

# The Problem of Transworld Identity: in Defence of Essentialism

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**Abstract.** In this article, the problem of transworld identity – that is the question, if and how it is possible to ground the intuition that the same individual exists in more than one possible world – is solved by arguing that individuals have essences. First of all, it is claimed that the concept of transworld identity is desirable since it betters both global pan-essentialism and counterpart theory. Then, necessary terminology for successful understanding of the transworld identity problem is introduced. Afterwards, it is contended that the well-known Chisholm’s paradox for transworld identity can be resolved by appealing to individual essences. It is argued that if extreme haecceitism is true, then essences of individuals are non-qualitative and hence haecceitist switches are ontologically grounded. On the other hand, if reductionism is true, then essences of individuals are qualitative and hence haecceitist switches are impossible. Finally, it is shown that by referring to individual essences across possible worlds it is possible to solve the problem of cross-world identification. **Keywords:** transworld identity, essentialism, Chisholm’s paradox, criterion of identification, qualitative distinction

## Tarppasaulinės tapatybės problema: esencialistinės perspektyvos pranašumai

**Santrauka.** Straipsnyje tarppasaulinės tapatybės problema – t. y. klausimas, ar ir kaip yra įmanoma pagrįsti intuiciją, jog individas egzistuoja keliuose galimuose pasauliuose – yra sprendžiama argumentuojant, kad individai turi esmes. Visų pirma, teigiama, jog tarppasaulinės tapatybės samprata yra pageidautina, kadangi ji pranašesnė už globalų panesencializmą ir antrininkų teoriją. Tuomet įvedama būtina terminologija, kuri leidžia sėkmingai suprasti tarppasaulinės tapatybės problemą. Straipsnyje teigiama, kad įžymus Chisholmo paradoksas tarppasaulinei tapatybei gali būti išspręstas nurodant, jog individai turi esmes. Jeigu galimi pasauliai gali skirtis vieni nuo kitų vien nekokybiniu būdu (*in a non-qualitative way*), tuomet individų esmės yra nekokybinės, tad skirtumas tarp netapačių galimų pasaulių, kurie kokybiškai yra vienodi (*qualitatively the same*), yra ontologiškai pagrįstas. Kita vertus, jei redukcionizmas yra tiesa, tai individų esmės yra kokybinės, tad netapatūs galimi pasauliai, kurie kokybiškai yra vienodi, yra neįmanomi. Taip pat įrodinėjama, kad tarppasaulinė identifikacijos problema gali būti išspręsta nurodant į tai, jog galima referuoti į esmes kituose galimuose pasauliuose.

**Pagrindiniai žodžiai:** tarppasaulinė tapatybė, esencializmas, Chisholmo paradoksas, identifikacijos kriterijus, kokybiškumo perskyra

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When Science is faced with the demand – as if it were an acid test it could not pass – that it should deduce, construct, find *a priori*, or however it is put, something called “this thing” or “this one man”, it is reasonable that the demand should *say* which “this thing”, or which “this particular man” is *meant*; but it is impossible to say this.

Hegel. *Phenomenology of Spirit*, §102

What is an individual? A very good question. So good, in fact, that we should not even try to answer it. We could assume that being an individual is a primitive concept – that is harmless: any sufficiently clear concept can be made primitive.

Dana Scott. *Advice on Modal Logic*: 144

## 1. Introduction

We find ourselves surrounded by individuals. Perhaps some of them could have been otherwise. As it happens, in the actual world this dog is courageous but had a possible world where this dog is timid been the case, then this very dog would have been timid. Existing in the actual world, this dog also exists according to another possible world, i.e. it is a transworld individual. In this article, two problems of transworld identity are addressed. (i) The metaphysical problem of transworld identity, due to Chisholm (1967), is a question – if there are haecceitist switches, then what grounds them? Although typically, one can straightforwardly accept non-qualitative individual essences to solve it, a novel rectification of Chisholm’s paradox, one that is not partisan with respect as to whether individual essences are qualitative or not, will be offered. Since it is metaphysically contentious whether individual essences are qualitative or not, one should take it as a virtue that one can find non-binding grounds to solve this paradox. (ii) An epistemic/semantic problem of transworld identity, due to Kaplan (1967/1979), is a question of identification of individuals across possible worlds – how can one determine that an individual in one possible world is one and the same as the individual in another possible world? It will be shown how the standard solution to this problem, viz. acknowledging the fact that one can stipulate that one is considering a possible world where such and such individual exists (Kripke 1980: 42-53), is compatible with the proposed solution to Chisholm’s paradox.

First of all, reasons for accepting transworld identity are given (section 2). Then, necessary terminology for dealing with problems of transworld identity is introduced (section 3). Afterwards, Chisholm’s paradox (section 4) and the problem of transworld identification (section 5) are discussed and resolved.

## 2. Reasons for Transworld Identity

Mathematical models for first-order alethic modal logics do not express anything about modal metaphysics. One could take  $W$  to be the set of apples, instead of the set possible worlds, and still do the mathematics equally well<sup>1</sup>. Hence, if one wants to understand what it takes for an individual to exist across members of  $W$ , then one has to provide an account of the nature of possible worlds and one has to intend that  $W$  is, nothing more or less than, the set of those things.

Possible worlds are maximal state of affairs. States of affairs are somewhat a blueprint for reality to be somehow. Some states of affairs include other states of affairs, e.g. *Socrates being seated and Saul Kripke writing a paper on formal logic* include state of affairs *Socrates being seated*, because if the former state of affairs obtains (i.e., is actual), then the latter does also. Similarly, one state of affairs can exclude another state of affairs, e.g.  $2+2=4$  excludes the state of affairs  $2+2\neq 4$ , because if the former state of affairs obtains, then the latter does not. One can capture the maximality in question by defining the possible world as:

**POSSIBLE WORLD**<sub>def</sub> = is a state of affairs  $S_1$ , such that for any state of affairs  $S_2$ ,  $S_1$  either includes  $S_2$  or excludes  $S_2$ .

It should be kept in mind that, possible worlds are not propositions since the former *do not* and the latter *do*, have *truth-value*. Also, any possible world is not the world itself, for “cosmos cannot itself be identical with any way the cosmos could have been: to say this would be like saying that Socrates is identical with the way Socrates is, which is plain bad grammar” (Inwagen 1980: 406)<sup>2</sup>.

When analyzing *de re* modality, one naturally (although not necessarily) encounters individuals that exist across possible worlds, i.e. cases of transworld identity. Minimal<sup>3</sup> transworld identity can be defined as:

**MINIMAL TRANSWORLD IDENTITY**<sub>def</sub> = there are individuals  $I_1$  and  $I_2$  such that,  $I_1$  exists in a possible world  $w_1$ ,  $I_2$  exists in a possible world  $w_2$  ( $w_1 \neq w_2$ ), and  $I_1$  is (numerically) identical to  $I_2$ .<sup>4</sup>

<sup>1</sup> Interpretation of  $W$  as the set of apples is an example offered by Timothy Williamson (2013: 85).

<sup>2</sup> Generally, this construal of possible worlds is in the spirit of Kripke (1980: 15-20, 42-52); Adams (1974); Salmon (1989: 5-7); Plantinga (1974: ch. 4; 1976).

<sup>3</sup> In the sense that it requires the least ontological commitment.

<sup>4</sup> Say that:  $x$  exists in a possible world  $w$  iff it is impossible for  $w$  to obtain and  $x$  to not exist. What is identity? Well, since I do not believe that there is any satisfactory definition of it, the following explication hopefully proves to be enough: “[i]dentity is utterly simple and unproblematic. Everything is identical to itself; nothing is ever identical to anything else except itself. There is never any problem about what makes something identical to itself; nothing can ever fail to be. And there is never any problem about what makes two things identical; two things never can be identical” (Lewis 1986: 192-193).

If one defines necessary (or essential)<sup>5</sup> property of individual as:

**X HAS P NECESSARILY**<sub>def</sub> = in all possible worlds  $w$ , if  $x$  exists in  $w$ , then  $x$  has  $P$ ,

then it is not the case that an individual exists across possible worlds only if one assumes that all properties of that individual are necessarily had by it. Following Roca-Royce (2011: 67), call this position pan-essentialism. If pan-essentialism is true for all individuals, then one has a stronger position called *global pan-essentialism*.

**GLOBAL PAN-ESSENTIALISM**<sub>def</sub> = for all  $x$  and for any property  $P$ , if  $x$  has  $P$ , then  $x$  has  $P$  in all possible worlds where  $x$  exists.

Then, the fact that some individuals do have accidental properties implies the claim that there are genuine cases of transworld identity.

**X HAS P ACCIDENTALLY**<sub>def</sub> = there is a possible world  $w_1$ , such that,  $x$  exists in  $w_1$  and  $x$  has  $P$  therein, and there is a possible world  $w_2$  ( $w_1 \neq w_2$ ), such that,  $x$  exists in  $w_2$  and  $x$  does not have  $P$  therein.

There is at least one case of transworld identity if and only if there is some individual  $I$  such that it has some property  $P$  accidentally<sup>6</sup>. Also, if there exists an individual  $I$  such that it has some properties accidentally, then global pan-essentialism is false. Therefore, minimal transworld identity implies the negation of global pan-essentialism. The same is true in another direction, i.e. if pan-essentialism is true, then there are no individuals with accidental properties and, hence, no transworld identity.

Reasons for accepting transworld identity can now be given by a Moorean flavor<sup>7</sup> argument:

- (1) One does know that Socrates could have been a poet.
- (2) If one does not know whether there are any cases of transworld identity, then one does not know whether it is the case that, Socrates could have been a poet.

hence,

- (3) One does know that there are cases of transworld identity (from (1), (2) and M.T.)<sup>8</sup>.

<sup>5</sup> In this article, “essential” and “necessary” are used interchangeably.

<sup>6</sup> It should be intuitively clear that the above is true. But if proof is wanted one can prove it as follows: for right-to-left: it follows from the definitions. For left-to-right: if minimal transworld identity is true, then there are two distinct possible worlds, such that in them the same individual exists. If two possible worlds are distinct, then there is at least one proposition that is true in one world but it is not true at another (otherwise, *per impossibile*, it would be the same world after all). Call this proposition “ $p$ ”. But then, the individual in question has a property “existing in a world where  $p$  is true” accidentally. Hence, some property is accidental to this individual.

<sup>7</sup> Moorean because it uses, what has been by William Rowe (1979: 339) called, Moorean shift. Take two forms of arguments: I.  $p, q \therefore r$ ; and II.  $\text{not-}r, q \therefore \text{not-}p$ , then “[t]o argue against the first premise ( $p$ ) by constructing the counter-argument II is to employ the G. E. Moore shift” (ibid.).

<sup>8</sup> Usually, in the history of philosophy, only Leibniz is recognized as holding global pan-essentialism to be true. On the other hand, for a defense of a claim that Leibniz’s views are compatible with transworld identity, see Cover and Hawthorne (1992).

Although this argument against global pan-essentialism is both, sound and valid, there is an elephant in the room not yet mentioned, i.e. David Lewis. Lewis's contention is that there are more horns than two: global pan-essentialism and transworld identity do not exhaust the logical space.

He suggests that the correct analysis of *de re* modality should use the logic of *similarity* and not one of identity. Individuals can (and do) have accidental and necessary properties but it has nothing to do with *their* being such and such in some possible world. What matters is whether or not *counterparts* of individuals exist and have the relevant properties in some accessible possible worlds. One can say that:

something has for *counterpart* at a given world those things existing there that resemble it closely enough in important respects of intrinsic quality and extrinsic relations, and that resemble it no less closely than do other things existing there (Lewis 1973: 39).

So, for example, some counterpart of Humphrey by winning an election guarantees that it is true in our world that Humphrey could have won the election (Lewis 1986: 194).

Lewis's thesis of counterpart theory is directly related to his thesis of modal realism, i.e. the thesis that every possible world is as real as ours. If other worlds are as real as ours, then it is not tempting to accept that there is any overlapping between domains of any possible worlds<sup>9</sup>. In the remainder of this section reasons against Lewis's counterpart theory are given.

OBJECTION I: it seems that counterpart theory just does not provide correct analysis of *de re* modal statements. Consider an obviously true statement:

(4) Socrates is essentially self-identical.

According to counterpart theory, proposition (4) is true if and only if all counterparts of Socrates are, on the one hand, identical with themselves (viz. all of them have the property  $\lambda x(x=x)$ ) and, on the other hand, if they are identical-with-Socrates, i.e. Socrates in  $w_0$ <sup>10</sup> (viz. all of them have the property  $\lambda x(x=\text{Socrates})$ ). But even if all Socrates counterparts pass the "being-identical-with-themselves" test (so to speak), none of them pass the "being-identical-with-Socrates" test. Therefore, according to the counterpart theory, one should say that it is not true that (4)<sup>11</sup>. It should be obvious that this gives reason to think that counterpart theory provides the wrong analysis of *de re* modal statements and not that the poor Socrates is no longer essentially self-identical.

<sup>9</sup> Lewis contends that, if one is modal realist, then one should not accept overlap because of *the problem of accidental intrinsics*. It is claimed that, if one accepts overlap, then one cannot account accidental intrinsics, e.g. having five-fingered hand. That is so because, in order to avoid a plain contradiction of claiming that an individual is both five-fingered and six-fingered, either one has to claim that such intrinsic properties are in fact relations to possible worlds, but then intrinsic properties are relations, or, one has to accept that all intrinsic properties are essential, but then Humphrey is essentially five-fingered. Both options are unacceptable according to Lewis (1986: 198-209). On the other hand, there are proponents of modal realism with overlap, for example Kris McDaniel (2004) and Sam Cowling (2011: 128-158). Note that, the critique of modal realism that follows will be confined to Lewis's version of it. McDaniel's and Cowling's positions are objectionable, but that would require more writing space to show.

<sup>10</sup> Where  $w_0$  stands for the actual world.

<sup>11</sup> For a similar critique, see Plantinga (1974: 110-114).

OBJECTION II: it seems that counterpart theory, by requiring us to reject any overlapping domains of possible worlds, collapses into global pan-essentialism. Simply put, everything existing in one world exists in that one world only. Therefore, if Socrates himself would have had different properties exemplified, it would no longer have been Socrates. But then, he has all of his properties in all worlds where he exists essentially. Hence one should agree with Nathan Salmon, that counterpart theory “is, at the bottom, just a particularly inflexible brand of essentialism” (Salmon 1982: 236). If that is the case, then the argument given against global pan-essentialism is as valid against counterpart theory<sup>12</sup>.

In this section, the main alternatives to the idea of transworld identity were discussed. It was argued that transworld identity betters both global pan-essentialism and counterpart theory. Before scrutinizing problems of transworld identity and offering an essentialist solution to them (section 4 and 5), it is necessary to introduce additional terminology (section 3).

### 3. Books, Ramsification and a Qualitative Distinction

Some propositions are true in some worlds but not in others, e.g. it is true that Socrates is snub-nosed in  $w_0$ , but there are worlds where that is not the case. Now, associating every possible world  $w$  with a set of true propositions in  $w$  gives a set called *the book on  $w$*  –  $B(w)$ . The truth of the conjunction of all members in set  $B(w)$  is grounded in  $w$  obtaining. Because books are maximal they correspond to possible worlds one-to-one: for one possible world there exists one book of true propositions and vice versa<sup>13</sup>.

*Ramsification* on a book is a function, such that<sup>14</sup>: (i) it takes as an input a book on a world and (ii) for each constant symbol used in that book replaces that constant with a unique variable, and (iii) it attaches corresponding existential quantifiers. Call the result of this function –  $R(B(w))$ .

Now one can make a qualitative distinction:

**QUALITATIVE PROPERTY**<sub>def</sub> = any property such that it is expressible by some  $n$ -place predicate that occurs in some  $R(B(w))$ .

<sup>12</sup> One might notice that this objection is in some sense illicit, i.e. it presupposes what it sets out to prove. I can only point out that I use the words *Socrates himself* to mean Socrates himself. If Lewis wishes to analyze the meaning of those words in his own way, I can only concede that I mean something else by them. Nonetheless, the objection is at least as feasible as Quine’s objection against McX (1948: 22), viz. in the same way as one does not mean by *Pegasus* and *idea of Pegasus*, so one does not mean by *Socrates himself could have done so and so*, that *someone similar to Socrates does so and so in some possible world*. Of course, both Lewis and McX have possible comebacks, but, for the present purposes, nothing substantial is at stake, since OBJECTION I still does the job. For further exploration of this objection against counterpart theory, see Plantinga (1974: 116-118) and Salmon (1982: 236), for a closely related critique, see Kripke (1980: 45/n13). Thanks to the anonymous referee for pointing out the circularity of this objection.

<sup>13</sup> Two notes on books. Set of propositions is maximal iff no proposition can be added to this set without rendering it inconsistent. Secondly, in the context of this paper, parsimony is not an issue, hence there are no methods given that would lessen the number of members in books.

<sup>14</sup> For a more general account of Ramsification, see Lewis (1970).

**NON-QUALITATIVE PROPERTY**<sub>def</sub> = any property such that it is not expressible by any  $n$ -place predicate that occurs in some  $R(B(w))$ .

Of course, it might be the case that, one in principle cannot *understand* some qualitative properties without understanding some non-qualitative properties (i.e. one can be sense-dependent on another), but that need not mean that those qualitative properties are *ontologically dependent* on those non-qualitative properties in question (i.e. it might be that they are referent-independent)<sup>15</sup>. Hence, all arguments of the following kind are mistaken:

- (5) It is possible that Kripke weighs twice as much as Socrates in  $w_0$ .
- (6) In some possible world  $w_1$  Kripke has a property  $P$  (where  $P$  – “weighs twice as much as Socrates in  $w_0$ ” and hence  $P(\text{Kripke})$  is true only if Kripke and Socrates stand in relation  $R$ , when  $xRy$  reads “ $x$  is such that it weighs twice as much as  $y$  in  $w_0$ ”).

Therefore,

- (7)  $P$  is non-qualitative.

But it is quite obvious that  $P$  is qualitative since there is such a predicate in some  $R(B(w))$  such that it expresses the property in question, e.g. if Socrates in  $w_0$  weighs 100kg, then the property in question is “weighs 200kg”<sup>16</sup>. Therefore, qualitative properties are only those that are not referent-dependent on non-qualitative properties (and vice versa).

Each  $R(B(w))$  is a *very long* first-order sentence that assigns to every  $x$  a set of qualitative properties that are exemplified by that  $x$  in a corresponding possible world. Therefore, every  $R(B(w))$  has one world-class ( $C$ ), when world-class is a class of sets of qualitative properties. For every  $S$ , such that  $S$  is a set of qualitative properties and  $S \in C$ , it is the case that this set of qualitative properties is exemplified by some  $x$  in a possible world corresponding to  $C$ . One can capture the idea of *qualitative profile* by saying: every  $S$  is a qualitative profile of some  $x$  in a possible world corresponding to  $C$ <sup>17</sup>.

For any  $R(B(w))$  (or  $C$ ), the most important remaining question is: does it correspond to one or to many possible worlds? Or, if put otherwise, could there be two distinct possible worlds, such that Ramsification of their books results in the same  $R(B(w))$ ? Define successful and unsuccessful Ramsification as:

**RAMSIFICATION IS SUCCESSFUL**<sub>def</sub> = each  $R(B(w))$  corresponds to one and only one possible world (and vice versa).

**RAMSIFICATION IS UNSUCCESSFUL**<sub>def</sub> = it is not the case that it is successful.

<sup>15</sup> Notions of sense-dependence and referent-dependence are taken from Robert Brandom. He uses them in a different context, viz. to explicate, what Brandom takes as, Hegel’s idea that alethic modal notions are sense-dependent (but not referent-dependent) on norm-governed activities, see Brandom (2005: 430-431), (2019: 83-85).

<sup>16</sup> On the other hand, think of the fact that Socrates weight is certainly not so neatly cut as to be exactly 100kg.

<sup>17</sup> Idea of world-class is suggested by Kenneth Siegel (1975: 75-78). Although he does not treat it in light of Ramsification.



(Un)successfulness of Ramsification depends on the very nature of reality. One can locate two metaphysical positions:

**EXTREME HAECCEITISM**<sub>def</sub> = reality is such that it is not necessary for Ramsification to be successful.

and, on the other hand,

**REDUCTIONISM**<sub>def</sub> = reality is such that it is necessary for Ramsification to be successful<sup>18</sup>.

In this section, necessary terminology for further investigation was given. In section 4, the problem of transworld identity emerging from Chisholm's paradox is scrutinized and resolved by appeal to individual essences. In section 5, the problem of cross-world identification is analyzed and untangled by arguing for the appropriateness of reference to individual essences across possible worlds.

#### 4. Essentialist Solution to Chisholm's Paradox

Chisholm's paradox (1967) is an argument against transworld identity with a *reductio ad absurdum* form. It is argued that, if one assumes transworld identity, then one is led to haecceitist switches.

**HAECCEITIST SWITCH**<sub>def</sub> = there are two possible worlds  $w_1$  and  $w_2$  ( $w_1 \neq w_2$ ), such that  $R(B(w_1)) = R(B(w_2))$ .

But, it is said, haecceitist switches are something utterly unacceptable, hence there is no identity across possible worlds.

Modified (and a stronger) version of Chisholm's paradox<sup>19</sup> can be formulated as follows:

- (8) Individuals exist across possible worlds (premise).
- (9) There are two individuals Adam and Noah, such that all of Adam's essential qualitative properties are those of Noah's essential qualitative properties and vice versa (premise).
- (10) There exist possible worlds  $w_1$  and  $w_2$  ( $w_1 \neq w_2$ ) such that: (i)  $R(B(w_1))$  corresponds to world-class  $C_1$ , (ii) Adam exemplifies  $S_1$  and Noah exemplifies  $S_2$  in  $w_1$  (where  $S_1$  and  $S_2$  are members of  $C_1$ ), (iii)  $R(B(w_2))$  corresponds to world-class  $C_2$ , (iv) Adam exemplifies  $S_2$  and Noah exemplifies  $S_1$  in  $w_2$  (where  $S_1$  and  $S_2$  are members of  $C_2$ ) and (v) everything unrelated to Adam's and Noah's existence is the same in  $w_1$  and  $w_2$  (from (8) and (9)).

<sup>18</sup> Similar definitions are given by Salmon (1996: 205-206).

<sup>19</sup> Chisholm's construal rests on transitivity of accessibility relations, i.e. on a frame condition that for all  $w, w_1, w_2, w_3$ , if  $wRw_1$  and  $w_1Rw_2$ , then  $wRw_2$ . The modified version given in this article does not and hence it is stronger in the sense that fewer initial assumptions are needed.



(11)  $R(B(w_1))=R(B(w_2))$  (from (10)).

(12) It is not the case that there are haecceitist switches (premise).

Now, (11) and (12) are a contradiction, and (12) is by assumption true, hence (11) must be false. But, (11) was inferred only because (8) was accepted, therefore:

(13)  $\sim$  (8) (conclusion).

In the remainder of this section, two arguments against Chisholm's paradox are developed.

OBJECTION I: the thesis that there cannot be any haecceitist switches (viz. premise (12)) is grounded by reductionism. One can state that there are in fact no possible worlds that differ only non-qualitatively if and only if one does know that necessarily every world has a unique  $R(B(w))$ . But the truth of the metaphysical thesis of reductionism is not obvious and no convincing argument is given to support it. The burden of proof rests on the shoulders of those that propose it to be correct.

On the other hand, if reductionism is false, then (11) should be taken as a reason for accepting that individuals do have non-qualitative individual essences<sup>20</sup>. For consider:

(14) State of affairs Adam exists is included in  $w_1$  (premise).

(15)  $B(w_1)$  implies Adam's existence (from (14)).

(16)  $R(B(w_1))$  does not imply Adam's existence (from (9))<sup>21</sup>.

(17)  $B(w_1)$  has the same qualitative information as  $R(B(w_1))$ .

Therefore,

(18) Non-qualitative propositions in  $B(w_1)$  implies Adam's existence (from (15), (16) and (17)).

Hence, if extreme haecceitism is true, one can know that non-qualitative truths in  $B(w_1)$  implies Adam's existence. But such non-qualitative truths are possible, only if Adam has a non-qualitative essence. Hence, if extreme haecceitism is true, then one should accept that Adam has a non-qualitative essence. One such essence could be a property "being-identical-with-Adam". Another, every world indexed property such that, it is uniquely instantiated by Adam in that possible world<sup>22</sup>.

***E IS AN INDIVIDUAL ESSENCE OF  $X_{def} = x$***  has *E* necessarily and there is no possible world *w* in which there exists *y*, such that,  $x \neq y$  and *y* has *E*.

<sup>20</sup> As David Lewis puts it "one man's reason is another man's *reductio*" (1986: 207). An argument for extreme haecceitism would rest on the fact that if one can conceive Adam and Noah to switch all of their qualitative properties, then in fact they can. One should remain humble and confess that one simply does not know whether it is genuinely possible.

<sup>21</sup> One could construct an argument that does not switch the roles of Adam and Noah but replaces one another. Hence, in  $w_1$  Adam will exemplify  $S_1$  and Noah will not exist but in  $w_2$  Noah will exemplify  $S_1$  and Adam will not exist.

<sup>22</sup> These are non-qualitative essences favored by Plantinga, (1974: 71-77) (1976: 149-150).

But then, the difference between  $w_1$  and  $w_2$  (from premise (10)) is grounded in the fact that in  $w_1$ , some  $x$  such that essence of  $x$  is “being-identical-with-Adam” exemplifies  $S_1$  and some  $y$  such that essence of  $y$  is “being-identical-with-Noah” exemplifies  $S_2$ , whereas in  $w_2$  it is vice versa<sup>23</sup>. Therefore, if reductionism is false, then haecceitist switches are ontologically grounded, viz. even if qualitatively these worlds do not differ, they are different and properly so<sup>24</sup>.

OBJECTION II: for the sake of argument, one might suppose that proof of reductionism is given. But if so, then it would be implausible to accept premise (9), for the following reasons<sup>25</sup>. If reductionism is true, then (14) implies

(19)  $R(B(w_1))$  implies Adam’s existence.

But  $R(B(w_1))$  assigns qualitative properties to variables, hence if it implies Adam’s existence, it must be the case that, some qualitative properties being exemplified by some  $x$  is sufficient for Adam’s existence. But now either exemplifying such a set of qualitative properties by some  $x$  is sufficient for Adam’s existence or it is sufficient and uniquely so. But it can’t be the former. For consider, if it is not unique, then there is some concrete contingent individual  $I$  such that its sufficient conditions for existence are the same as Adam’s. But then the existence of  $I$  supervenes on the existence of Adam (and vice versa)<sup>26</sup>. In this paper, no principles of plenitude<sup>27</sup> were introduced, but presumably, whatever they might be, they would rest on the fact that: existence of any two concrete contingent individuals does not supervene on one another<sup>28</sup>. But if there would be sufficient conditions for Adam’s existence that are not unique, then Adam’s existence would supervene on the existence of some other concrete contingent individual. But, Adam’s existence does not supervene on the existence of some other concrete contingent individual. Therefore, there are sufficient conditions for Adam’s existence that are unique. These conditions being satisfied in any possible world  $w$  implies Adam’s existence. Since these conditions are assignments of qualitative properties to variables, they are satisfied in a given possible world  $w$  if and only if Adam’s qualitative essence is exemplified by some  $x$  in that possible world  $w$ .

<sup>23</sup> Therefore, it is not the case that: “there may be good ground for the existentialist’s *Angst*; since, it would seem, God could have had no sufficient reason for choosing the world in which you play your present role instead of one in which you play mine” (Chisholm, 1967: 4).

<sup>24</sup> This does not constitute any proof of extreme haecceitism, since there is no proof given of haecceitist switches. Even if “being-identical-with-Adam” is a property had only by Adam, one cannot infer that this property is separable from and in principle not reducible to qualitative properties. It might turn out that non-qualitative properties are, in a memorable phrase of Armstrong, “ontological free lunch” (1997: 13). But if it would be the case that all non-qualitative properties are reducible to qualitative properties, then (by definition of qualitative properties) these so-called “non-qualitative” properties are *in fact qualitative*.

<sup>25</sup> Of course, one should take some generalization of premise (9) that does not involve Adam and Noah concretely.

<sup>26</sup> Viz. in all possible worlds there cannot be any difference of facts concerning Adam’s existence without there being any difference of facts concerning an individual’s  $I$ ’s existence and vice versa.

<sup>27</sup> Principles of plenitude should ensure that there are no gaps in logical space, e.g. “if there could be a dragon, and there could be a unicorn, but there couldn’t be a dragon and a unicorn side by side, that would be an unacceptable gap in logical space, a failure of plenitude” (Lewis 1986: 88).

<sup>28</sup> It should be added: for individuals that do not depend on one another in some essential ways. If one assumes biological origins essentialism, then principles of plenitude should not block Kripke’s essential dependence on his parents.

***E* IS A QUALITATIVE INDIVIDUAL ESSENCE OF  $X_{def} = E$**  is an individual essence of  $x$  and  $E$  is a property “exemplifying properties in a set  $A$ ”, when  $A$  is the intersection of  $S_1, S_2, \dots, S_n$  (when  $S_1, S_2, \dots, S_n$  are qualitative profiles of  $x$  in all possible worlds where  $x$  exists)<sup>29</sup>.

But if reductionism and (14) imply (19), and the latter can be explained only by appeal to qualitative essences, then (9) is plainly false. If individuals have qualitative essences, then there are no two (numerically distinct) individuals such that sets of their qualitative essential properties are identical. But if so, then there are no haecceitist switches.

To conclude, Chisholm’s paradox does not raise any problems for transworld identity, since depending on whether extreme haecceitism or reductionism is true, individuals have either non-qualitative or qualitative essences. Therefore, one can resolve this paradox in a non-partisan way, i.e. by leaving it open as to whether individual essences are qualitative or not<sup>30</sup>.

## 5. Essentialist Solution to the Problem of Cross-World Identification

Another problem, that is said to haunt proponents of transworld identity, is associated with the criterion of identification of individuals across possible worlds. It is said, that one has to propose a criterion of cross-world identification in order to determine “transworld heir lines” (Kaplan 1979: 94). Criteria of adequacy for this criterion is – it must be given in terms of *specified qualitative properties*<sup>31</sup>. If one does not provide such a criterion of identification, then it is said one must conclude, as Quine does (1968: 313), that “we can make little sense of identification of particulars across possible worlds”. For it is:

odd to the point of paradoxicality to maintain that we can talk or think comprehendingly about things without knowing *what it is* that we are talking or thinking about—that is, without grasping their essences (Lowe 2008: 41/n33).

In the remainder of this section, two arguments are given: (i) for the appropriateness of reference to individual essences across possible worlds without knowing exactly what they are and (ii) against the criteria of adequacy for the criterion of cross-world identification.

Regarding (i): one might compare the predicament, described by Lowe, with another situation. Imagine someone listening to a conversation between two mathematicians about some topological function called – “Fred”. Since the person listening does not have the necessary background to understand this function, she certainly does not know *what* it is. Because of their assurance to her, that everyone in the mathematics department agrees

<sup>29</sup> Qualitative essences as defined above are overloaded since they also include not unique necessary properties. What could qualitative essence of Adam be? Well, who knows. The only contention made in this section is that, if reductionism is true, then Adam has a qualitative essence.

<sup>30</sup> Platinga also considers the possibility of remaining agnostic, with respect as to whether individual essences are qualitative or not (1974: 100-101). On the other hand, elsewhere, he explicitly accepts *thisness*, i.e., in the terminology of this article, non-qualitative essences, cf. Platinga (1974: 71-77) (1976: 149-150).

<sup>31</sup> Cf. Kripke (1980: 44); Plantinga (1974: 93); Salmon (1996: 207); Kaplan (1979: 99).

*what* this function is, she infers that Fred has an essence even if she does not know what this essence is. But surely, when she formulates propositions concerning Fred, she is talking about it<sup>32</sup>.

Alike with individuals. One can know that Kripke exists and one's knowledge of that fact allows one to infer that there must be an essence of Kripke (as argued in section 4)<sup>33</sup>. Agnosticism regarding whether individual essences are qualitative or non-qualitative (viz. whether extreme haecceitism or reductionism is true) should not prevent one from thinking about individual essences, because obviously, Kripke has a property "being-identical-with-Kripke". When one ponders as to whether reductionism or extreme haecceitism is true, then ultimately one is considering whether this essence of Kripke is referent-dependent on qualitative properties or not. The very intelligibility of arguing for either side rests on a prior fact that there is some such essence to be considered. But if so, then one is thinking about Kripke's essence after all and hence, one can appropriately refer to it across possible worlds. If someone wants to specify worlds that include Kripke, she just says that she is doing so.

On the other hand, if one were to stipulate a possible world where Kripke has a property of being an anteater, then it might be the case that, Kripke's essence is incompatible with this property being co-exemplified with it and, hence it is impossible for such a world to obtain. Of course, if one were to commit oneself to the task of listing all metaphysically possible worlds where Kripke exists, then one would have to prove either extreme haecceitism or reductionism and specify all of Kripke's essences, essential and accidental properties. But that is unnecessary for the intelligibility of transworld identity. One might better take sides with Inwagen and say, that these questions:

are better described as metaphysical questions *about* individuals (...) that are *couched in terms of* trans-world identity. To call them questions *about* trans-world identity is like calling the question whether the truth of materialism commits one to the truth of determinism a question about truth (1985: 116).

Regarding (ii): the idea behind criteria of adequacy for the criterion of cross-world identification seems to be the following: having a set of specified qualitative properties, one could, for any possible world, check whether or not it's  $R(B(w))$  includes their exemplification. Of course, this criteria of adequacy presupposes reductionism. If extreme haecceitism is true, then individuals are individuated by non-qualitative essences and hence it is wrong to assert that criterion of cross-world identification must be given in terms of qualitative properties.

On the other hand, what if reductionism is true? Well, it still seems that it is not necessary to *specify* qualitative properties that individuate individuals in order to refer to them across possible worlds. If proof of reductionism were given, then one would know *that*

<sup>32</sup> The example is taken from Plantinga (1974: 86)

<sup>33</sup> It would be another question whether or not, one can refer to and know that there are essences of not yet existing objects.

Kripke has a qualitative essence and hence one could refer to this essence of Kripke. This situation is not dissimilar to the following one described by Salmon. When one declares that

I am discussing cities with marble monuments. I do not have to specify the relevant class of cities purely qualitatively and then provide a criterion for intercity identity of material. I simply select the class of cities that I wish to discuss by specifying that they have monuments made of . . . , well, *marble* (1996: 210).

Similarly, for possible worlds. One chooses to specify such and such possible world for our attention and it need not be specified by qualitative properties only, even if reductionism is true<sup>34</sup>. For:

[p]ossible worlds' are *stipulated*, not *discovered* by powerful telescopes. There is no reason why we cannot *stipulate* that, in talking about what would have happened to Nixon in a certain counterfactual situation, we are talking about what would have happened to *him*" (Kripke 1980: 44).

## 6. Conclusions

In this paper, it was argued that:

1. Transworld identity betters both global pan-essentialism and counterpart theory because the former *does* but neither of the latter *do*, account accidental properties.
2. Chisholm's paradox does not raise any problem for transworld identity. That is so because either extreme haecceitism or reductionism is true. But if the former is true, then individuals have non-qualitative essences and, hence haecceitist switches are ontologically grounded. On the other hand, if reductionism is true, then individuals have qualitative essences and it is impossible for two distinct individuals to have the same essential qualitative properties, and hence there are no haecceitist switches.
3. Cross-world identification of individuals does not raise any problem for transworld identity. Criteria of adequacy for this criterion is incorrect since it is appropriate to refer to individuals across possible worlds without specifying qualitative properties that individuate them (even if there are such properties). That is so because it is appropriate to refer to individuals across possible worlds by referring to their essences<sup>35</sup>.

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<sup>34</sup> Similarly, Kripke (1980: 18/n17) says: "[w]hat I defend is the *propriety* of giving possible worlds in terms of certain particular as well as qualitatively, whether or not there are in fact qualitatively identical but distinct worlds."

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