provisional ground for (H2). Since the entire study was not compromised by the preliminary experiment's findings, let us cruise to the main one.

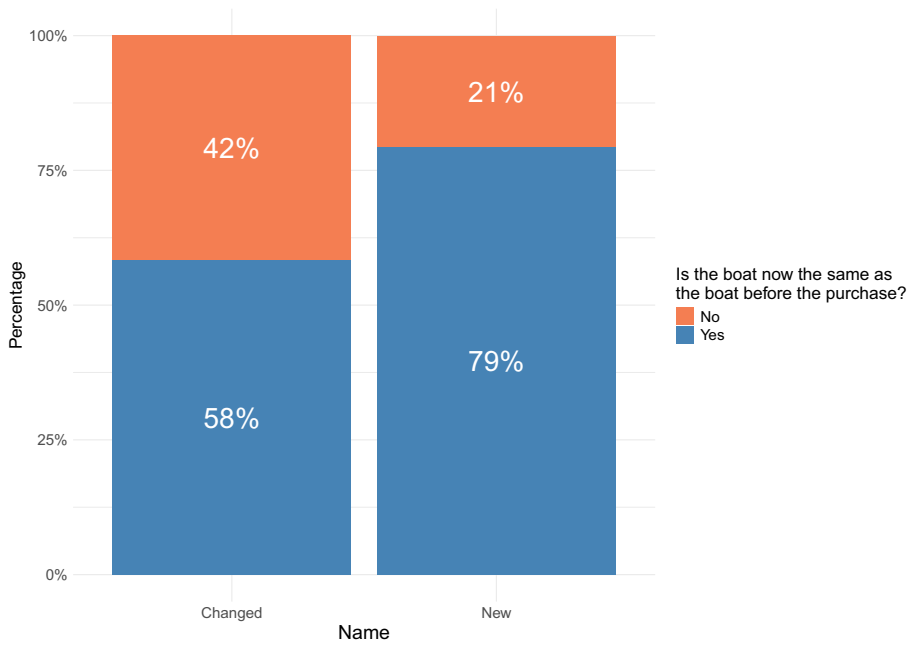


Fig. 1 Percentage results of the preliminary experiment

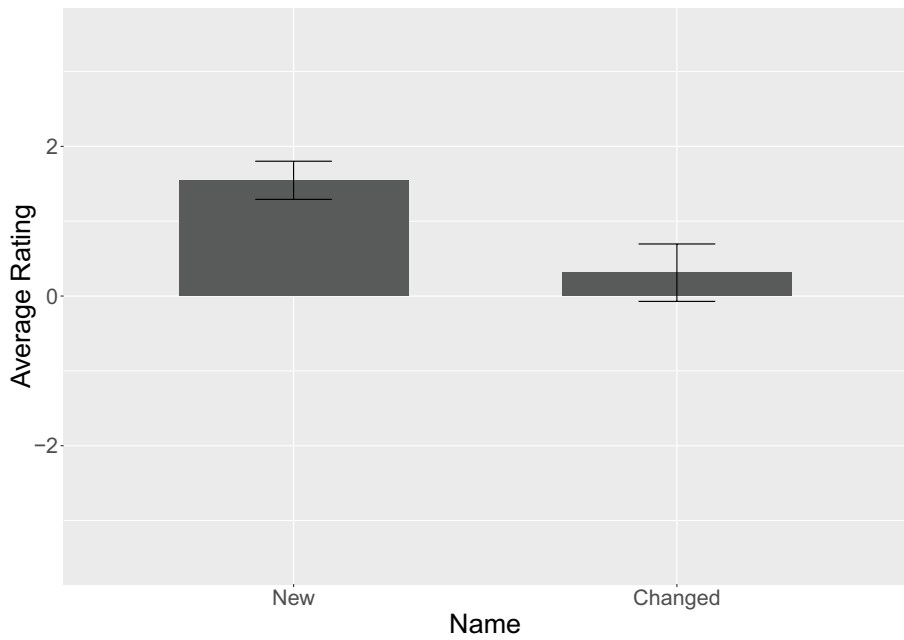


Fig. 2 Composite results of the preliminary experiment

4.2 The main experiment

Secondly, the main experiment was conducted in accordance with the novel methodology previously outlined. The study consisted of eight vignettes, which were designed to examine three variables: (i) material constitution, (ii) name, and (iii) function. In what follows, vignettes illustrating just the above changes are presented, respectively.⁴¹ All other scenarios are combinations of these changes.

Scenario 2.2. (C)

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts, enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has not maintained her boat properly, so every now and then she had to repair or replace some parts. At the start of this season, it turned out that over the last 10 years, every part of the boat had been replaced with a new one.

Scenario 2.3. (N)

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts, enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has properly maintained her boat, so she didn't have to repair or replace any parts. This year, due to financial difficulties, Anna sold the boat to Peter, who is also a wildlife photographer. After the purchase, Peter renamed his boat with the new name Osprey.

Scenario 2.5. (F)

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts, enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has properly maintained her boat, so she didn't have to repair or replace any parts. This year, due to financial difficulties, Anna sold the boat to Peter, who owns the local restaurant. After the purchase, Peter displayed the boat in the beer garden of his restaurant for his guests to admire.

In the remaining a brief commentary regarding above scenarios is provided.

⁴¹ The C, N and F are shorthands for the material constitution, name, and functional change.

Firstly, the part about disassembling the boat is important for two reasons, one pertaining to philosophical considerations and the other to practical matters. The former is that (especially in the case of the baseline scenario) it allows for the verification of whether participants acknowledge that the boat is capable of surviving some (un)usual changes, such as being dismantled into its constituent parts. The latter is that it allows for a natural comprehension question regarding the status of the boat during the winter. Then there is a part about financial difficulties. It serves to indicate that the rationale behind the sale was not metaphysical. It is important, as there may be an assumption that Anna is selling the boat because she believes that it is not the same anymore. By referencing the financial difficulties, this concern is being diffused. Next, it is also crucial to assume that Peter is a wildlife photographer as well. Again, there may be an intuition that if he were to partake in a different profession (e.g. being a fisherman), a minor functional change would occur. This could entail a change in the boat's identity *via* change in functionality, as it would no longer serve the purpose of a platform for photograph but instead become a fishing vessel. By explicitly stating Peter's rationale for purchasing the boat, this concern is also mitigated. Finally, a major functional change is present. This time, Peter's significance in the story is that he is a restaurant owner who is purchasing the boat with a completely different purpose in mind, namely to utilize it as an aesthetically pleasing item to display for the guests. The idea is that it should elicit a response to functional change, given that the boat is no longer being used for its intended purpose, that being navigating the lake.⁴² The research objective was to check only the impact of major functional change. If it were determined that this change is inconsequential for identity ascription, it could be reasonably inferred that any minor functional change would also have no impact.

4.2.1 The main experiment's participants and setting

The participants ($N = 560$, 297 females, mean age 41.33 years, 100% reporting English as a native language) were recruited via Prolific. All subjects were residents of the US or UK and received a £0.62 compensation for approximately 3 minutes of their time. Each participant was only permitted to participate once and could not take part in further experiments.

Participants were presented with one scenario out of eight at random. Following a careful reading of the material, each of them was asked to respond to three accompanying questions: one assessing comprehension of the scenario, one concerning identity of the objects in the scenario, and one concerning confidence in the response to the identity question. The latter were presented on a separate page, accompanied by the text of a scenario. The confidence level was operationalized using a 7-point Likert scale presented vertically, ranging from 3 (highest confidence) to -3 (lowest

⁴²It is important to note that there is a potential of an even greater functional change, which could be labeled 'a radical functional change'. This would entail a scenario in which the object in question is no longer capable of performing its initial function. To illustrate, one may consider the transformation of a wooden boat into the roof of a small building. It is evident that the roof cannot be "the same boat as" anything, but potentially still be considered the same object. That being said, we will not inquiry about such cases.

confidence), with the following labeled levels: 3 – absolutely confident; 0 – neither confident, nor unconfident; –3 – absolutely unconfident.

4.2.2 The main experiment's results

Two participants were excluded from the analysis, since they did fail the comprehension check. The data were analyzed using a $2 \times 2 \times 2$ ANOVA with the factors *Constitution* (levels: changed, unchanged), *Name* (levels: changed, unchanged), and *Function* (levels: changed, unchanged). The composite value was again calculated from responses to identity and confidence questions, where the former were coded as 1 and –1 (*yes* and *no*, respectively). All other settings are standard, as in the preliminary experiment. Figure 3 presents the composite results of the main experiment. The analysis revealed two statistically significant results: a small effect of *Name* on dependent variable ($F(1, 550) = 16.947$; $p < 0.001$; $\eta^2 \approx 0.015$), and a large effect of *Constitution* ($F(1, 550) = 582.015$; $p < 0.001$; $\eta^2 \approx 0.504$), indicating that changes in both meaningfully influenced the outcome. There was no effect of *Function* ($F(1, 550) = 0.139$, $p = 0.710$, $\eta^2 \approx 0$) and no statistically significant interactions were observed.⁴³ The nominal and percentage results are presented in Table 1, while the mean values and standard deviations are provided in Table 2.

Thus, most importantly, (H2) is confirmed by the data, and so are (H2.1) and (H2.3). However, predictions of (H2.2) failed to materialize.

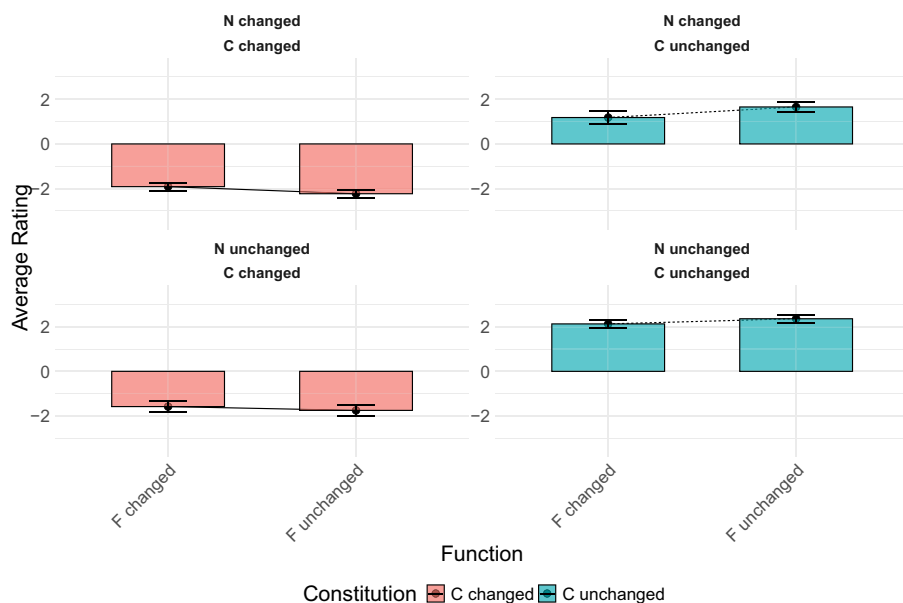


Fig. 3 Composite results of the main experiment

⁴³ In particular instance of *Constitution:Function*, the outcome was $p = 0.052$. It will be one of the talking points in Sect. 5.5.

Table 1 Nominal and percentage results of the main experiment

Scenario	Constitution	Name	Function	Yes	No	Total	% of <i>yes</i>
CNF	changed	changed	changed	8	62	70	11.4%
CN	changed	changed	unchanged	5	64	69	7.2%
CF	changed	unchanged	changed	10	59	69	14.5%
C	changed	unchanged	unchanged	13	55	68	19.1%
NF	unchanged	changed	changed	49	22	71	69%
N	unchanged	changed	unchanged	56	14	70	80%
F	unchanged	unchanged	changed	64	7	71	90.1%
Basic	unchanged	unchanged	unchanged	65	5	70	92.9%

Table 2 Mean values and standard deviations of results in the main experiment

Scenario	Constitution	Name	Function	Mean value	Std. dev.
CNF	changed	changed	changed	-1.91	1.55
CN	changed	changed	unchanged	-2.23	1.43
CF	changed	unchanged	changed	-1.58	1.95
C	changed	unchanged	unchanged	-1.75	1.93
NF	unchanged	changed	changed	1.18	2.31
N	unchanged	changed	unchanged	1.66	2.04
F	unchanged	unchanged	changed	2.13	1.64
Basic	unchanged	unchanged	unchanged	2.36	1.44

4.3 Additional experiment

Furthermore, an additional study was conducted to test (H3) and determine whether the assumptions regarding the form of the question do in fact reflect reality. Participants were thus presented with *Name change* scenario and, in addition to comprehension and confidence questions, asked one of the following:

Question 1. Is the boat now the same as the boat before the purchase? (Yes/No)

Question 1.3. Is Kingfisher the same boat as Osprey? (Yes/No)

Note that instead of referencing the boat by description, in the latter question it is done using proper names, and there is the word “boat” after the sameness clause. Given the previous commentary, it was done to elicit a quantitative reading, as opposed to the descriptive question, which was designed to remain neutral.⁴⁴

⁴⁴ It should also be noted that the idea of not including the word “boat” in the sameness clause yields the question emphasizing a qualitative reading, namely “Is Kingfisher the same as Osprey?”. That being said, this question was not included in the pilot study. In addition, the possibility of eliciting an optional reading of the sameness using proper names explicitly is not immediately apparent.

4.3.1 Additional experiment's participants and setting

The participants ($N = 100$, 70 females, mean age 40.63 years, 100% reporting English as a native language) were recruited via Prolific. All subjects were residents of the US or UK and received a £0.30 compensation for approximately 2 minutes of their time. Each participant was only permitted to participate once. All participants were presented with the same scenario, namely *Name Change*. Following a careful reading of the material, each of them was asked to respond to three accompanying questions: one assessing comprehension of the scenario, one concerning identity of the objects in the scenario (assigned at random, either Question 1 or Question 1.3), and one concerning confidence in the response to the identity question. The latter were presented on a separate page, accompanied by the text of a scenario. The confidence level was once again operationalized using a 7-point Likert scale presented vertically, ranging from 3 (highest confidence) to -3 (lowest confidence), with the following labeled levels: 3 – absolutely confident; 0 – neither confident, nor unconfident; -3 – absolutely unconfident.

4.3.2 Additional experiment's results

All participants passed the comprehension check, and none were excluded from the analysis. The data were analyzed using a one-way ANOVA with the factor *Question* (levels: by description, by name). All other settings are standard, as in the preliminary experiment. Figure 4 presents the percentage results of the additional experiment,

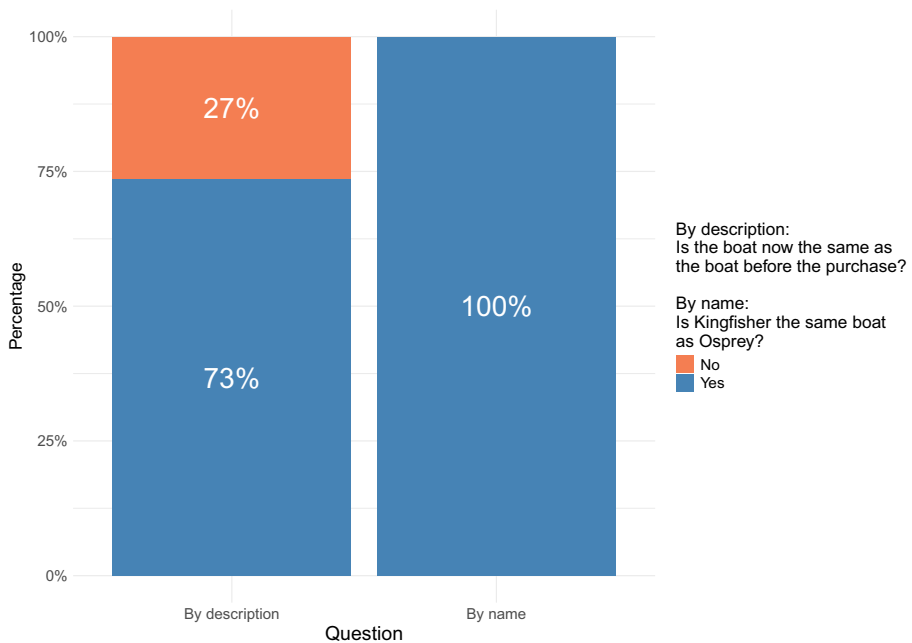


Fig. 4 Percentage results of the additional experiment

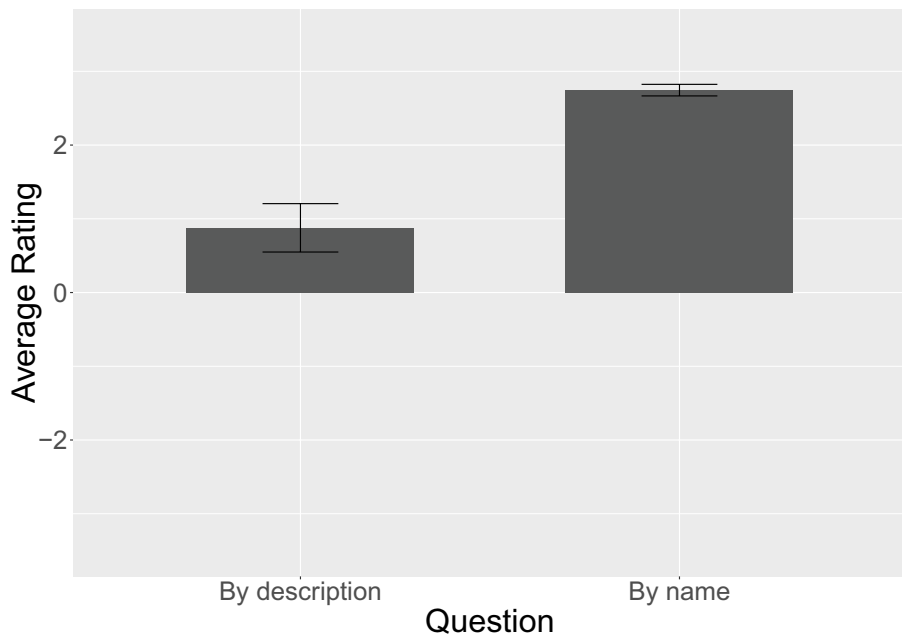


Fig. 5 Composite results of the additional experiment

while Fig. 5 presents composite ones. Nominally speaking, participants in the *by name* condition were significantly more likely to recognize the boat's identity (51 of 51 participants answered *yes*) than those in the *by description* condition (36 of 49 participants answered *yes*). The analysis revealed statistically significant results and large effect of *Question* on the dependent variable ($F(1, 98) = 7.432; p < 0.001; \eta^2 \approx 0.245$), indicating that changes in *Question* significantly influenced the outcome.

5 Discussion

It can be concluded that the act of changing a name has a significant impact on an individual's identity statements, thus confirming the main research hypothesis. Nonetheless, as it is characteristic of experimental methods, the interpretation of data must

be meticulous and accompanied by consideration of many caveats.⁴⁵ This section provides some interesting points and possible avenues for future research. They are presented in no particular order of importance.

5.1 On (H1) & (H3): the narrative identity juncture

The results of the preliminary experiment are not exceptional on their own, as (H1) is supported by the data. However, one might be surprised that the percentage is not higher. The additional experiment might help to make some sense of this. Although, as will be seen, this *prima facie* help comes with its own major problems. Recall that the vignette story was reused in the study, and when participants were asked the “by description” question, the results were comparable. However, when they were asked the “by name” question, an astonishing 100% (*sic!*) responded positively to the research question. Notably, this percentage is significantly higher than in the vignette set where the initial baptism of the object was considered. This raises an important question: why might individuals believe (when asked the “by name” question) that naming an object for the first time has a greater impact on its identity than changing its existing name? One possible way to address this question is through the lens of the narrative theory of identity. In brief, narrative identity involves perceiving the self as an evolving story that serves to provide a cohesive understanding of how different life events fit together.⁴⁶ Then, it could be argued that the already named boat comes with a particular narrative story,⁴⁷ of which changing the name is just another chapter. On the other hand, the initial baptism could be regarded as the genesis of the boat’s narrative. Notwithstanding, it is important to note that the theory in question is concerned with the personal identity, so attempting to apply it in this context may be a significant stretch.⁴⁸ In addition, a potential parasitic nature of people’s responses may be another major impediment: there are important human agents in the vignette

⁴⁵ One potential contention relates to the broader critique concerning the procedure of deriving any philosophical points from people’s uninformed judgments (cf. Footnote 30). Our response is that, irrespective of the approach to the results – whether they are used to support (resp. challenge) views presented in the literature, or to dismiss them as inconsequential – engagement with the findings is required. It was determined that the responses were not produced in a random manner: despite them being spontaneous, analysis revealed the presence of patterns that were statistically significant. Notwithstanding the potential skepticism regarding the direct philosophical value of results obtained in such way, and the subsequent reluctance to incorporate them into a more rigorous philosophical analysis, it is insufficient to simply discard them. Rather, an explanation is required (in general, this kind of ‘explaining away’ constitutes one of the viable strategies, but one that we are not particularly fond of given the results of our study, see Sect. 5.4). Nonetheless, providing such an explanation would still be to partake in philosophical activity, albeit not one where philosophical points are deduced *from* the results. The authors would like to express their gratitude to the anonymous reviewer for their incisive questions regarding this matter.

⁴⁶ For a short yet influential reference point on the narrative theory of identity (and some remarks on suffering), see McAdams & McLean, 2013.

⁴⁷ It must be noted that the phrase “comes with” is far from being precise. The term “possess” is deliberately left out as it could result in an overly substantial interpretation, thereby giving the impression that the narrative is merely an additional property of the object in question.

⁴⁸ For an immediate example, consider the following passage: “[c]onstructing and internalizing a life story – McAdams argued – provides an answer to Erikson’s key identity questions: Who am I? How did I come to be? Where is my life going?” McAdams & McLean, 2013, p. 235.

scenarios, so it could lead to the argument that an object's perceived narrative identity is potentially anchored in the narrative identity of these agents. Change that human agent in some appropriate way and an object's identity would change accordingly.⁴⁹

5.2 On (H2) & (H2.1): the ownership property/relation juncture

One of the most prevalent responses to the results of the main experiment is that it is not the name change that does the trick, but rather the fact that the boat is sold and therefore ownership is changed.⁵⁰ Consequently, the response goes, the experiment overlooked the fundamental reason of why people's responses are affected by the name change. Two possible counterarguments can be advanced: a sophisticated, ontological one and a watch-and-see, pragmatic one. As philosophers, we will present both using the terminology of the former.

The first point is that one should conceptualize the ownership as a relation rather than as a property, i.e. the expression of ownership through a binary relational symbol rather than an unary one is a more accurate representation of the world as it is; or is carving reality at its joints, if one wills. To illustrate, consider an object *A* being owned by Anna. Fix a binary relational symbol *Own* for the ownership relation, and a unary relational symbol O_x for the ownership property, where the index is used to denote the owner. Now, the idea is that the situation would be best described by *Own*(Anna, *A*) rather than some peculiar property like $O_{\text{Anna}}(A)$. In the event of selling the object to Peter, the world's stock of relationships would change by replacing the old one with *Own*(Peter, *A*), rather than the set of properties of the object changing with $O_{\text{Peter}}(A)$ in lieu of the old property.⁵¹ It is important to note that the property replacement affects the object, while the relationship replacement does not. That being said, it still might influence people's perception of the object's identity. It could be argued that further research is required to determine whether ownership impacts identity perception in a name change manner or whether a name change effect is in fact an ownership change effect. However, we did not find the exploration of this idea reasonable. There are two main points. Firstly, vignettes are presented from a third-person perspective. It can be argued that name change and functional change of an object are potentially important for both their owners and other people alike, while the ownership of an object would matter much more (or in some cases even only) for people that are buying and selling a boat in question, and not much for third parties. Secondly, it should be noted that the functional change scenarios included an ownership change, whereas the name variable was changed in only half of them. Thus, if an overlooked ownership variable were at play, it would have been revealed in the analysis, specifically in Scenario F and Scenario CF. However, this was not the case. It is important to acknowledge that the ownership relation is not considered

⁴⁹ Overall, one way to evaluate the aforementioned points would be to conduct a further experiment, in which the vignette stories are presented in the first person rather than the third. It is a known experimental trick.

⁵⁰ Note that this assertion aligns well with the narrative theory of identity, but also the remark on a parasitic nature of an object's identity.

⁵¹ In the context of remarks on the name change from Sect. 2.4, a name is also a relation rather than a property in this very sense.

of negligible or uninteresting status. Our position is not premised on such a claim. Rather, the ownership is simply deemed to be inconsequential for the phenomenon under investigation, namely the identity of an object.

Making use of the above commentary, the second argument is the following observation. Imagine one attempts to buy an object, which has been selected on the basis of certain characteristics of interest. Unfortunately, here is the problem: it is not possible to buy that particular object due to the property of ownership (resp. the ownership relation) changing at some point in the transaction process. While this may not be a matter of significant concern (and it should not be), the notion that ownership as a presumed property (or the identity-altering relation) is meaningful constitutes a crucial element of the addressed response to the results of the main experiment. Therefore, if one wishes to hold that it is possible to trade things, the status of this response must be dubbed interesting, but inadequate.

5.3 On (H2), (H2.1), (H2.3) & (H3): the Polish pilot study

The question whether the questionnaire and vignettes successfully capture the phenomena under investigation still remains. To demonstrate successful capture, it must be shown that there is no forcing of a particular reading between two types of sameness. As previously noted, a pilot study (not including a functional change) was conducted in Polish, which lexically demarcates the two. The results of the pilot study are presented briefly (for reasons stated before, see Footnote 32) here. From all the participants ($N = 203$, 122 females, median age group 25–34 years⁵²), 21 were excluded from the analysis as either failing to finish the study, or failing the comprehension check. The data were analyzed using a 2×2 ANOVA with the factors *Constitution* (levels: changed, unchanged) and *Name* (levels: changed, unchanged). In the quantitative identity case, the analysis revealed a large effects of *Constitution* ($F(1, 178) = 46.707$; $p < 0.0001$; $\eta^2 \approx 0.1914$) and *Name* ($F(1, 178) = 19.283$; $p < 0.0001$; $\eta^2 \approx 0.0791$) on the dependent variable, indicating that changes in both significantly influenced the outcome. No statistically important interactions were observed. In the qualitative identity case, the analysis revealed a large effect of *Constitution* on the dependent variable ($F(1, 178) = 12.070$; $p \approx 0.000644$; $\eta^2 \approx 0.0621$), indicating that changes in constitution meaningfully influenced the outcome. Furthermore, a small effect of *Name* was registered ($F(1, 178) = 4.252$; $p \approx 0.040656$; $\eta^2 \approx 0.0218$) and no statistically significant interactions between *Name* and *Constitution* were observed. The pilot study provided initial insights into the topics previously discussed. Firstly, it is evident that constitution is a main contributing factor in the context of qualitative identity. This provides further support to the claim that name is not a property.⁵³ Secondly, change of name does impact a quantitative identity, and to an even greater extent than in the main experiment of the present paper. Conse-

⁵² In contrast with studies presented in the main body of the paper, the demographic survey of the Polish pilot included a question about having taken two or more semesters of philosophy or linguistics classes. This will provide an interesting point in 5.5.

⁵³ This standpoint can be employed for arguing the same with respect to other social phenomena, such as function and ownership.

quently, it can be deduced that the significance of a name change is contingent upon the quantitative reading of the question at hand. Given that the main experiment's question does indeed result in *Name* being a statistically significant factor, it can be inferred that the questionnaire employed is effective in this (i.e. not prompting any particular reading) regard.⁵⁴ Thus, its seen as adequate for goals of the research.

5.4 On (H2): psychology, identity variance, and metaontology

Despite demonstrating that changing the name significantly impacts the perception of the object's identity, a definitive explanation for this phenomenon remains unclear. One answer could be that individuals possess varying concepts of identity, wherein not only intrinsic properties but also external relations are deemed essential for it. This is the most pessimistic of the available explanations, as it would imply that the entire study was founded upon a certain equivocation. This interpretation, however, seems rather unlikely, as no effect of functional change on object's identity, which also have relational character, has been found. Thus, this would require further explanations of why some kind of relations have impact on perceiving identity and others do not. The second route would be by appealing to psychology, as it is conceivable that the result is due to some form of cognitive bias⁵⁵. As previously stated, it is highly unusual to change the name of an object in the absence of other significant changes to it. Despite explicit statements to the contrary in vignette scenarios, some individuals may still find the possibility challenging to grasp, leading them to infer the presence of a hidden changing variable. Alternatively, the tendency to associate name change with other changes may be a semi-automated response, stemming from long-standing habits or expectations. It is possible to draw parallels with the folk physics. The manner in which objects and their behavior are perceived is based on people's everyday experience. This in turn allows predictions to be made about behavior in a range of different conditions. Consequently, the trajectory of a tossed stone can be predicted with greater ease than the movement of a double pendulum, which, *prima facie*, appears to be a totally chaotic system. However, it is important to bear in mind that the accuracy of folk physics in predicting the behavior of even relatively simple systems is very limited, as described in (Stich, 1996), Chap. 1.2. The

⁵⁴ Whether this could be improved further to align closer with the results of the pilot study is not within the scope of this section. However, it is conjectured by us that it is likely that the expressive power of a lexically demarcated distinction can be captured in English. At this stage, the most promising approach would be to utilize the proposed quantitative-reading question, namely Question 1.1 from 3.1. It should be also noted that, despite the fact that the intention behind the framing of the question was not to compel any particular reading, there may still be a concern that some participants have entertained the distinction and have been uncertain about the precise meaning of the question to which they were expected to respond. As demonstrated in this section, while this concern may indeed be valid on the level of individual psychology, the fact that the results are situated between those of the Polish pilot study serves to dispel this issue on a statistical level. Once again, the authors would like to reiterate their gratitude to the anonymous reviewer for alerting them about this potential issue.

⁵⁵ Putnam considered it a remnants of the magical thinking, namely that "some [...] believe that some representations (in particular, *names*) have a necessary connection with their bearers; that to know the 'true name' of someone or something gives one power over it. This power comes from the *magical connection* between the name and the bearer of the name." Putnam, 1981, p. 3 Italicization in the original.

potential challenges posed by folk identity theory would undoubtedly be even more troublesome. Consider the following inductive argument “from the sorry history of folk theories in general”:

It starts with the observation that folk psychology really is a *folk* theory, a cultural inheritance whose origin and evolution are largely lost in prehistory. The very fact that it is a folk theory should make us suspicious. For in just about every other domain one can think of, the ancient shepherds and camel drivers whose speculations were woven into folk theory have a notoriously bad track record. Folk astronomy was false astronomy and not just in detail. The general conception of the cosmos embedded in the folk wisdom of the West was utterly and thoroughly mistaken. Much the same could be said for folk biology, folk chemistry, and folk physics. However wonderful and imaginative folk theorizing and speculation has been, it has turned out to be screamingly false in every domain where we now have a reasonably sophisticated science. (Stich, 1983, p. 229)

Furthermore, the confirmation of (H2) and (H3) makes this line of thought rather implausible. Lastly, it can be argued that the name change is best conceptualized as a minor shift in one’s conceptual scheme and, by extension, their ontology.⁵⁶ The idea would be that even if there is one external world, it can be described in a different, yet equally valid ways. That is to say, there is no such thing as a ready-made world, but rather reality that is yet to be put in a conceptual scheme. This was contemporarily developed into the notion of the quantifier variance (and the so-called neo-Carnapian approach to metaontology), see Hirsch, 2002. This line of thought could provide a possible explanation for the problem of equivocation in the concept of identity, although it must be noted that the approach is highly theoretical in nature. Moreover, this should likely be accompanied by linguistic research into the influence of one’s language on their cognition, and further investigation would be necessary to ascertain whether the present study provides support for any such influence being present. Due to the limited scope, we abstain from making any substantial commentary on metaontology. However, it is important to acknowledge that even if a form of the identity variance were to be a thing, it could still constitute, contrary to the quantifier variance, an interpersonal phenomenon (i.e. a different identity reading for a different

⁵⁶For more details and yet another anti-predicativist account of proper names, see Marti, 2017.

situation, yet always the single correct one). Consequently, the inquired hierarchy governing principles of (re)identification would be simply a manifestation of it.⁵⁷

5.5 On (H2) & (H2.2): *sui generis*ness and monotonicity juncture

The failure of (H2.2) must be addressed. It could be deemed disappointing that the paper, which devotes a non-insignificant portion to presenting the idea of a functional change possibly altering the individuals' identity statements, ultimately presents data that point to the contrary, namely that the functional change is insignificant in this matter.⁵⁸ Despite the absence of findings that would substantiate a strong parallel between proper names and functions, the results yield at least two valuable takeaways.

The first takeaway drawn from the breaking of a strong parallel is that proper names exhibit a certain degree of a *sui generis*ness.⁵⁹ It is evident that they are not "out of this world" in the sense that one could not find similarities between them and other phenomena. However, upon thorough analysis, there appears to be a consistent presence of some "but" in relation to them.⁶⁰ Turning to the main experiment results, particularly the scenarios in which constitution was fixed as unchanged and function as changed, but the name was left as a variable (i.e. the left column of the right-hand side of Fig. 3), reveals a significant impact of just the name variable on the results, surprisingly. A close examination of the relevant scenarios, namely Scenario 2.5 and Scenario 2.7, further amplifies this surprise. The vignette stories concerning a functional change are extensive, yet Scenario 2.5 accounts for 93% of Scenario 2.7.⁶¹

⁵⁷ Note that while this may seem a very radical proposal, one is in a good company. Consider the following fragment on the impact of (unsophisticated) political and social factors on ontological conclusions:

In some situations, it is easier to get a grant or a promotion or to enhance one's reputation in the scientific community by announcing the discovery of a new entity or denying the existence of one previously claimed to exist. In other situations, it is more politically expedient to conclude that entities of a certain sort don't have some of the properties previously attributed to them and that experimental results or other phenomena can best be explained by attributing some rather different properties to those entities. Which conclusion the scientific community ultimately accepts may well be determined, in some cases, by factors like these (Stich, 1996, p. 68).

If it is reasonable to apply the above to the notion of existence and property-having, then it is not implausible to propose an analogous perspective on identity. For comparison, see Nichols et al., 2016, where the above fragment is also quoted in full.

⁵⁸ Recall that there is a possibility of a radical functional change that could exhibit an effect that was theorized by us for a major functional change.

⁵⁹ As stated in the paragraph on the results of the Polish study, the demographic survey allows to distinguish respondents who declared taking philosophy or linguistic classes. Of particular interest is the finding that those baby philosophers (resp. linguists) were more inclined to respond in a manner that accentuated the effect of *Name*. In the quantitative identity case, removing those individuals results in a change from $F(1, 178) = 19.283$; $p < 0.001$; $\eta^2 \approx 0.098$; to $F(1, 139) = 7.653$; $p \approx 0.006$; $\eta^2 \approx 0.052$. In the qualitative case, from $F(1, 178) = 4.252$; $p \approx 0.041$; $\eta^2 \approx 0.023$ to $F(1, 139) = 3.090$; $p \approx 0.081$; $\eta^2 \approx 0.022$. Therefore, in both cases, there is a decrease in levels of significance.

⁶⁰ As previously stated, proper names serve as a bridging notion between natural language and philosophical/technical constructs. Moreover, an example of truth was provided. It should be noted that truth also exhibits a certain degree of a *sui generis*ness: it is conceptualized as a predicate, yet upon thorough analysis there appears to be a consistent presence of some "but".

⁶¹ The calculation omits that, for stylistic reasons, on a single occasion in the Scenario 2.7 the boat is addressed as "it".

The only new information is that “[Peter] renamed the boat Osprey to match the name of his restaurant [and]”. It is noteworthy that within this lengthy scenario, which could potentially be met with a narrator’s cue objection (a possibility we had considered prior to the experiment), individuals can process the information and focus on the tiny name change detail. To further illustrate the point, imagine an individual engaged in the telling of a detailed story, which contains numerous elements, that are yet deemed non-significant for the identity alteration;⁶² unknowingly to the interlocutors, obviously. Then, the speaker recollects something and states the following: “Oh, by the way, somewhere along the way, the name of it was changed”. The hearer then responds with “That is changing everything”. Evidently, the situation is presented here in an outlandish fashion; nevertheless, this is a consequence that can be drawn from the available data.⁶³

The second takeaway is more speculative in nature. It should be recalled that (H2.3) was confirmed, but it was noted in the footnote that in the particular instance of *Constitution:Function* the outcome was $p = 0.052$. At this stage, it should be deemed a data noise, but the exploration of the possibility is intriguing enough to warrant further comment. It is expected that any subsequent changes would add to individuals’ confidence in their responses to the research question. If the change of a constitution of an object is sufficient for altering the identity, then changing a constitution and some other factor is sufficient as well. In this sense, employing the term from formal logic,⁶⁴ one can call this the monotonicity of an identity change.⁶⁵ Consequently, the (potential) interaction in question would be a noteworthy observation, as functional changes would defy this intuition: even though the constitution is already changed,

⁶² The search for other phenomena that do not affect identity statements even though they *prima facie* should is a promising avenue for future research.

⁶³ In order to elaborate further, the results demonstrate a shift of less than one point on a seven-point scale. While this is statistically non-trivial, it is clearly not as dramatic as the above framing would suggest. Nevertheless, the choice is motivated by two rationales: firstly, to emphasise the remarkably surprising situation in which one could contend that changing the name of an object impacts its identity status; and secondly, to highlight that the results point in the direction of there being such an impact. As such, the above description using the phrase “That is changing everything” evidently represent a limit case. Nevertheless, it is precisely because it is a limit case that it provides an instructive illustration of the point that could be made using the results.

⁶⁴ In logic, monotonicity of entailment is the following property of a deductive system: given set of premises Γ and some sentences ϕ, ψ , if $\Gamma \vdash \phi$, then $\Gamma, \psi \vdash \phi$. In natural language terms, if some sentence is deducible from a set of premises, then it is also deducible from any superset of it, i.e. providing more information cannot invalidate the deduction. For more details on the monotonicity of identity, see Hoeksema, 1986 and Vincent, 2024). For recent experimental study of logical properties of (personal) identity, see De Freitas & Rips, 2025.

⁶⁵ Obviously, not every deductive system is monotonic. For reference point, see McCarthy, 1989. Despite its technical nature, the underlying idea should be familiar:

[c]ommon-sense knowledge includes the basic facts about events (including actions) and their effects, facts about knowledge and how it is obtained, facts about beliefs and desires. It also includes the basic facts about material objects and their properties. One path to human-level AI uses mathematical logic to formalize commonsense knowledge in such a way that common-sense problems can be solved by logical reasoning. This methodology requires understanding the commonsense world well enough to formalize facts about it and ways of achieving goals in it. (McCarthy, 1989, p. 161).

Compare the above with a passage from Scaltsas, 1980 in the introduction.

some further functional change⁶⁶ can lead to a decrease in certainty regarding the status of an identity of the object. In addition, this would provide an example of a situation where a “certain principles are used happily on some occasions and are overridden in other occasion”. It could be explained away by assuming that individuals become less certain in light of the more extensive information provided, but it contradicts the clarification of the name change phenomenon outlined in the preceding paragraph. Yet, this clarification is strongly supported by the available data. Any alternative explanation would necessitate a potentially arduous philosophical story; therefore, we refrain from proposing such explanations at this moment. There are levels of allowed speculations. Nevertheless, it would be intriguing to delve deeper into the potential ramifications of this (potential) phenomenon. To this end, a further foundation must be provided first, namely a new experiment designed to isolate the suspected factors at play. A particularly worthwhile⁶⁷ avenue for future research is to determine whether this could be amplified to the level of statistical significance.

5.6 On (H2), (H2.1), (H2.3) & (H3): the semantification

Finally, there is the option to semantify the framing of the results.⁶⁸ It is evident that further research into potential context clues that would facilitate the determination of the appropriate reading of the sameness clause (cf. Sect. 3.1) would be beneficial for informed commentary on this possibility. Nevertheless, it is feasible to offer some observations even in the absence of this additional data. In short, the contention would be to say that the framing of the results should centre on ascertaining whether participants have changed their understanding of the expression “the same (boat) as” from one of qualitative identity to one of quantitative identity, or vice versa.⁶⁹ While this may appear to be a reasonable possibility, a closer examination should be convincing (as it is to us) in demonstrating its inadequacy in comparison to the ontological framing; and this is the case both with respect to the gathered data, as well as simple intelligibility of the accounts.

In order to substantiate the former, it is important to recall that the proposed meaning change could not happen at the level of individuals, as in every study participants were presented with only one scenario and could participate only once. Consequently, the only potential trigger point would be on the level of vignettes. This is only possible if there would be context clues that determine one appropriate reading of the sameness clause, e.g. a mention of material change would be a clue for triggering a qualitative meaning, while a mention of a name change would be a clue for trigger-

⁶⁶ A substantial functional change would likely be necessary, although examining a small one (e.g. selling a boat to a fisherman) would also be of interest, given that this line of inquiry is already at odds with the initial intuitions.

⁶⁷ It is advisable to refrain from the term “promising”, as this paragraph is more in alignment with philosophical curiosity rather than empirical data.

⁶⁸ The authors would like to express their gratitude to the anonymous reviewer for highlighting the need for addressing this issue in greater detail.

⁶⁹ The direction would be obviously significant in terms of explaining the results; however, for the sole purpose of framing them, which is the issue under consideration, one can assume any direction without loss of generality.

ing a quantitative meaning. It is important to note that, while we addressed potential triggers in the wording of the questions, as well as the possible impact of information mentioned in the vignette scenarios on question interpretation (see 3.1), we did not inquire into the broader themes concerning such clues, but noted it as a possible further research avenue. That being said, given the issue under discussion, it is enough to observe that the results of the main experiment (and the Polish pilot study too) are clear on the interaction issue, namely that there are no interactions. However, if the semantification based on the level of vignettes is to have any merit, there would be some “confusion” of participants in scenarios containing, with respect to the above example, both material constitution change and name change. This would then manifest as an interaction, but no such thing was observed.

In order to substantiate the latter, it was assumed above that a talk about changes impacting the meaning of the sameness clause is at least as reasonable as a talk about changes impacting the identity of the object. However, we will argue that upon closer examination this is not the case. To begin with, the ontological framing may be presented schematically as follows:

$$\text{object}_{t_1} \xRightarrow[\text{changes}]{} \text{object}_{t_2},$$

where object_{t_1} is the one at the beginning of the vignette story, and object_{t_2} is the one at the end of it. The participants are faced with the question whether object_{t_1} is the same as object_{t_2} while taking into the account the changes that happened to it between moments t_1 and t_2 , i.e. during the vignette story. Now, in order to semantify this framing one would have to start with the above schema and modify it in the following way:

$$\text{meaning}_{t_1} \xRightarrow[\text{changes}]{} \text{meaning}_{t_2}.$$

And this is where the unproblematic procedure ends, as providing a parallel interpretation of the schema that would remain intelligible is far from trivial. First of all, other than the fact that it is supposed to be either qualitative or quantitative, it is unclear what meaning_{t_1} is and how it got there. It cannot be “the meaning at the beginning of the vignette story” as the question containing the sameness clause appears only after the vignette scenario is read by the participant. Moreover, while there is no problem with identifying object_{t_1} , the default character of meaning_{t_1} is a problem, with further questions being whether it is this-default for a single individual, a specific group, a language or cultural community, and so on. Even with these questions answered in a satisfactory manner, there still would remain the task of the semantification of the arrow representing changes, specifically the issue of when they are supposed to happen. In the case of ontological framing it is obvious what moments t_1 and t_2 are, and, in consequence, when the changes happen. In the case of a semantified framing the changes could occur either during the vignette story or during reading of the question. The first option was already discussed above, and the second one is obscuring rather

than illuminating. One would have to explain why (and how) is this peculiar change happening when participants are faced with answering the question. In order to see how troublesome this task is, simply note that the phenomenon to be defended is that of existence of some default meaning_{*t*₁} of the given sameness clause that is however modified to meaning_{*t*₂} after one is presented with some sameness clause. That being said, while the semantical framing is significantly lacking in comparison with the ontological one, it could be revisited in the future after either new data is provided by further research, or some serviceable ways of obtaining the parallel interpretation are provided.

5.7 Summary

The aim of this paper was to provide an initial analysis (and ordering) of the features that need to change for there to be a shift in people's overall perceptions of the object's identity. The main research hypothesis, that changing the name would significantly affect the individuals' responses, is confirmed by the empirical data. However, the hypothesized effect of a functional change was not observed and the interpretation of the interplay between some of the factors is far from clear. Possible avenues for further research and main philosophical issues have been outlined in the discussion section. All the work done, following remarks in Campdelacreu et al., 2020, has been conceived as a preliminary to the construction of the hierarchy of principles governing (re)identification. Overall, it is hoped that an inciting sketch of the enterprise has been provided.

Appendix

The following section presents the full vignette scenarios, together with the questions asked for preliminary, main and additional experiments.

Preliminary experiment vignettes

Scenario 1.1 (Initial baptism).

Anna is a wildlife photographer. She is preparing for the season when she wants to photograph water birds. For this reason, she needs to buy a boat. Anna decides to buy a brand new wooden boat. After the purchase, she chooses to launch the boat into the local lake. Before the shakedown cruise, she names her boat Kingfisher. Now they are ready for the season.

Question 0 Why did Anna buy a boat? (She wanted to photograph the water birds/start a wooden boat collection/try boat fishing)

Question 1 Is the boat now the same as the boat before the purchase? (Yes/No)

Question 2 How confident are you with your answer? (3/-3, Likert scale)

Scenario 1.2 (Name change).

Anna is a wildlife photographer. She is preparing for the season when she wants to photograph water birds. For this reason, she needs to buy a boat. Anna decides to buy a second-hand wooden boat, the Osprey. After the purchase, she chooses to launch the Osprey into the local lake. Before the shakedown cruise, she renames it Kingfisher. Now they are ready for the season.

Question 0. Why did Anna buy a boat? (She wanted to photograph the water birds/start a wooden boat collection/try boat fishing)

Question 1. Is the boat now the same as the boat before the purchase? (Yes/No)

Question 2. How confident are you with your answer? (3/-3, Likert scale)

The main experiment vignettes

Scenario 2.1 (Basic).

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts, enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has properly maintained her boat, so she didn't have to repair or replace any parts.

Question 0. What happens to Anna's boat during the winter? (It is disassembled and stored in a small shed/stored in Anna's house/disassembled and hidden in the bushes.)

Question 1. Is the boat now the same as the boat 10 seasons ago? (Yes/No)

Question 2. How confident are you with your answer? (3/-3, Likert scale)⁷⁰

Scenario 2.2 (C).

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts, enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has not maintained her boat properly, so every now and then she had to repair or replace some parts. At the start of this season, it turned out that over the last 10 years, every part of the boat had been replaced with a new one.

⁷⁰Those questions were asked in each of the following scenarios.

Scenario 2.3 (N).

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts, enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has properly maintained her boat, so she didn't have to repair or replace any parts. This year, due to financial difficulties, Anna sold the boat to Peter, who is also a wildlife photographer. After the purchase, Peter renamed his boat with the new name Osprey.

Scenario 2.4 (CN).

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts, enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has not maintained her boat properly, so every now and then she had to repair or replace some parts. At the start of this season, it turned out that over the last 10 years, every part of the boat had been replaced with a new one. This year, due to financial difficulties, Anna sold the boat to Peter, who is also a wildlife photographer. After the purchase, Peter renamed his boat with the new name Osprey.

Scenario 2.5 (F).

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts, enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has properly maintained her boat, so she didn't have to repair or replace any parts. This year, due to financial difficulties, Anna sold the boat to Peter, who owns the local restaurant. After the purchase, Peter displayed the boat in the beer garden of his restaurant for his guests to admire.

Scenario 2.6 (CF).

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts, enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has not maintained her boat properly, so every now and then she had to repair or replace some parts. At the start of this season, it turned out that over the last 10 years, every part of the

boat had been replaced with a new one. This year, due to financial difficulties, Anna sold the boat to Peter, who owns the local restaurant. After the purchase, Peter displayed the boat in the beer garden of his restaurant for his guests to admire.

Scenario 2.7 (NF).

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts, enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has properly maintained her boat, so she didn't have to repair or replace any parts. This year, due to financial difficulties, Anna sold the boat to Peter, who owns the local restaurant. After the purchase, Peter renamed the boat Osprey to match the name of his restaurant and displayed it in the beer garden for his guests to admire.

Scenario 2.8 (CNF).

Anna is a wildlife photographer. She owns a wooden boat named Kingfisher, which she uses during the season to navigate the lake, taking pictures of waterfowl. Before every winter, Anna disassembles the boat into smaller parts, enabling her to store it in a small shed. At the beginning of each season, Anna assembles the boat again. For the past 10 seasons, Anna has not maintained her boat properly, so every now and then she had to repair or replace some parts. At the start of this season, it turned out that over the last 10 years, every part of the boat had been replaced with a new one. This year, due to financial difficulties, Anna sold the boat to Peter, who owns the local restaurant. After the purchase, Peter renamed the boat Osprey to match the name of his restaurant and displayed it in the beer garden for his guests to admire.

Additional experiment

Scenario 1.3 (Name change).

Anna is a wildlife photographer. She is preparing for the season when she wants to photograph water birds. For this reason, she needs to buy a boat. Anna decides to buy a second-hand wooden boat, the Osprey. After the purchase, she chooses to launch the Osprey into the local lake. Before the shakedown cruise, she renames it Kingfisher. Now they are ready for the season.

Participants were assigned one of the following question sets:

Set I (the “by description” question).

Question 0. Why did Anna buy a boat? (She wanted to photograph the water birds/start a wooden boat collection/try boat fishing)

Question 1. Is the boat now the same as the boat before the purchase? (Yes/No)

Question 2. How confident are you with your answer? (3/-3, Likert scale)

Set II (the “by name” question).

Question 0 Why did Anna buy a boat? (She wanted to photograph the water birds/start a wooden boat collection/try boat fishing)

Question 1 Is Kingfisher the same boat as Osprey? (Yes/No)

Question 2 How confident are you with your answer? (3/-3, Likert scale)

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Data availability All the research data are available on the OSF platform: <https://osf.io/b7fc9/>.

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