



# Philosophie der Digitalität

**12. Sitzung, 12.7.2019**

Thema heute:  
Ontologie der Digitalität



Thema der vorletzten Sitzung:

# Immersion

# Ästhetik der Computerspiele



Thema der letzten Sitzung:

# Digitalitäts-Tagung



# Kleine digitale „Presseschau“



## Leitfragen:

- Worin besteht die Besonderheit der Twitter-Diskussion?
- Worin unterscheidet sie sich von der „traditionellen“ medialen Diskussion?



**Axel Krommer**  
@mediendidaktik\_

Follow

Jörg Noller verhängt ein Wikipedia-Verbot für Hausarbeiten. Wie soll das mit der Kultur der Digitalität vereinbar sein?

Es wird sicher sehr spannend in München!

... [itaet2019.philosophie.uni-muenchen.de/programm/index...](http://itaet2019.philosophie.uni-muenchen.de/programm/index...)

#digitalitaetmuc

cc @ht\_uta @phwampfler @stafel

Quelle: [youtu.be/VEy\\_0X5VbXI?t=...](https://youtu.be/VEy_0X5VbXI?t=...)

Translate Tweet



1:10 PM - 22 Jun 2019

6 Retweets 22 Likes



14 6 22



**PhiloCast (Jörg Noller)** @CastPhilo · Jun 26

Replying to @mediendidaktik\_ @ht\_uta and 2 others

Das Verbot ist natürlich nicht generell gemeint. Es kommt hier wie immer auf die #Medienkompetenz an. Für einen ersten Blick ist es zur Orientierung immer sehr sinnvoll, das mache ich selbst auch in meinen Seminaren vor: [youtu.be/IBHDn0jRxTM?t=...](https://youtu.be/IBHDn0jRxTM?t=...)

Von Zitaten rate ich aber ab...

Translate Tweet



**Immersion und Ästhetik der Computerspiele (21...**

Support the stream: <https://streamlabs.com/zarakas2000>

Die Folien der Sitzung können hier

heruntergeladen werden: <http://philocast.net/wp-cont...>

[youtube.com](https://www.youtube.com)



**Peter Jochum**

@JochumPeter

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Gefühlt sitzen bei [#digitalitaetmuc](#) alle den ganzen Tag in Vorträgen und gucken sich die Folien anderer Leute an. Scheint mir so ziemlich das Gegenteil von zeitgemäßer Bildung 🧑

Translate Tweet

5:27 AM - 29 Jun 2019

6 Likes





**PhiloCast (Jörg Noller)**

@CastPhilo

Replying to [@iqberatung](#) [@JochumPeter](#)

Wir haben hier in München ein ganzes Spektrum an Medien und Methoden auf der Digitalitäts-Tagung eingesetzt  
[#digitalitaetmuc](#) - die Mischung macht's:

Live-Streams auf PhiloCast [@CastPhilo](#) ,  
dynamische Twitter-Wand,  
Plenumsdiskussion:

[Translate Tweet](#)

Plenumsdiskussion: "Was ist Digitalität?" (28. und 29.6.2019)  
[youtube.com](#)

5:58 AM - 29 Jun 2019

6 Likes



6





**Michael In Albon** ✓

@MichaelInAlbon

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Replying to [@phwampfler](#) [@CastPhilo](#)

Eine Grenze zwischen Kultur und Dig. aufzubauen, ist unsinnig, genausowenig, wie die christl. Religionen eine Dualität zw. Körper und Seele denkt. Das macht Digitalität zu einer eig. Dimension, obwohl Dig. als Varianz, Entwicklung, oder Erweiterung der Kultur viel schlüssiger wäre.

🌐 Translate Tweet

11:23 PM - 28 Jun 2019





**PhiloCast (Jörg Noller)**

@CastPhilo



Replying to [@MichaelInAlbon](#) [@phwampfler](#)

Digitalität setzt an bestehenden kulturellen Formen an, so dass sie diese transformiert. Hier herrscht also kein Dualismus. Doch scheint diese Transformation neue Realitäten mit sich zu bringen, die mit einer veränderten Raum- und Zeitlogik zusammenhängen.

Translate Tweet

6:42 AM - 5 Jul 2019





**Michael In Albon** 

@MichaellnAlbon

Follow



Replying to [@MichaellnAlbon](#) [@CastPhilo](#) [@phwampfler](#)

... oder griffiger formuliert: Digitalität ist Teil der Kultur. Und wer hier ontologische Differenzen herleitet, überhöht die Unterschiede zu einer eigenständigen Daseinsform. Das ist fatal, weil so unterstellt wird, dass es zwei Welten gäbe: eine reale und eine virtuelle.

 Translate Tweet

11:27 PM - 28 Jun 2019





**PhiloCast (Jörg Noller)**

@CastPhilo



Replying to [@MichaelInAlbon](#) [@phwampfler](#)

Der Begriff der Virtualität umfasst auch kulturelle Phänomene wie Institutionen. Virtuelle Realität ist nicht nur digital möglich. Aber digital realisierte Virtualität scheint einer anderen Raum- und Zeitlogik zu folgen. Insofern stellt sich die Frage nach einer neuen Ontologie.

Translate Tweet

6:40 AM - 5 Jul 2019



14:14 4G

← Tweet

♥ Uta Hauck-Thum gefällt das

 **Andre Schier**  
@schier\_andre

Ein weiteres Beispiel  
wie die Naturen in  
[#digitalitaet](#) verschwimmen.  
[#digitalitaetmuc](#) :-)



Deine Antwort twittern

**PhiloCast (Jörg Noller)**

@CastPhilo

#digitalitaetmuc

Kann ein "digitaler Humanismus", wie ihn Prof. Nida-Rümelin vertritt, das Phänomen und die Chancen der #digitalitaet angemessen erfassen?

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5:50 AM - 28 Jun 2019

2 Likes



1



2



Add another Tweet

**Andre Schier** @schier\_andre · Jun 28

Replying to @CastPhilo

Denke schon, gerade #digitalitaet sollte das Digitale nicht überbetonen

[Translate Tweet](#)[Translate Tweet](#)



**PhiloCast (Jörg Noller)**

@CastPhilo



[#digitalitaetmuc](#)

Prof. Nida-Rümelin kritisiert "ideologische Überhöhung" und "Animismus" im Bereich der Digitalisierung.

Frage: Was bedeutet das für das Phänomen der [#digitalitaet](#) ?

Translate Tweet

5:44 AM - 28 Jun 2019

2 Retweets 5 Likes



2

5





**PhiloCast (Jörg Noller)**

@CastPhilo



Ist [@rezomusik](#) ein Positivist? Vortrag von Philippe Wampfler auf der Tagung "Was ist Digitalität?" [#digitalitaetmuc](#) [#castphilo](#),

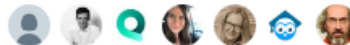
[Translate Tweet](#)**Philippe Wampfler: "Das Internet als "marketplace""; "Was i...**

»Markets are conversations« ist einer der Schlüsselsätze des »Cluetrain Manifestos«, mit dem eine Autorengruppe 1999 die Auswirkungen der digitalen Transforma...

[youtube.com](#)

1:25 AM - 29 Jun 2019

1 Retweet 6 Likes





Thema der heutigen Sitzung:

# Ontologie der Digitalität

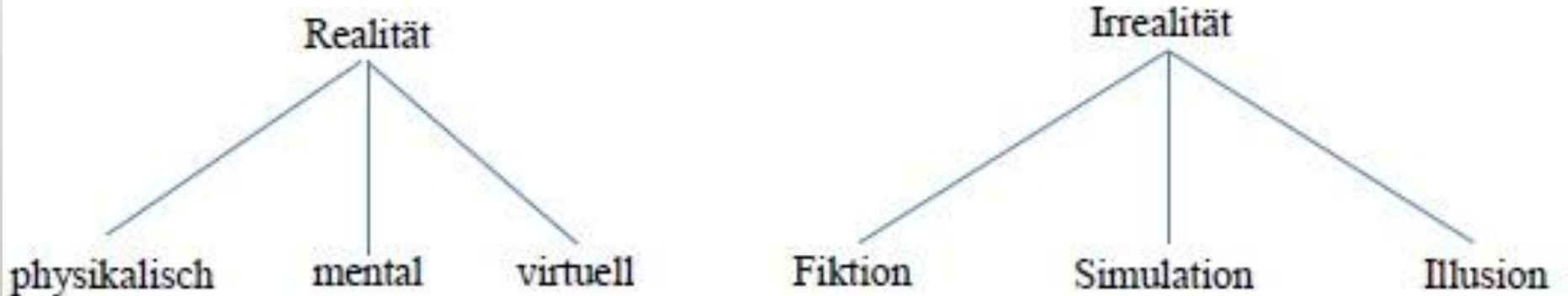


## Leitfragen:

- Worin besteht der Unterschied zwischen einer physikalischen und einer virtuellen Ontologie?
- Worin besteht die Ontologie virtueller Handlungen? Worin unterscheidet sie sich von Handlungen, die sich in der 'wirklichen' Welt abspielen?
- Welche Ontologie besitzen digitale Gegenstände?
- Wie können wir digitale Gegenstände erkennen?
- (Wie) existieren digitale Gegenstände in Raum und Zeit?



## Vorschlag zur Unterscheidung:





Philip Brey:

THE PHYSICAL AND SOCIAL REALITY OF VIRTUAL WORLDS



## Introduction: A Question of Ontology



“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.” (42)



“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. 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)



“In this chapter, I will perform an ontological analysis of virtual objects, actions, and events. My focus will be on two ontological questions: (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)



“In the next section of this chapter, I aim to give an answer to the first of these two questions. I will study how virtual objects relate ontologically to physical objects, and will attempt to determine their ontological status. In the third section, I will focus on the second question, and will study under which circumstances a virtual object may qualify as real. This will move me into the domain of social ontology. In the fourth section, my focus will be on virtual actions, which are ontologically different from virtual objects and require a separate analysis. In the fifth section, I will investigate the various ways in which virtual entities create ontological confusion or uncertainty, and hence muddy the distinction between reality and fiction. In a concluding section, I summarize my findings and briefly discuss their significance.” (43)



# General Ontology of Virtual Reality



“This section is devoted to answering the first question of this chapter, concerning the mode of existence of virtual objects (and actions and events). 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 soft ware.”



“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. 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.)



# The Social Ontology of Virtual Reality



“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.” (46)



“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)





“John Searle (1995) has developed an ontological theory that can answer in a principled way which kinds of objects, actions, and events are essentially physical and which ones are only contingently so. I have used his theory to analyze which kinds of things can be ontologically reproduced in virtual form (Brey 2003). Searle holds that within what we call reality, a fundamental distinction can be made between physical and social reality. Physical reality consists of entities and facts that are genuinely objective and that exist independently of our representations of them. Social reality consists of all those entities and facts that are not genuinely objective but are the outcome of a process of social interpretation or construction.” (46)



John Searle (\* 1932)



“Physical facts includes such truths as that there are snow and ice near the summit of Mt. Everest, that apples grow on apple trees, and that there is electric lighting in many houses on the Western Hemisphere. Searle is willing to admit that the concepts used in expressing physical facts are socially constructed. Yet Searle denies that their referents are also socially constructed. Rather, they are held to exist independently of our representations of them. Even if no humans existed there would be snow and ice near the summit of Mt. Everest. In contrast, social facts are also themselves socially constructed. The class of social facts includes such facts as that a bar of gold is worth a lot of money, that Harvard University offers a graduate degree program in physics, and that the curved object in my kitchen drawer is a corkscrew.” (46)



“These facts, Searle claims, seem to be objective in that there is (near-)universal agreement on them. Yet, Searle argues, these social facts and entities seem to be dependent on human representation or intentionality in a way that physical facts and entities are not. There is nothing intrinsic about the green paper bills that are used as money that determines their nature as money. Only when people start representing (intentionally using, accepting, believing in) such bills as money, intuitively, does it become a fact that these bills are money.” (46)



“Many entities in the real world are institutional in nature. They include people (e.g., janitors, professors), physical objects (e.g., dollar bills, wedding rings, contracts, chess games), properties (e.g., being licensed, being under probation), events (e.g., weddings, parties, elections), and actions (e.g., trespassing, scoring, prohibiting). Importantly, language is also an institutional phenomenon. The marks that read “tree” can only refer to trees because it is collectively accepted that these marks have this meaning. Nonlinguistic symbols similarly derive their meaning from a collective imposition of a symbolizing function to them.” (47)



“Interestingly, the distinction between physical, ordinary social, and institutional reality corresponds in large part with the previously made distinction between simulation and ontological reproduction in virtual environments. Physical reality and ordinary social reality can usually only be simulated in virtual environments, whereas institutional reality can in large part be ontologically reproduced in virtual environments. For example, rocks and trees (physical objects) and screwdrivers and chairs (ordinary social / objects) can only be simulated in virtual reality. The reason is that their simulations are not capable of reproducing the actual physical capabilities of physical and ordinary social objects. On the other hand, money and private property (institutional objects) can literally exist in virtual reality. This is possible because institutional entities are ontologically constituted through the assignment of a status function, of the form “ X counts as Y (in context C ).” (47 f.)



## Conclusion



“In this chapter, I have performed an ontological investigation of two ontological questions: what the mode of existence is of virtual objects, actions, and events, and whether any of them can be claimed to be part of the real world rather than of a simulated reality. My answer to the first question has been that virtual objects are a special class of digital objects that are represented graphically as objects and can be interacted with through a computer interface. They are complex, systematically generated physical phenomena that imitate real objects and can do so successfully by virtue of the underlying computer hardware. Virtual actions are actions initiated by human agents that are defined over virtual objects. Virtual events can likewise be defined as events defined over virtual objects.” (53)





“In answer to the second question, I have argued that certain types of virtual objects, actions, and events qualify as real, in the sense that they do not just simulate but ontologically reproduce the entity that they are an imitation of. Virtual objects can ontologically reproduce those phenomena that computer systems and their output devices have the causal powers to reproduce, such as light, sound, and resulting structures like images and tunes. More importantly, virtual objects and actions can ontologically reproduce institutional objects and actions, objects like money and chess games and actions like selling and promising. In addition, virtual actions often have extravirtual (physical) effects next to intravirtual ones, by which they qualify as actions in the real world under the appropriate description.”

(53)



“I also considered a variety of ways in which virtual entities can be the object of ontological uncertainty, which is uncertainty regarding their ontological status. Virtual environments, and the digital realm more generally, create ontological confusion and challenge us to draw and redraw the boundaries between reality and fiction, and truth and falsehood. Understanding the sources of our ontological confusion, and the ways in which it can be overcome, can help us better understand the potentiality and pitfalls of virtual worlds, and of digital realities in general. It can ultimately help us to design better virtual worlds and to interpret and use them in better ways.” (53)



Alles Gute und bis zur nächsten Sitzung!  
Thema: Ethik der Digitalität