All known Identity problem solutions (head-on attack)

How different definitions of Self result in different types of identity, death, solution of identity problem and immortality

Level of ideality in definition of self

Too much information

Not enough information

Levels of definition of Self	Reality theory	Identity and its question	Criteria of identity	Solution of the Copies problem	Mechanism of identity transfer	Death and the ways to immortality	Arguments pros and cons	Comments	Best solutions
Type of the definition of Self	Exact definition of Self								

Non-informational identity

All ideas that assume that mirror copy could be not me, because it lacks something by definition unmeasurable

Here Self is not information and Identity has some kind of non-informational identity essence

- Atman
- Soul
- Self as a center of gravity of the human mass
- Self is individual rainbow of qualia
- Quantum consciousness based on Self-Observation
- Identity is continuity of consciousness flow/stream
- Identity is continuity of experience
- "Now moment" holes within other moments of experience
- Local identity - I exist only one instance right here
- Reopening identity
- Zero identity
- Identity as nature of time
- Identity as unholy trinity
- Identity as information about the brain - that is position of all atoms
- Self is an information about neural bonds
- Self is information about connectome, synapses (gross activity, synapses)
- Self is information about neural bonds + consciousness (gross activity, synapses) + qualia
- Self is information about neural bonds + consciousness, synapses (gross activity, synapses) + qualia + self-consciousness (the ability to recognize oneself in the mirror)
- Self is my connectome + Functional Integrity (FCI) + qualia
- Overlapping sequence of Fadiga neurons (Core, Self)
- Self is **self-image**
- Self is set of main unique features of personality
- Unique information about a person, which will be lost in the event of his/her death
- A large unique set of neurotransmitter features **of childhood**, idea of God
- Unique personality **creative ability**
- **Valuable information** and skills
- **Digital signature** of **unique information style** - everything he do and say
- **Name and CV**
- He is everybody who thinks that he is me.

- Self is God
- God exists and he created the world, and provides evolutionary process
- Only Self is real
- Quarks and Another basic constituents
- Supernatural supernaturalism
- Physicalism and other reductionism Materialism Mechanism
- "(1) Physicalism is true of a possible world if all and only the physical facts obtain in a duplicate of w in a duplicate of the actual world.
- Physicalism is defined here as "The world=matter", so our case 1 results in physicalism
- No real number definition. Something like the set of all sets, referring to the whole interactions of simple elements, which are not necessarily perfectly

- Identity of the observer
- Identity carrier is the same in all observers
- All my copies are me, including loose ones.
- All observers split the same way and all of them are me (Mike, Bill & me)
- Only the copies with "my soul" are me, but we can't know which ones
- Nothing is needed to be done
- If all quarks are the same then observer is the same
- Preservation of quantum coherence in the quantum computer of mine
- Memory about previous state of consciousness
- I exist only now
- Any copy is me
- Any my copy is me
- There is no any need to worry about identity in quantum immortality
- Buddhism: and we should fight with that illusion as a source of unhappiness

- Death does not exist and I'm always immortal (Death is a trivial mistake in the flow of information)
- There are no any proves of this theory and it is very speculative
- Two possible solutions of non-informational identity problem: 1. Prove me wrong! And all my copies, which are not me nonetheless, or pass through all the same experiences that I'll do. Agree or reject evidence.) 2. Or Self is defined privilege, and I can't prove anything to anyone
- Death of Identity
- If identity is unmeasurable entity, how it could be sharing to bind how life death is a illusion
- Is Identity able to change and evolve?
- If yes, could it become other identity?
- Could argument work: changes in identity, in principle?

- Sum of all non-informational identity elements
  - Qualia
  - +Actuality (Now)
  - +Continuity, based on causality
  - + quantum consciousness

Informational identity

Self is information in the brain or about the brain.

Information could be presented in form of 0 and 1 and could be copied without loss

Identity depends only of fidelity of information transfer, no hidden variables.

- Personality identity
- The copies of identity answers question: what copy of me will be in the next moment (+1 second) in unnatural business trip? Quantitative identity by Parfit
- **Criteria here is similarity of reference. Quantitative measure is mind or similarity**
- 10 exact copies are me
- Type of similarity is needed for identity? Level of similarity? Functional units of the brain? Or atoms? Or quarks? Or strings?
- Technically this type of identity depends on our vision and is not objective. It is very important for us in choosing ways:
  - safety
  - ability to recognize us and "our" copies
  - how likely it is for other side
- Is ability to evolve?
- Destruction of all other copies and all memory about them
- Functional copies of me in a body
- Me is me if functional structure of neural net is the same
- The same information flows as in actual brains
- Me is the matter of me with the same memories, which differs only on random noise
- The same memories
- The same but memories have changed, but the point is the same
- The same change of belief
- The same set of unique memories
- The same unique identifier
- The same unique information
- The same set of possible actions (random reactions)
- The same set of biased (by the current personality) reactions
- Stylistic unity
- He is everybody who thinks that he is me.

- Order of magnitude of needed information (10^10 bits)
- 10^10
- 10^10
- 10^11
- 10^11
- 10^12
- 10^13
- 10^13
- 10^13
- 10^13 ?
- 10^13
- 10^14
- 10^14
- 10^14

- Death is destruction of the part with all copies, but immortality is preserving of this part
- Death is destruction of all my copies, but I'm still alive in other copies
- Death is destruction of all my copies, but I'm still alive in other consciousness
- Death is destruction of all my copies, but I'm still alive in other consciousness
- Death is destruction of all my copies, but I'm still alive in other consciousness
- Death is destruction of all my copies, but immortality is preservation of the same information
- Death is preservation of my copies, but immortality is preservation of the model of personality
- Death is preservation of my copies, but immortality is preservation of the model of personality
- Death is preservation of my copies, but immortality is preservation of recognizing pattern
- Death is destruction of the memory of the copies
- Death is destruction of the image of self with copies
- Death is destruction of the image of self with copies, but immortality is preservation of self-consciousness
- Death is destruction of the image of self with copies, but immortality is recreation of these image
- Death is destruction of the unique information and consciousness in the post-person

- Information redundancy

These models require too much precision that is difficult to ensure, and obviously wants to keep too much unnecessary information about the carrier of consciousness, but not consciousness itself

- Information insufficiency

These demands result in insufficient information and loose copy

- Information identity solution for goals of social immortality

We should preserve enough information to recreate
- valuable
- valuable
- and predictive
traits of the personality

- Information identity criteria for exact model
  - Behavior similarity +
  - Indistinguishable inner thought process
  - Similar reactions on external influences
  - No neurons could be replaced by computer

- Information identity elements
  - Memory
  - Memory-materializations (thoughts patterns)
  - Similar reactions by others and self-recognition
  - Indirectal identity
  - Direct physical identity)
  - Unique useful information (personal style, DNA)
  - Goal equivalence
  - Set of unique information pool (child memories)
  - Valuable features
  - Valuable skills
  - Personal style
  - Memory of the last moment (short term memory)

Identity and Self are **social agreement**

Self depends of WE and is defined by group of people based on its practical goals. No indipendent Self exist

- He is what others think he (and including what I think is me)
- He is the one who has same historical (subway) memories (Core, Self, name, date, function)
- He is the one who is me based on set (Hall identity)
- Self is defined by all my groups and social roles which I am in, and also by all my groups (group identity) - it is national
- Social identity
- The type of identity answers the question of whether I stay in the next moment as the point of view of other people, who know me, or who have contact with me with enjoyment
- The criterion here is that we can realize the difference if we are in the position of the other (normal condition)
- Criterion: where to go most of the signs of identity
- The degree of recognition by other mind (idea of the real person)

- He is full set of how who would be reported on me
- Group identity (I am in the group of people, who think that they are me, and they are in the group of people, who think that they are me)
- Profession: anyone who has a certain set of skills and roles
- Identity membership: I define my identity by absence of other social groups

- My social environment must recognize me in a crisis
- Some old copies could fail the Turing Test (the copy could fail at the same amount as the original, or as close as possible to it) in some and time
- Legal death is defined as death of the brain and heart (immortality should be legally defined)
- Social humiliate could be immortal as long as his group exist

- As a result me is a set of **Legal identity** (Social security number, Passport, Driver's license, Birth certificate, Marriage certificate)
- Death is (theoretically) of spatial-temporal pool that of the body (only existence)
- Identity means that one living being cannot be in two in the same spatial place (e.g. if he regrew other brain in the same place)
- If I foster treat my father, I'm not my father, I'm my father's son and I'm not my father, I'm like imposter.

- Legal identity

Legal identity is defined as a set of unique features, which are important for them, then they are recognized by the state.

The criterion for it is law.

Identity defines by documents (passport, birth certificate, driver's licence, social security number, etc.)

A quantitative measure - the statute of limitation. The person is declared dead in the case of the absence of any news from the person for a long period.

The practical nature of identity is a given society are the basis for legal identity.

In some societies human could change identity (also called initiation) or replace name

- Information-causal theory of identity:
  - information
  - +
  - causality
  - +
  - reference class
  - (And in his extension includes rainbow of qualia and self-awareness)

Planning self

Self is something about which I could make plans and predi ctions

Me is future me, which I control and makes plans for.

- My future - is my future + copies which survived
- Virus logic - My is anybody who has instructions to reproduce
- Who will remember me? - My is the set of my loose copies which will remain but anything I decide now
- Future me is the object of my current plans and my motivational flow
- My is my expected future
- Future memory continuum (chain of events and of the way to remember the event) - Spiritual

- Planning Identity

This identity ends when my plans end.

- My copy are who same as me (Parfit) - I can't predict information in
- My is anyone with my values
- Memory about new decision
- My is only the one who can a) plan and b) **can act if all needed information** then
- The observer who will experience consequences of my decision (set materialism)
- Overlapping chain of experience memories

- All copies which carry out my plan
- All copies with the same values and situation
- All future copies which will carry out a decision which I will plan now
- All copy with the same values and situation
- The observer who will experience consequences of my decision (set materialism)

- Type most causally follow me, which will be able to "do" about my actions
- We can not say who is me, but we can say who is not me
- Solve contradictions of this demand

Mathew parodies about specter my appear here.

Buddhism: there is no any self, there is only flow of the specific/logical pattern, which is continuum of this flow. Cases which stretch, on the one hand, from replacement of all cells in the body (Ship of Theseus) to the death of the body, on the other end of the spectrum, on which all of my memories are replaced with those of Napoleon."

- Duplicate of the same set of my information
- Copy must survive in order to be me. And copy is possible in the case of the same spatial-temporal location

Indirect definition of Self

We define something with which Self is strongly connected, but which is not Self.

- Self is biological human
- Self is human body
- The same atoms
- The same human body (including organisms)
- Self is human body with same DNA
- The same cells.

- Identity is the identity of the brain
- We need the alive brain for identity
- We need the alive brain for identity
- We need not only the brain but also the whole body
- Neuro thought that we need the same atoms in the same connectome for identity. But this means that most neurons of the brain will be replaced by new ones during the life and then will return to old ones by the end.
- Those neurons are new, copy with the same connectome, but with different atoms could have opposite role in the connectome
- Connectome of the brain - missing
- Connectome of the same set of how the neural impulses transmit in the brain
- Connectome body system - missing

- Carrier Identity

Here we replace question of identity with question of identity of the carrier of mind - atoms, cells or brain.

We abandon here idea of independence of the information from the media

This is the strongest grounds for the identity problem solutions. But any carrier could split.

Self is a sum of all attributes of Self

- **Identity logs** (Social security number, birth certificate, passport, car agreement (the unique set of the numbers, like security numbers))
- **Social identity** (Name, Surname, Patronim, location, social status)
- **Informational Digital** (Digital signs of the last moment, knowledge of passwords, biometrics of key abilities (fingerprints, DNA))
- **Recognitive identity** (I am able to recognize my past) (Verbs and Nouns) (I am able for recognize me
- Situational identity (Identity is defined by the situation in which we refer or the group member)
- The copy which received most different signs of identity is me
- Death is loss of signs of identity
- Write a copy which would carry out my identity

- Biological identity
- Human identity
- The identity is result from sum of signs of identity

- Outer identity

It answers the question, whether the copies identical in terms of certain external observer.

The Identity of hallucinations, link

The identity based on defining characteristics of identity (Criterion of Leibniz, or duck). Paradoxically, it depends on the observer.

Potential identity

It's something fully coolen with definition A, a to A

- Human idea of "Self" and identity as complex adaptation (Meta - Self)

Self doesn't have any one substrates , it use many, but not limited to them

- "Feeling of Self" - Some people claim that they have a strong feeling of self - but we can't check it. (Qualia identity)
- Intuitive understanding of the idea if identity - Most people have an idea what is identity
- The body has a plain integrativity of services
- Union of all identities, able to recombinant lacking identity
- Evolving identity - identity which is evolving in time as a set of features, which is able in personality to show traits.

- Multi-level human identity

It answers the question of what types of identity are applicable in this case, and how the identity is developing.

Criterion: where to go most of the signs of identity

- As long as my brain alive, I am I (as long as enough bits of my brain alive)
- The copy which received the most different signs of identity is me
- Overlapping ob-server-moment • Memory of the previous moment • The same qualia
- Different people could have the same observer moments
- Identity as complex adaptation of human-mamalian brain
- Identity and Subconsciousness - Dual observers could have different subconsciousness
- Multiplicity is more important than Unity - In the world where there is no individual differences, identity is meaningless
- Identity (and its values) changes during time with aging. It is different in child, teenager and adult.
- Human identity is like living being - consists of many parts, evolves and able cure it-self

- Self-determination

"Self" controls identity , creating its own criteria of identity and declare its nature (The will to identity)

- Declarative identity (Intelligent being is able to declare himself that he is (being what it is))
- Conformity to my own identity theory (Identity is consistent and realistic identity)
- Self-recognition - (Noticing yourself to your own identity and avoiding case offenders manner)
- Unconsciousness of identity - identification with social group

- Identification

Identity is what you think about identity

- Social identification by group membership
- Identity is defined by environment
- Self-narrative and mutual recognition - Hence, who thinks that he is me, he will also be (Hobbs, Parfit)
- Posthuman will have power over his own identity.

He will be able to redefine it according to his needs. He will not be a victim of any identity solution.

Meaningless questions

The question of identity and self is meaningless

- Those questions are **meaningless on our terminology** - Wittgenstein, the Kane and consciousness
- **Two solutions of ethics** - **Ethics of Parfit and levels of reality** - Buddhism, personal and scientific
- **The problem is of purely linguistic nature**
- "I" is a pronoun , the value which depends on context

- Skepticism and positivism

- Identity as connected-ness of observer moments
- Identity as individuality, that is uniqueness
- Evolution results in built in mechanisms, which implies idea of identity
- It is of brain structure it exists result of its work (as the result of evolution) - the quote of identity)
- It may provide wrong results: dissociative disorder, new tech

Self is subset of all thinking beings

which is determined by some trait and is dynamically changing

- Class identity

It answers questions "where I am?" and "Who I am?"

- Identity and indexical uncertainty
- My copies are me, even when the sample is not me
- If I can not tell if I was being AI or #2 , then I am both of them - I am a copy , and myself - as a random representative of this class
- All copies with the same first person perspective are the same.
- If I don't know if I am copy or not, I am the same as I'm not sure (Hobbs's fix)
- Reassortment of the number of the copies
- Assortment with positive probability of duplicate (AI or Human)
- Identity as my position in world - If my picture of the world is true (AI or Human), and my position in it, and it provide me with best for identity

- Identity as result of ability to distinguish different people
- My ability to distinguish me from others, based on indexical information: name, position, values, body, memory, connectome. It requires society with very different minds
- Dissociative and depersonalization diseases. But most people can recognize that if I really "feel" it is a very subjective potential.
- Ability of my peers to distinguish me from others or from my copies - my friends, my partners, law enforcement. Digital for syndrome - failure to do it.
- Ability of me to distinguish myself from other copies
- Facility future technology (including AI) to do so based on complex data - DNA, brain maps

Self in quantum multiverse

Self is exact replicas of me (arising during separation of quantum branches multiverse, or in infinite universe)

- Identity in multiverse answer a question: which copy of me I will be in the next moment of time, given known distribution of probabilities of branches?

- 21) Splitting identity. It is an idea that future identity could split into several (or infinitely many) streams. If we live in quantum multiverse we split every second without any (perceived) problems.

Non-binary definitions of identity

The idea that me or not-me identity solutions are too simple and result in all logical problems

- Partying identity - my identity is changing as are invitations, and could be presented as flow passing through all possible states
- Undual identity - identity as continuous measure of identity
- Probabilistic identity - identity is a probability that I find as self in the (point) next observer moment
- Complex identity - identity as complex number where real part is Self and imaginary part is probabilistic identity

Negative definitions of identity

We can't see identity, but we we are able to distinguish non-identity

- Taboo rule - Any time only one me is me in an AI space (in 0, 1 and 2 sec) (Could be not true in the linear world)
- Time rule - I exist at time between birth and death. (Could be null true if I resurrected)
- External observer rejection - My behavior or appearance is not what is expected from me
- Internal observer rejection - My self image and perception are inconsistent with my internal image
- Philosophies - a copy which does not have consciousness experiences is not me.
- Universal consciousness as final arbiter - Imagine, that all brains and copies in some kind of universe are connected to one single mind, which is able to feel all their feeling and experiences. It is the final arbiter.
- Buddhism: we do feel or declare identity of different observers, or provide identity to all observers.
- Knowledge criteria - If a copy doesn't know important thing or decision which I know, it is not me.
- Planning and value criteria - If a copy doesn't have and follow my plans, it is not my future copy. If I don't have my core values, it is not me.

Conservative approach to identity

As we don't know real nature of identity, we should try to preserve as much identity as possible

18) **Mathematical identity**

If Self is a mathematical series, which consists of first digit and a law how to get new digits.

N= N+3

Identity may be presented as number sequence, where each number describes a full state of mind. Useful toy model

19) **Infinite identity**

The main idea here is that any mind has non-zero probability to become any other mind after a series of transformations.

So only one identity exist in all space of all possible minds, but the expected time to me to become given person is dramatically different in case of future me (1 day) and random person (10 power 100 years). This theory also needs special version of quantum immortality which resets "memories" of a dying being to zero, which result in something like reincarnation. Or infinite repeating universe in style of Nietzsche's eternalrecurrence.

20) Identity in multi-level simulation. As we are probably live in a simulation, there is a chance that is is multiplayer game in which one gamer have several avatars and constantly able have experiences of all of them. It is like one eye through several people.

What is identity?

"Sameness of essential or generic character in different instances" (Webster)

General identity, mind identity and human identity

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