



# Philosophie der Digitalität

**8. Sitzung, 14.6.2019**

Thema heute:  
Virtualität



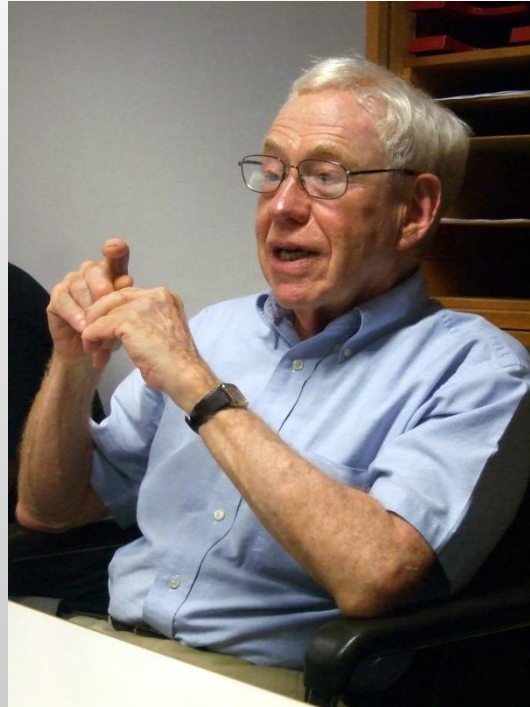
## Mögliche Hausarbeitsthemen:

- Inwiefern ist künstliche Intelligenz “intelligent”?
- Was ist Information?
- Wie funktionieren künstliche neuronale Netze im Vergleich zum Gehirn? Können Sie unser Denken simulieren oder gar ersetzen?
- Inwiefern ist das Internet philosophisch relevant? Worin besteht seine Struktur, worin seine ethischen Probleme?
- Worin besteht der Unterschied zwischen Realität, Virtualität und Simulation?

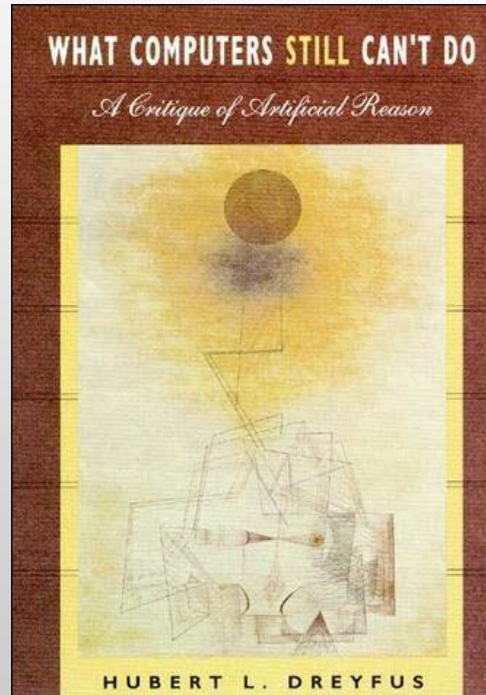


Thema der letzten Sitzung:

# Das Internet



Hubert Dreyfus (1929-2017)



**What Computers Still Can't Do: A Critique of Artificial Reason (1972)**



On the Internet (2001)



“The Internet is not just a new technological innovation; it is a new type of technological innovation; one that brings out the very essence of technology. Up to now, technological innovators have generally produced devices that served needs that were already recognized, and then discovered some unexpected side effects. So Alexander Graham Bell thought the telephone would be useful for communication in business but would not be accepted into people’s homes, let alone intrude as they walked down the street. Likewise, Henry Ford thought of the automobile as giving people cheap reliable, individualized transportation, but he did not imagine it would destroy the inner cities and liberate adolescent sex.” (1)



“The Net is different. It was originally intended for communication between scientists, but now that is a side effect. We have come to realize that the Net is too gigantic and protean for us to think of it as a device for satisfying any specific need, and each new use it affords is a surprise. If the essence of technology is / to make everything accessible and optimizable, then the Internet is the perfect technological device. It is the culmination of the same tendency to make everything as flexible as possible that has led us to digitalize and interconnect as much of reality as we can.<sup>2</sup> What the Web will allow us to do is literally unlimited. This pure flexibility naturally leads people to vie for outrageous predictions as to what the Net will become. We are told that, given its new way of linking and accessing information, the Internet will bring a new era of economic prosperity, lead to the development of intelligent search engines that will deliver to us just the information we desire, solve the problems of mass education, put us in touch with all of actual reality, enable us to explore virtual worlds that enable us to have even more flexible identities than we have in the real world and thereby add new dimensions of meaning to our lives.” (1 f.)





“According to the most extreme Net enthusiasts, the longrange promise of the Net is that each of us will be able to transcend the limits imposed on us by our body. As John Perry Barlow, one of the foremost proponents of this vision, puts it, the electronic frontier is “a world that is both everywhere and nowhere, but it is not where bodies live”. By our body, such visionaries seem to mean not only our physical body with its front and back, arms and legs, and ability to move around in the world, but also our moods that make things matter to us, our location in a particular context where we have to cope with real things and people, and the many ways we are exposed to disappointment and failure as well as to injury and death. In short, by embodiment they include all aspects of our finitude and vulnerability. In the rest of this book, I will understand the body in these broad terms.” (4)



“Leaving the body behind would have pleased Plato, who subscribed to the saying that the body was the tomb of the soul and followed Socrates in claiming that it should be a human being’s highest goal to “die to his body” and become a pure mind. As Socrates put it: “In despising the body and avoiding it, and endeavoring to become independent – the philosopher’s soul is ahead of all the rest.” But that makes it surprising that the Extropians claim to be following Nietzsche, not Plato, when they say we should transcend our humanity” (5)



“As a philosopher, I’m not going to become involved in condemning some specific uses of the Internet and praising others. My question is a more speculative one: what if the Net became central in our lives? What if it becomes, as the developers of Second Life hope it will become, what Joseph Nye, Dean of Harvard University’s Kennedy School of Government, calls an “irresistible alternative culture”? What if the Internet gave us access to a virtual second life? To the extent that we came to live a large part of our lives in cyberspace, would we become super- or infra-human?” (6)



“In seeking an answer, we should remain open to the possibility that, when we enter cyberspace and leave behind our emotional, intuitive, situated, vulnerable, embodied selves, and thereby gain a remarkable new freedom never before available to human beings, we might, at the same time, necessarily lose some of our crucial capacities: our ability to make sense of things so as to distinguish the relevant from the / irrelevant, our sense of the seriousness of success and failure that is necessary for learning, and our need to get a maximum grip on the world that gives us our sense of the reality of things. Furthermore, we would be tempted to avoid the risk of genuine commitment, and so lose our sense of what gives meaning to our lives. Indeed, in what follows, I hope to show that, if our body goes, and we live, for example, through avatars (virtual bodies) as in Second Life, we will largely lose our sense of relevance, our ability to acquire skills, our sense of resistant reality, our ability to make maximally meaningful commitments, and the embodied moods that give life serious meaning. If that is the trade-off, the prospect of living our lives in and through the Web may not be so attractive after all.” (6 f.)



“Web surfers embrace proliferating information as a contribution to a new form of life in which surprise and wonder are more important than meaning and usefulness. This approach appeals especially to those who like the idea of rejecting hierarchy and authority and who don’t have to worry about the practical problem of finding relevant information. So postmodern theorists and artists embrace hyperlinks as a / way of freeing us from anonymous specialists organizing our databases and deciding for us what is relevant to what. Quantity of connections is valued above the quality of these connections. The idea has an all-American democratic ring. As Fareed Zakaria, the managing editor of Foreign Affairs, observes: “The Internet is profoundly disrespectful of tradition, established order, and hierarchy, and that is very American.” (12 f.)




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**OLD LIBRARY CULTURE**


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**HYPERLINKED CULTURE**


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**Classification**

- a. stable
- b. hierarchically organized
- c. defined by specific interests

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**Diversification**

- a. flexible
- b. single-level
- c. allowing all possible associations

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**Careful selection**

- a. quality of editions
- b. authenticity of the text
- c. eliminate old material

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**Access to everything**

- a. inclusiveness of editions
- b. availability of texts
- c. save everything

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**Permanent collections**

- a. preservation of a fixed text
- b. interested browsing

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**Dynamic collections**

- a. intertextual evolution
  - b. playful surfing
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**Table 1:** Opposition between old and new systems of information retrieval



Thema der heutigen Sitzung:

# Virtualität



## Leitfragen

- Wie verhalten sich Realität, Virtualität und Simulation zueinander?
- Auf welchen Ebenen kann sich Virtualität zeigen?
- Inwiefern kann man objektiv epistemologisch und ontologisch zwischen diesen drei Modi unterscheiden?
- Inwiefern verändert sich das Verhältnis dieser drei Modi unter den Bedingungen der Digitalität?





## Drei Beispiele:

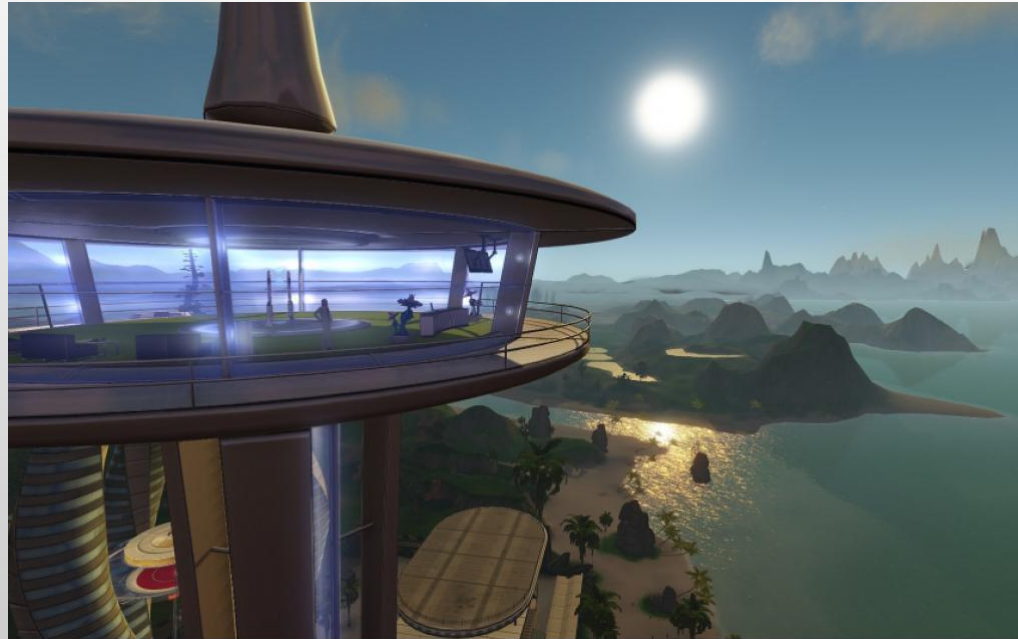
- Geldscheine und Bitcoins
- Youtube-Abonnenten
- Gegenstände in Computerspielen



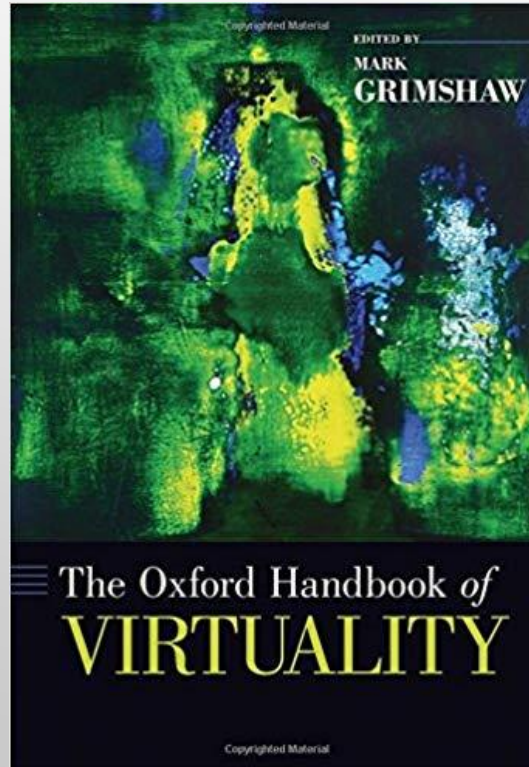
**Der blaue Partyhut in RuneScape - Wert  
1.680 US-Dollar**



**Second Life - Amsterdam für 50.000 US-Dollar**



**Entropia Universe - Crystal Palace und  
Club Neverdie für 330.000 Dollar**





“The nature of virtuality, and its relationship to reality and actuality, is one that has vexed the academy for many years. While a precise understanding of the concept remains elusive, the application of that concept, sometimes implicit, sometimes explicit, has profound implications for the public, particularly in one of its modern incarnations, that of a virtuality enabled by an increasing digitalization of society.” (1)



“It becomes clear that, despite its recent connection to the digital domain, the virtual has a long bloodline concerning its relationship to the real and the actual and that ideas and applications of modern digital virtuality are merely late arrivals to the party.” (4)



“It is a common belief that objects in virtual environments are not real but are mere imitations or simulations of real objects. A virtual apple, for example, has the appearance of an apple but by no means qualifies as real. A real apple has weight, mass, a physical location in space, and physical and chemical capabilities by which it can interact with objects in the real world. These are the kinds of properties by which we hold it to actually exist, instead of just being imagined or represented. A virtual apple, in contrast, has no such properties. Instead, it seems to be a make-believe object, a mere visual projection that responds to computer inputs but not to anything else. But if virtual objects are not real, physical objects, then what kinds of objects are they? Are they nonphysical objects or are they still reducible to something physical? And could it be the case that some virtual objects are real after all? Isn't a virtual chess game that allows one to play chess with an opponent, also in a way a real chess game? Cannot virtual money qualify as real money, if it can be exchanged for dollars or other currencies, as is the case for virtual money in certain virtual worlds like Second Life ? Aren't virtual insults real insults, if they are intended and taken personally by users of a virtual world?” (42)





“These kinds of questions have been central to philosophical and social studies of virtual reality since its early beginnings (Rheingold 1991; Heim 1993; Zhai 1998). They belong to the field of ontology , the study of being, which is a branch of philosophy concerned with the question of what kinds of entities exist and how different kinds of existing things relate to each other. Ontology asks questions like these: What is a physical / object? Are there objects that are nonphysical? What is a property and how do properties relate to objects? How do we distinguish essential from contingent properties of objects? Are there different kinds of existence or being for objects? What is the mode of existence of a number? Of a set? Of an event? Of a fictional object? And so forth.” (42 f.)



“(1) What is the mode of existence of virtual objects, actions, and events? (2) Can any virtual objects, actions, or events be claimed to be part of the real world as opposed to being unreal, a merely simulated reality, and if so, how does this fact problematize the distinction between reality and virtuality? Currently, there is widespread ontological confusion about virtual reality and its relation to the real world, which contributes to a flawed understanding of virtual reality and its potential. A better understanding of the ontology of the virtual can contribute to a better design and use of virtual environments and virtual reality systems.” (43)



“We have already seen that many, if not all, objects in virtual worlds do not have real existence. That is, they are not part of the real world. But is this to say that virtual objects have no existence at all? This seems clearly false. Virtual objects do exist, they populate the virtual environments used by millions of users all over the world, and they are things we refer to and interact with. But how can we then say that something exists and at the same time is not real?”

(43)



“By speaking about virtual objects (not) existing or being (un)real, we get confused by our language. So let us try to be more precise in our use of it. It is true that virtual apples exist, or are real, as virtual apples . However, it is false that virtual apples exist, or are real, as real apples . This is the confusion: virtual apples simulate or imitate real apples. To say that they are not real is ambiguous between saying that they are not real apples and that they do not exist (not even as virtual apples). But they do exist as virtual apples, just like imitation apples made out of clay or plastic exist as imitation apples but not as real / apples. A virtual apple is a real entity, just not a real apple. It is, as Dilworth (2010) calls it, a concrete model, just like a physical imitation apple.”  
(43 f.)



“At this point, an objection may be in order. While it is true that fake apples are real (physical) objects, can we genuinely say that virtual apples are real objects? Isn't it a necessary condition for something to be a real object that it exists in space and time in the physical world and has mass and weight? Virtual objects, it would seem, are immaterial and usually are not clearly located in the physical world. In short, they seem to have no physical existence, and therefore do not really exist, not even as virtual objects.” (44)



“In reply to this objection, it may be pointed out that virtual objects do have an underlying physical basis, and that they resemble physical objects in significant ways. To see this, some more detail is in order as to how they are generated by computers and what properties they have. Virtual objects are generated by computer systems. Computer systems are devices that are characterized by their ability to perform logical operations over symbolical representations , or symbol structures, or symbols in short. The soft ware that runs on a computer and the data structures used by soft ware programs consists of strings of symbols that ultimately are represented in the form of bits and bytes. Many of these symbols remain invisible to users, as they are “machine code” that is interpreted by the machine. Larger symbolical structures, which rely on these lower-level symbols, may, however, be made accessible to users as objects that they can manipulate. They are usually made visible on the screen, where they are represented by an icon (e.g., one that depicts a folder) or a symbol string (e.g., “prog.exe” representing a program). Such symbolical structures I will call digital objects.” (44)



“Although digital objects do not appear to have an identifiable mass and region in physical space, unlike (ordinary) physical objects, they have other features in virtue of which they may be defined as an object of some sort. Digital objects qualify as objects because they are persistent, unified, stable structures with attributes and relations to other objects, and agents can use and interact with them. It appears that computers can generate complex phenomena that imitate real objects, offer possibilities for interaction, and manifest themselves in an object-like manner. Because of their object-like behavior we may pragmatically define them as objects of some sort. Their unity and behavioral consistency is guaranteed by the underlying hardware and software.” (44)



“A virtual object is a digital object that is represented by a computer, usually graphically as an object or region in a two- or three-dimensional space, and that can be interacted with or used through a computer interface. 2 Virtual objects are digital objects that appear to us as physical objects and that we interact with in a manner similar to physical objects. An example of a virtual object is a folder on the desktop of a PC. Such a folder looks like a real folder and functions and behaves in many ways like a real folder: it can be opened, documents or items can be put into it or removed from it, we can label it, move it, discard it, and so forth.” (44)





“In addition to being physical phenomena that have a physical basis, virtual objects are also artifacts , designed by human beings to serve particular functions in a virtual world or environment. Thus, they usually have a specific functionality and specific (scripted) interactive possibilities tailored to the aim of the application. Moreover, virtual objects / have features in common with fictional objects : objects and characters that appear in products of the imagination, such as novels and movies, and which do not have real existence. Virtual objects resemble fictional objects in requiring a suspension of disbelief: just as immersing oneself in a movie or novel requires one to experience or perceive depicted events as if they are actually happening, immersion in a virtual world requires one to act as if it is real. In addition, just like fictional objects, virtual objects depend on authorship, and this sometimes implies that facts concerning virtual objects are made true by fiat of their creator, in the interest of a narrative of which these objects are a part. For instance, a building in a virtual environment may be introduced as being very old, made of granite, being formerly owned by a wealthy family, and so on, without there being an independent way within the context of the simulation to verify these claims: they are made true, as with fictional objects, by fiat of the author or narrator.” (44 f.)



“Let us now turn to our second question, whether virtual objects, events, or actions can ever be said to be real rather than merely simulated. We have already seen that virtual objects are real as virtual objects, but this is obviously not the kind of answer we are looking for. So let us rephrase it to clarify what we are after. We want to know whether a virtual X (apple, rock, automobile, etc.) can in some cases be an instance of a real X . By a real X , I mean an X that actually exists or occurs, instead of merely being supposed, imagined, or represented. Let us say that when a virtual X merely succeeds in imitating a real X , but is not a real X itself, it is a (computer) simulation . A virtual apple, for example, is a simulation of a real apple. When a virtual X instead manages to qualify as a real X , it will be called an ontological reproduction (Brey 2003). Ontological reproductions are actual members of the class that they simulate. They share essential properties with a physical X in the real world by which they themselves qualify as a real X.” (45)



“So are there any virtual X that can qualify as real X ? Let us first consider ordinary physical objects, like apples, rocks, and trees. I claim that virtual versions of ordinary physical objects can never qualify as real instances of these objects. The reason is that their having physical mass as well as a certain physical composition is an essential part of their definition of a real object. Virtual objects do not have mass, nor do they have a physical composition, and therefore ordinary physical objects cannot be ontologically reproduced in virtual environment.” (45)



“While physical objects cannot be ontologically reproduced in virtual environments, some physical phenomena can be. A phenomenon is an observable event or pattern, like a thunder flash or a repeating high-pitched sound. While computers do not have the causal power to produce physical objects, they do have the causal powers to produce certain types of physical phenomena, specifically phenomena that are composed of light / or sound. They can do so because computer systems equipped with adequate output devices (monitors and speakers) have the causal powers of producing a wide variety of visual and auditory phenomena. Hence, they are able to ontologically reproduce certain “weightless” physical entities like images, sounds, shapes, and colors. Consequently, when in a virtual environment an orchestra plays Bach’s Toccata and Fugue in D minor, a real performance of Toccata and Fugue in D minor is actually produced. Similarly, when in a virtual environment a circle is drawn, the result is a real circle, since a circle is mathematically defined as a phenomenon consisting of points in a plane, and is not by definition a physical object with weight and mass.” (45 f.)



“Computers are also capable of ontologically reproducing X s that normally exist as physical objects but that do not essentially exist in physical form. Money, for example, traditionally exists in the form of physical coins and bills. But that it exists as such is mere convention. And conventions are changing. More and more, money exists as digital objects. A smart money card contains a code (a series of zeroes and ones) that defines how much money is present on the card. Money here has become a digital object. Money, it seems, does not essentially exist in physical form but may exist in digital or virtual form as well. Money is hence not essentially but only contingently physical.” (46)



Alles Gute und bis zur nächsten Sitzung!



Thema der nächsten Sitzung:  
Ästhetik der Digitalität / Immersion / Computerspiele