Desiring Fakes

AI, Avatars, and the Body of Fake Information in Digital Art

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On 3 November 1948, the Chicago Tribune led with the premature headline "Dewey Defeats Truman". Thomas E. Dewey was expected to win the presidential election. Instead, the actual winner Harry S. Truman ironically held up a copy of the newspaper after his victory was announced (fig. 1). This historical false report reached unimaginable relevance in 2016: According to most polls of the 45th US presidential election, Hillary Clinton would surely become the next president. Donald J. Trump's shock victory was also attributed to widespread posting and sharing of so-called 'fake news' via social media. In light of this, even Facebook felt compelled to make a statement.[1]

The political dimension of fake news says a lot about forgeries in general: forgeries are not copies. Perpetrators of forgery fake evidence, obscure their sources and rewrite history. Famous art forgers in the 20th century — such as Tom Keating, Eric Hebborn and Edgar Mrugalla — have not copied pictures to compete with the originals, but to imitate the 'style' of other artists. What these painters falsified were not objects, but (art) history itself. In this essay I will propose an understanding of forgeries much more as a formal process in the terms of information theory, rather than focusing on the process of their manifestation.

In most instances, the word "forgery" is used with negative connotations. However, forgers have often completed (art) history more than actual experts, who, in a way, have written this history with gaps: Forgers have created the missing pieces of the historical puzzle, even if they are false ones. In this context, the German art critic Niklas Maak writes about the spectacular case of the forger Wolfgang Beltracchi:

1 | See the statement by Mark Zuckerberg at https://www.facebook.com/zuck/posts/10103269806149061 (last accessed on 14 June 2017). For an analysis of fake news in the 2016 presidential election see Allcott / Gentzkow 2017.

Figure 1: Harry S. Truman holding the issue of the Chicago Daily Tribune *at St. Louis, Missouri on 3 November 1948.*

What Beltracchi painted are not classical forgeries but his own works of art, which reveal the mechanism of the art market — and which, because they are put so precisely in art-historical niches, in terms of market needs, painted *in desideratum*, give a precise portrait of the epoch. They say much about the present time, the image of art history, and about the economic preconditions of 'masterpieces'. (2011, my translation)[2]

Summarising Maak, then, forgers fulfil the expectations and desires of the art market by analysing the art system and integrating themselves into its immanent mechanisms.

2 | "Was Beltracchi gemalt hat, sind keine klassischen Fälschungen, sondern eigene Kunstwerke, die den Mechanismus des Kunstmarkts offenlegen — und die, weil sie so präzise in kunsthistorische Nischen, in Marktbedürfnisse, in Desiderate hineingemalt sind, ein präzises Epochenporträt abgeben. Sie sagen viel über die Gegenwart, ihr Bild von Kunstgeschichte, und über die ökonomischen Bedingungen von 'Meisterwerken'".

Accordingly, a key feature of forging is the supposed context. Antique forgers have always resorted to fabricated stories to make their alleged 'discoveries' seem plausible. Even in antiquity, 'original' writings were claimed to have been found "'under the feet of Anubis' or 'in the night, fallen into the court of the temple in Koptos, as a mystery of this goddess [Isis]'" (Grafton 1990: 8). Such forged provenances were intended not only to make the discovery plausible through apparent eye-witness accounts, but to add even more (false) credibility. Likewise, forgeries cannot be thought of without false collection labels or stories of adventurous findings or invented provenances.[3] Therefore forgeries are not so much an expression of craftsmanship as they are vehicles for the creation of a narrative with similarities to circular reporting, in which the original source is hidden behind multiple other sources.

Following these considerations, here forgeries are understood as an aesthetic practice that reflects exactly this mechanism of desire and empty promises, where the 'false' serves the purpose of corroborating pre-existing expectations in order to make them 'true'. Due to the information age, I will focus more on the false information which counterfeits an object as original or authentic than on the object itself. The focus of this essay will be on new media artworks which utilise fake identities, and reflect on and question the benevolent art system and its gaps. As a result, a connection to AI (artificial intelligence) and its history is fundamental: AI, similar to forgeries, is intended to fit and to satisfy the demands of an analysed environment. These programs work in a defined system, a system, like the art market, that has been previously analysed.[4] Today, AI has various uses, for instance in the financial sector as well as an instrument to spread 'fake news' in social networks. Google, for example, even managed to defeat the world class *GO* player Lee Sedol with its AI *AlphaGO*. The works discussed here do not reach such technical competence, but they do address a central aspect of the discussion of AI: decision-making.[5] The mastery of *GO*, a game so complex that experience and intuition play

3 | The importance of provenance shows the case of John Drewe. Drewe commissioned art forgeries and forged documents by way of their provenance and partly smuggled them into museums and archives in order to sell the forgeries as originals.

4 | On this see for example an article by *Bloomberg News* from 22 April 2015 about the Flash Crash, at http://www.bloomberg.com/news/articles/2015-04-22/mystery-trader-armed-with-algorithms-rewrites-flash-crash-story (last accessed on 14 June 2017).

5 | Daniel Dennett discusses this aspect in the early 1970s not as a category of AI itself but a stance in reception. The point in his essay is not his description of different kinds of stances — design, physical and intentional stance (1971: 88-91) — but that he reverses for his assessment of AI the machinable criterion to a human one. In this approach, an AI

a decisive role, was considered impossible for AI until 2016. For a certain degree of complexity in fact, *decisions* cannot be predicted by an algorithm (Turing 1937). The works discussed here deal with this problem, this gap of information: similarly to forgeries, AI artworks stimulate *expectations* and *desires*, which are more revealing of the frame of communication in which they operate, than the concealment of their technical deficits.

True or False — A Decision of Bots

The question as to whether something is a fake can simply be answered with 'Yes' or 'No'; its ascription is either true or false. The simplest method is to compare two objects, one which is identified as genuine and another. Here, criminalistics also argue in the case of identification by means of dactyloscopic and biometric methods with the words "nature does not repeat itself" (Vec 2006: 209). Classical reproduction in the sense of a perfect duplicate is therefore characterised by its (twofold) identity, a sample and a match. To identify something as an original or a forgery is to determine its essence. This means that it is identical to an object, but not *that* object itself. In contrast, forgeries deal much more with the different fields of consistency, the authorship, or the purity of a work. An essential characteristic of forgeries is therefore the deception by imitation, not only the material imitation, but, above all, a simulation, through faked information, of the production and origin. Nonetheless, in the digital age exact imitations are already obsolete since everything can be copied without loss. Thus, an imitation also must embrace the context of creation, produce a reality of production constituted by mimetic premises, because the alleged object is not original anyway.

Forgeries are linked to technical conditions, and in the course of history more techniques have become accessible to forgers. Digitalisation, however, has released technical production from its material boundaries, because its essential property is its basic reducibility to information. The ascription as original or forgery is no longer so simple as the degree of complexity involved increases. It is ultimately independent of hardware, which makes the question of original, copy and counterfeit become redundant in the context of the digital. In particular, there are hardly any tangible mediums anymore, since data is mirrored and outsourced in

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can only take a (intentional) decision if it fits human behaviour, because "the goals of a goal-directed computer must be specified intentionally, just like desires" (91).

In this regard the current AI reasearch by Google Director of Engineering Raymond Kurzweil or Swedish Philosoph Nick Bostrom, for example, is not of further interest. In fact, the fundament characteristic of AI's agency is in this context relevant.

clouds, there are no more master-copies and thus no hierarchy of information: nothing is copied and forged, all data is multiple at its inception. Nevertheless, there is an important similarity between forgery and digital practices, referring not to the generation of material but to the performative dimension of the interaction: forgeries in the digital context do not aim at technical perfection, but rather they are shared as if they were original. In this sense, they are simply reduced to their informative content for an existing communicative framework; that is, they can be linked to expectations.

Such an atmosphere of sensationalism and desire for information provides the perfect breeding ground for fake news. The common greed for information enables fake news to propagate and spread. This was the case, for example, a few days after the attack at the Boston Marathon in April 2013 and the subsequent manhunt for two suspects, in which authorities, the public, and the news media participated equally. In a race for the latest and most spectacular news, rumours and false reports were published without being checked, even by renowned news stations and thus gained a wide audience. The incentive of such attention prompted some Twitter users to create false profiles and spread false information. So, the tweet "I want to kill all of you, you killed my brother" from a profile that pretended to be one of the wanted assassins, was adopted by social media and news as an *actual* statement (European Media Art Festival 2014: 153). Although it was clear after a few minutes that it was a fake profile and the tweet was just a (cruel) joke, this news went viral over several hours. In his work *Fake Account* the artist Alexander Repp visualises the network of tweets, which are related to the report of the fake profile, by analysing a five-minute live recording of Twitter: all messages with the word 'killed', the users who wrote them, the attached links and the hashtags form a point in the network.

This artwork not only shows how false messages are spread easily online, but also how forgeries generally work. The imitative fake profile is not so important, since the profile and the messages were clumsy inventions whose absurdity was easy to uncover by deeper consideration: why would a suspect, for whom the whole country was searching, be sending tweets? What really matters is the fabricated *pre-mitation*[6] of something that will cause a predictable effect. In this case, something that triggers the desire of (media) reality for sensational news. Through the numerous participants, the half-life and haste of the news cycle and anticipation of a spectacle, a network, as Repp presents it, is created. The actual forgery fades away under the quantity of factors. Favoured by this complexity, the decidability of

6 | This term refers to the German philosopher Hans Blumenberg and his concept of "Vorahmung". The English translation as "anticipation" is misleading as Blumenberg understands this term as a function of the concept of "imitation" ("Nachahmung") which would mean, in an overly literal translation, "post-imitation" (2000: 48).

whether an object — here the tweet — is true or false is irrelevant as long as it fits expectations. Only an evaluation, which contradicts the hasty machinery of sensationalism, allows an accurate conclusion.

Leaving Twitter aside and focussing instead on another social network, Facebook, Sarah Waterfeld describes the practice of self-representation as mimesis 2.0 (2012). Here, she refers to René Girard's model of the "mimetic desire". In his book *Deceit, Desire and the Novel: Self and Other in Literary Structure*, Girard develops this concept based on literature of the 19th and 20th centuries. In a nutshell, this is a triangular model of a subject, the "mediator" and an object of desire (Girard 1969: 2). Instead of desiring the object for its own qualities, the subject or the protagonist wants it, because it is valuable to the mediator, e.g. his antagonist, whose desire he imitates by doing so. Therefore, the mimetic process is a mediation which can be "external", if it refers to spiritual type like the imagination, or "internal", if it refers to a physical type like a person (9). Girard's analysis goes deeper, he is interested in the character's jealousy, envy or rivalry and its consequences for the relations in the novel, but the literary and even the general anthropological implications of Girard's model have little relevance for this essay. More important is to point out Waterfeld's understanding of this model of *triangular desire* as a valid pattern for interactions in social networks. Waterfeld sees self-expression on Facebook as a mimetic process in the sense of Girard: the actual user does not desire some object itself, but the reactions shown on one's timeline and therefore a desire for something somebody else wants or likes. Following this reasoning, the profile or the account in social networks is an expression of *the Other*, because it represents an ideal not of one's self but of an image, that would most likely be 'liked' and commented. What Waterfeld describes by updating Girard is an imitation of an imagination or, well-known since the emergence of *psychoanalysis*, an image of *the Other*. Although Waterfeld transfers the triangular model of Girard and notes rightly that there is no "dislike-button" (2012: 234) she avoids naming the components in this relationship. That is maybe because every component is exchangeable with the others. But moreover, she ignores that a profile is a representation of a user and not the actual one. Instead, I would like to understand such profiles as an imitation of a type of self-approval. The point is, that the user does not follow real references but virtual idols or (role) models that embody what is 'liked' and therefore desirable. In this sense the triangular model consists of 'likes' or attention (object), the (distorted) self-expression in the profile (mediator) and the user (subject). The user mimics an image in his profile, a desirable ideal he understands as self-expression, that should be solely 'likeable'. He therefore has no genuine desire for 'likes'; his urge is only based on his understanding of the popularity of other users who are successful in the system of social networks. This accompanies virality, or the phenomenon of memes, and this is what Girard calls, with reference to Gregory Bateson, a "double bind", because the primary impulse of imitation to get an object of desire is necessarily reciprocal. Girard understands that this an instinctive threat to is created by being imitated, so a rivalry between the

subject and the "mediator" occurs, for which reason "*mimetic desire* is simply a term more comprehensive than violence" (2005: 156-58). In the case of fake accounts, the object of desire is the alleged news, the, in fact, fake news, that triggers sensationalism. The fake account becomes the "mediator", while the subject, that imitates and copies this "mediator", is something like the news media or profile that shares the false information. But this relation only works if one is beware of the triangular relation, it is a *mimesis of mimetic desire*. The fake (profile) imitates, but does not become, the object of desire with the intent that the other user's profiles imitate this fake profile. The object here is to gain attention, 'likes' in the context of social networks. So by imitation I mean, more accurately, the *pre-mitation*, because the creator of a fake account anticipates and counterfeits the desire of *the Other*; he presumes how his audience will react if he triggers their desire.[7] Aware of the "double bind", the profile deals with this by counterfeiting the "mediators'" qualities, thus satisfying their desires or expectations.

Fake profiles, as showcased by Repp, are not a rarity. These take not only in the form of false profiles managed by real people to remain anonymous, but also in the form of chat bots. Such bots may be helpful, just like the assistant AI I have mentioned, but they can also increase the number of followers of real profiles, increasing the popularity level, and they can thus mislead a user to interact with an only allegedly real person, as happens, for example, on some dating websites.

Such bots only work in a calculable system. They themselves cannot make any decisions, so they must be programmed into desiderates. Following a procedure — and that is the purpose of robots — they can then carry out an action in relative autonomy. Such an autonomous action which is only possible in a certain, defined framework, was the topic of the artist group *!Mediengruppe Bitnik* and their project *Random Darknet Shopper (RDS)* at the Kunst Halle St. Gallen in 2014

7 | This triangular model can similarly be found in the Internet practice of 'trolling', because here the 'troll' tries to trigger a response that is itself worse than his original insult. He hides behind a fake identity and aims to involve a third party by staging this argument for an audience. Therefore 'trolling' is more about faking or imitating identities, as Judith Donath states: "Trolling is a game about identity deception, albeit one that is played without the consent of most of the players. The troll attempts to pass as a legitimate participant, sharing the group's common interests and concerns; the newsgroups members, if they are cognizant of trolls and other identity deceptions, attempt to both distinguish real from trolling postings, and upon judging a poster a troll, make the offending poster leave the group. Their success at the former depends on how well they — and the troll — understand identity cues; their success at the latter depends on whether the troll's enjoyment is sufficiently diminished or outweighed by the costs imposed by the group" (1999: 45).

(fig. 2). The centre of this work was a bot, which had a weekly amount of $ 100 in Bitcoins to buy goods and deliver them to the exhibition. The bot does not shop in any online shop, but in the so-called 'agora', which is offline by now, in the darknet, a marketplace similar to the well-known 'silk road.' The darknet is an overlay network, it uses the Internet infrastructure, but without public access. To become a part of this network, one must be invited, but subsequently a high level of anonymity is guaranteed, especially at these darknet-markets. Basic for the *RDS* is to experiment, to explore, and to document how such a relationship works, when it is based only on information and quasi confidence in a system. Week for week the

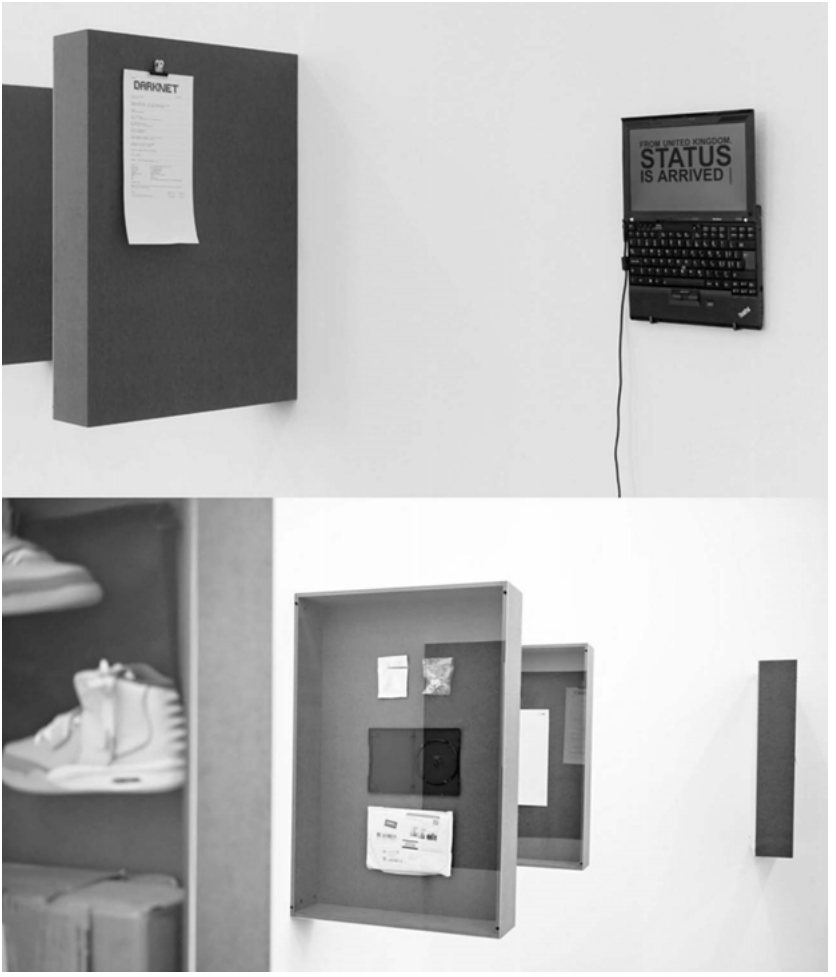


Figure 2: !Mediengruppe Bitnik, "Random Darknet Shopper", 2014 / 15, installation shots at Kunst Halle St. Gallen, Switzerland.

bot bought items such as counterfeit sneakers or jeans, high-quality passport scans, a copy of a *UK Fire Brigade Master Key Set* or drugs like ecstasy. At the end the Swiss police confiscated this 'evidence' of this artwork, but, interestingly, without charging the human artists.

An aesthetic dimension of the *RDS* is its title-giving contingency. With this incalculability, the work stands in the tradition of Digital Art, because the "serendipity" (Cybernetic Serendipity 1968) or the "aesthetic gap" (Becker 2017: 172) is a fundamental and genuine characteristic of this art form. For the *RDS*, this gap is its relative autonomy. At the same time, however, the shopper works only by the command-execute-demand-structure of the darknet shopping platform, the randomness is therefore given in the selection of the products and thus only *the bone of contention*. The communication and trafficking between the bot and the traders was 'successful' in two ways: Firstly, this scheme realised the artists' intention to get such scandalising items and therefore attention, otherwise this performance could have taken place on eBay or any other shopping-platform; secondly, it is exclusively based on a rational system of ratings. Given the special community of the darknet, the sellers are as interested in a redundant but working identity like a rating as is the bot, which uses these ratings for judging and deciding for from whom to buy. As on Amazon, the credibility of a seller is decided by his ratings. The *RDS* is therefore a type of 'programmed scandal', which, crucially, is based only on digital information, on the exchange between bot and sellers, whether they are controlled manually or programmed.

The success of the communication between the *RDS* and the human sellers depends on the expectations of the sellers. They do not expect anything except payment for their goods. As long as this adheres to market mechanisms, or "market needs" (Maak 2011), everything else does not matter. On the other hand, there are also procedures to prevent such communication. Websites try to protect themselves from such artificial users by using so-called CAPTCHAs (Completely Automated Public Turing test to tell Computers and Humans Apart), which are installed before the content can be accessed. The idea here is that a bot cannot easily solve visual tasks that a human user can, because a computer programme cannot recognise that these graphics include letters and characters and cannot serve the required input. Of course, this remains a constant race: When bots solve the CAPTCHAs, these must in turn be improved. But as in the work of the South Korean artists' group *Shinseungback Kimyonghun*, the principle can also be reversed in order to exclude people: a so-called *FADTCHA* (Face Detection Turing test to tell Computers and Humans Apart) (fig. 3). Face detection is based on an algorithm of the open source library "OpenCV". The computer detects faces in its camera vision and marks them with a red square. The actual work, however, is a book with nine round, colour patches, which act on the human eye like a diffuse collection of monotonous circles. In this collection, the computer recognises a face, but the human eye does not. For a dichotomous categorisation — true or false — here only the system-immanent, i.e.

programmed, factors matter. So in the case of *FADTCHA* as well as of the *RDS* the actual object — purchased object or image — plays no semantic role, because their judgment is only based on the calculated work steps. But are they forgeries or do they deal both with fake identities in a proper sense? From the perspective of the seller, the *RDS* is a false identity, because it orders using the name of and to the real address of a legal person, i.e. the Kunsthalle St. Gallen. From the point of view of a human being the images in *FADTCHA* are false faces, because they do not concur with our image of faces. Forgeries are therefore not false facts but false, created situations. In the digital age, forgeries rather fake a construct of identity, object, and reception, of artist, work, and expectation; they create a situation in which an object becomes adequate, they fake a triangular relation of desire.

Figure 3: Shinseungback Kimyonghun, FADTCHA, computer sees the face in the test image of the book and the human user, 2013.

The Imitation Game

This triangular relation is central for AI research, because what is important is not the form of the AI, but its deception of being humanoid. The fundamental issue of AI's interplay and autonomy in this relation marks the beginning of AI research, and leads the British computer scientist Alan Turing, to open his famous essay "Computing Machinery and Intelligence" with: "I propose to consider the question, 'Can machines think?'" (1950: 433). But Turing himself relativises this approach by replacing it with the question of whether machines can be realised as thinking humans. He illustrates this, the later so-called 'Turing Test' to which CAPTCHAs refer, in a mind experiment which he calls the "Imitation Game". In this respect, Turing was not concerned with the extent to which machines or computers can think in any form, but how far — and this shows the behaviouristic approach of his thinking — they can behave as if they were thinking beings (435, 438).

This game consists of three elements: a machine or computer, a person and separate from these two an interrogator, who ideally communicates only via telecommunication with the other participants. The task of the interrogator is to distinguish the two others from each other; the task of the machine and of the human is to answer the questions so that they are perceived in each case as a human being (434). One must keep in mind that in 1950, when Turing described this game, the available skills and range of computing were very limited, apart from the fact that digital computers were not beyond an initial phase of development. Nevertheless, Turing already speaks of machines or computers that could imitate humans as "human computers" or, in today's words, as robots (438). With the increasing development of digital computers that can store and process an unimaginable amount of information, Turing was visionary in his foresight that it is just a matter of programming and commands that enable machines to 'mimic' human behaviour (438). Nevertheless, it was not his intention to equalise people and computers or to put them on some ontological level, he wanted to point out and raise awareness of the potential of these machines.

One has to understand Turing's reflections on the "imitation game" in the context of his article "On Computable Numbers, with an Application to the Entscheidungsproblem", written several years earlier (1937). Here, Turing describes his solution to the *Entscheidungsproblem* ("decision-problem") according to David Hilbert, namely, that it is undecidable for each possible mathematical formula whether it is provable or not. This *Entscheidungsproblem* cannot be transferred directly to the question of whether something is actually a forgery, since Turing was primarily concerned with mathematical and formal problems, not with semantic ones. It is, however, important for understanding the 'Imitation Game', because here Turing has already substituted the vague concept of predictability with being computable by a machine: "According to my definition, a number is computable if its decimal can be written down by a machine" (116). In this sense

the Turing machine is a universal machine, a simulation machine, since its operations can be described as "'rule of thumb'" or "'purely mechanical'" (1948: 4); all it does depends only on the information on a tape.

Before mentioning machines, Turing describes the "Imitation Game" in a different constellation namely: "a man (A), a woman (B), and an interrogator (C) who may be of either sex" (1950: 433). Assumed to be "B", to convince the interrogator of one's sex Turing suggests that "the best strategy for her is probably to give truthful answers. She can add such things as 'I am the woman, don't listen to him!' to her answer, but it will avail nothing as the man can make similar remarks" (434). To cause an incorrect identification with this strategy, one has to mimic the other sex. Despite whether this really is the best strategy, Turing's mind experiment is very similar to Girard's model: both assume a triangular constellation and both suppose that one has to imitate or mimic their rival to succeed.

With regard to this 'foreplay' of the "Imitation Game" it is also interesting that a successful imitation in reverse means that the original (person) cannot present itself as such. Juliane Rebentisch understands this part of the "Imitation Game" as a gender construction, with the male imitating the female. Here, Rebentisch makes a reference to Judith Butler: the sexual construction by Turing is based, like social interaction in general, on normative rules (Rebentisch 1997: 28). Actually, Turing's idea postulates an original which will be imitated by a machine. But as soon as he transforms this assumption into a game situation the concept of originality is necessarily questioned, because in this framework the original appears as an imitation of an unattainable ideal, induced by cultural, social, institutional and political practices (29). This raises the issue of whether imitation is not a question of the reference itself, but a means of navigating a system.

Turing, similarly to Rebentisch and Butler, also presupposes social norms: "The book of rules which we have described our human computer as using is of course a convenient fiction. Actual human computers really remember what they have got to do. If one wants to make a machine mimic the behaviour of the human computer in some complex operation one has to ask him how it is done, and then translate the answer into the form of an instruction table" (Turing 1950: 438). As in his article about the *Entscheidungsproblem*, Turing defines the problem of calculability as mechanical. In this regard, he presumes two things without mentioning: enough information can purport or simulate a common-sense knowledge *and* there must be some kind of benevolent interrogator or observer. Here Turing follows a mathematical-information-theoretical logic: We know the information that is transmitted, the receiver is defined normatively, so the sender (the imitator) results as a variable which can either be successfully deceived or not. In other words, if one has an interrogator who knows how the programme works, asks the right questions, for example logical contradictions or detects that the computer reacts in unclear situations with counter-questions, then the "Imitation Game" does not work.

The (human) reaction based on feelings, emotions or instinct in unforeseen situations is a well-known argument against AI, because calculation means that there is no room for consciousness. Turing himself mentions this argument but rejects it, because in "this view the only way by which one could be sure that a machine [as well as a man] thinks is to be the machine [or the man] and to feel oneself thinking" (445). So, as in any conversation, the success of the communication is based on how the codes, knowledge, or expectation of the participants concur. This applies to both human and artificial counterparts.

Through Turing's work, one realises that computers are no longer just pure computing machines, but symbol-processing machines. Though he asks the provocative question "Can machines think?" in his essay, he is not concerned with the intention of proving that machines can be intelligent, but *how* they can be perceived as intelligent. However, this ontological question of the autonomy of AI can be understood within the tradition of the philosophical 'body-soul problem' and plays a strong role in contemporary discussions of AI. The *RDS* also raises the question of who takes responsibility for its (illegal) actions, and consequently AI researchers warn of the consequences in regard to the progress of AI's autonomy.[8]

Turing, however, defines intellect in a purely linguistic, information-technical sense. This way, he can dissociate his concept of intelligence from a material and physical body:

> The new problem has the advantage of drawing a fairly sharp line between the physical and the intellectual capacities of a man. No engineer or chemist claims to be able to produce a material which is indistinguishable from the human skin. It is possible that at some time this might be done, but even supposing this invention available we should feel there was little point in trying to make a 'thinking machine' more human by dressing it up in such artificial flesh. (434)

In this detachment from the physical, which is supposed to strengthen the argument of machine intelligence, there is, however, still a recognition of the physical. For the "Imitation Game" "the ideal arrangement is to have a teleprinter communicating between the two rooms", because any physical perception would immediately make the imitation impossible, for qualities such as the sound of a voice are rooted too strongly in the human perception apparatus (434). The telecommunicative situation and the obscuring of physical conditions support the indistinguishability in Turing's experiment, because bodily features are so compelling. But exactly because they are so compelling, the imitation of these

8 | See https://futureoflife.org/open-letter-autonomous-weapons/ (last accessed on 31 May 2017).

Figure 4: Joseph Weizenbaum acts out "Eliza" at a computer with printing output, photograph, 1966.

characteristics can support the deception. Turing, owing to the technical conditions of his time, ignores that, but today a machine, i.e. a computer, that imitates such bodily features can forge an identity and even belie its deficit in (artificial) behaviour.

Avatars

One of the first programs that can be seen as the implementation of Turing's "Imitation Game", the Turing test, and that is still a milestone in AI research, is Joseph Weizenbaum's *ELIZA* (fig. 4). This language analysis programme consisted of two parts, the language analyser and the script composed by a set of rules. This could include rules for a conversation about cooking, insurance, banking, etc., depending on which conversation was intended by the programmer. For the first experiment, Weizenbaum used a therapy session whose script is based on the "Rogerian psychotherapy" and is known under the name *DOCTOR* (1976: 3-4).[9]

Weizenbaum himself saw the overwhelming response to his programme critically. In fact, he was surprised that a machine which used a regular procedure

9 | "Rogerian psychotherapy" or "person-centred therapy" is a form of talking therapy. It is characteristic of this form of therapy that the client is focused on and the therapist avoids intervention as much as possible. It tends to let the client reflect and become aware of his own emotions and cognition.

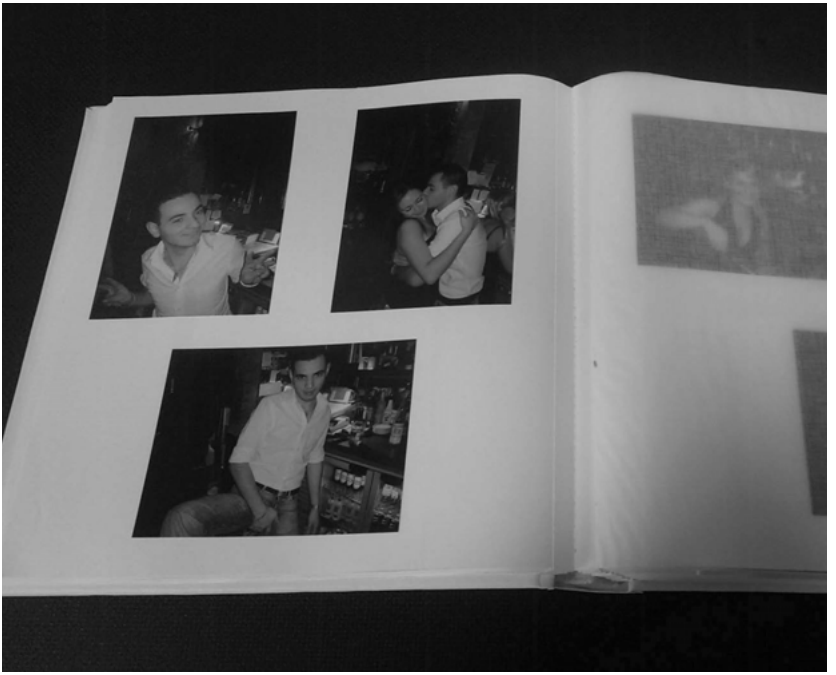
was seen by laymen as well as by experts as an equivalent to human intelligence (5-8). Basically, its utilisation of the regular communication situations of "Rogerian psychotherapy", which were highly structured, made calculated behaviour by the computer possible. A situation, in other words, for which one usually accepts that it follows clear rules, is less associative, and allows only a small range of behaviour. For example, the programme responded to the statement "Perhaps I could learn to get along with my mother" with "Tell me more about your family" (4, see also 189). The supposed semantic component is based on a simple classification by means of a thesaurus. Therefore the script is based on lexical database. The programme itself, however, provides a mere syntax, the actual semantics originate from the users, because DOCTOR does not provide any information (Weizenbaum 1966: 42). It simulates a dialogue by means of contentless counter questions, which are based on the — in this case lexical — user's expectations. Therefore, Weizenbaum also writes: "It is important to note that this assumption is one made by the speaker" (42).

As Claude Shannon, founder of information Theory, describes, the content of information is dependent on the recipient (Weizenbaum 1976: 209). What Weizenbaum after Shannon hereby actually means is that the same information can be understood differently in different contexts. Therefore, in the example of *ELIZA*, it is remarkable how much autonomy and identity can be seen in simple answers and counter-questions which in reality do nothing more than reassure the questioner. The communication situation of a therapy discussion, in which the role of the therapist actually denies a personal relationship, is surely conducive. However, this could be transferred to all sorts of professionals, since a certain degree of professionalism always prevails over personal interests. As I argued, the identity of the therapist in *ELIZA* is ultimately based on a database in form of a thesaurus. Even in the early days of (criminal) identification, analogue databases of photographies or Bertillonages were important (Vec 2006: 185-86). Such discussions on data retention, data encryption and data monitoring are still current. And when the artists *KairUs* (Linda Kronman and Andreas Zingerle) evaluated hard drives they found at an African dump, in their work *Forensic Fantasies Trilogy* (2016), creating in the third part of this work anonymous but also intimate and personal photo albums from the found pictures (fig. 5), they showed that the relationship between data and identity, today, is even more basic.

Because AIs are based on neural networks, they only learn on the basis of their accessible data. Therefore, they reproduce systemic stereotypes in facial recognition if they occasionally classify faces of Asians as having 'closed eyes' because they were trained with Caucasian models.[10] On the other hand,

10 | The accuracy of face recognition software depends on its training parameters. In this way, these programmes can reproduce mistakes which are caused by its programmers, in this case, because they are

Figure 5: KairUs (Linda Kronman and Andreas Zingerle), "Not a Blackmail", Part one of "Forensic Fantasies Trilogy", 2016, installation shot at Ars Electronica 2016.



this facial recognition would not work so well in Europe if other parameters were broader. Accordingly, databases are designed with regard to their creator's claim.[11]

Weizenbaum's *ELIZA* was a primitive forerunner of today's common chatbots, whose database structures are much more complex. Even though today's chatbots are at least equipped with a profile image, Weizenbaum, like Turing, ignores the visual dimension in his programme. This is mainly due to the fact that early AI research focused on the production of natural language (Weizenbaum 1966; 1976: 182-201). Therefore, he also named his programme after the character

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only fed with one biometrical data. This led to unintentional racist categorisations by the AI.

The biometric identification by AI is therefore different to a general physiognomic or the FACS (Facial Action Coding System), because first of all it develops parameter to recognise a face and not produces categories to analyse it.

11 | For an overview of databases in art see Deep storage 1998.

"Eliza Doolittle" in George Bernard Shaw's play Pygmalion. It is interesting to mention this point because of two aspects — apart from the clear reference to a female muse and divine creator in Pygmalion: First, although this character learns to speak more eloquently, Eliza Doolittle arguably does not become more intelligent, and still uses inappropriate language. Second, the play focuses on linguistic imitation of other people.

With regard to the false therapist in *ELIZA*, one has to differentiate between two aspects of forgeries. One, which is linguistic, plays a form of the "Imitation Game". Here, imitating is indeed deceiving, but not deceiving in the technical sense. In this respect, forgeries work only if they are reduced to pure information. The second strategy of forgeries function upon whether a form of desire is awakened by the forgery, which obscures the technical character. Such a form is an 'avatar', which emerges in an artificial world instead of the protagonist to imitate and in the end, to substitute for them.

The concept of the avatar is closely related to control elements that connect the user with the software. However, two restrictions can be made so that not every cursor or status bar can be seen as an avatar: an avatar must first have a certain bonding and continuity in the virtual world, otherwise a button could also be considered as an avatar. Secondly, it must have a certain degree of anthropomorphic features, so that it has a potential for identification. Accordingly, there is always a degree of visuality in the concept of the avatar. In game studies the aspect of the avatar-player-binding and thus the function of control elements is emphasised. To use the avatar in this context goes a step further. Instead of analysing the representation and the perspectivation and other immersive elements of the avatar I would like to focus on the consequences of this bond. Assuming the avatar is an immersive representation of a user, others (human) users have to interact with this unknown player like a real counterpart. The concept of the avatar appears here to be appropriate, because of the unspoken understanding that an avatar is a representation of an actual user. Its artificial elements substitute for a real person. In the case of *ELIZA* for example, this would be the protocolary language. In general, these are mostly visual elements which in the form of anthropomorphic elements, like profile pictures, simulate that a real user is behind this avatar. Even chatbots usually provide profile pictures in order to be taken as a real person by an actual user sitting in front of the computer. The visuality of a kind of mug shot is therefore to obscure their actual identity, as Jean Baudrillard writes: "In the last analysis, robots are always slaves. They may be endowed with any of the qualities that define human sovereignty except one, and that is sex" (1996: 120). This not only points out the distinction between man and machine, but *vice versa*, also suggests that by gendering the machine, the sovereignty of the human individual would become brittle. This is an interesting parallel between the representation of the machine and the art-historical concept of personification where the gendering of abstract

concepts also has an intentional function.[12] The gender-specific representation of the avatar thus allows an alleged conclusion about the actual user, insofar that a user represents his "true" identity through their avatar. But this is not a deficit of the machine, as Baudrillard writes, on the contrary, it is a potential, because without sex it can better construct any sex and satisfy any sexual desire. In context of this gender construction, Judith Butler writes more generally that "gender is a kind of imitation for which there is no original" (1991: 21). What Butler understands specifically in relation to the performance of gender identity, in Baudrillard's observation acquires a completely new dimension. By separating gender and body, the machine gains sovereignty, because its embodiment is exchangeable and can adopt and occupy every form. Therefore, just as one can perform their gender, a personification has a gender role, AI can also adopt a role according to its (programmed) aims. "There is no original", a central factor in cases of forged identities or identity theft — and that is nothing less than what Turing describes in his "Imitation Game" — that the desire of the human is the key to a successful imitation. Therefore he emphasises the role of sexual appeal (Hodges 1994: 620).

12 | In general, one can observe an anthropomorphisation with respect to a gendering of AI's humanlike qualities, for instance, with the use of mostly female voices. In literary or cinematic works the anthropomorphisation of AI follows basic gender roles. Characters like Hadaly (Auguste Villiers de l'Isle-Adam: *L'Ève future*, 1886), Samantha (Spike Jonze: *Her*, 2013) or Maria (Fritz Lang: *Metropolis*, 1927) are female representations of an ideal. Characters like HAL (Stanley Kubrick: *2001. A Space Odyssey*, 1968) or Terminator T-800 (James Cameron: *Terminator*, 1984), in contrast, are male representations of threat and destruction. Silke Wenk writes about art-historical personifications: "The female allegories represent the opposite of the feminine; they represent not the women, but the sovereignty, which even the 'great men' lack and point beyond them. The male-patriarchal order demands more from the men than what they are and do. There has to be another image for the *cohesion of order*, especially of the 'nation', which is 'invented' as a political community of equals (of 'brothers'). Male images are not suited to represent the *imaginary community*, through which the state can be analysed through a bourgeois society — as a community beyond the debate about particular interests, through which the national state constitutes itself" (Wenk 1996: 101, my translation). In this regard, the anthropomorphisation of AI is similar to the personification, because it uses the same methods when it comes to in gendering.
For an overview of anthropomorphic machines in literature and film, see also Bukatman 1993.

Turing's approach is a semiotic and not a visual one, but to be clear, the point is that it is not the machine which becomes more human-like — although it can be perceived as such on a visual level — but the human becomes more machine-like, or, as Harry M. Collins states, "Wherever we choose to mimic a thing, a thing can mimic us" (1990: 216). This human follows a command-structure while they are blinded by the visual elements of an avatar, an object. A successful deception therefore depends not on the forgery itself, but on a gamesmanship, a narrative that causes credulity by the user, so "just when humans engage in behaviour-specific acts they can be mimicked by machines" (41) or forgeries, because then they are predictable.

Thus, spam or clickbaits use sexual content to attract the user. In the early time of the Internet the net artist Alexej Shulgin launched the project *FuckU-fuckme* (fufme.com, offline, 1999) to discuss the new possibilities of cybersex. This website, which offered "dildonics" (Rheingold 1991: 345-77) for each sex, received a wide audience. In fact, it was a fake; the offered sex toys never existed and were only illustrations. But this example shows that desires, imitated or assumed, especially when they are sexual, can get an attention that ignores, overlooks or disregards the real state of an (artificial) framework.

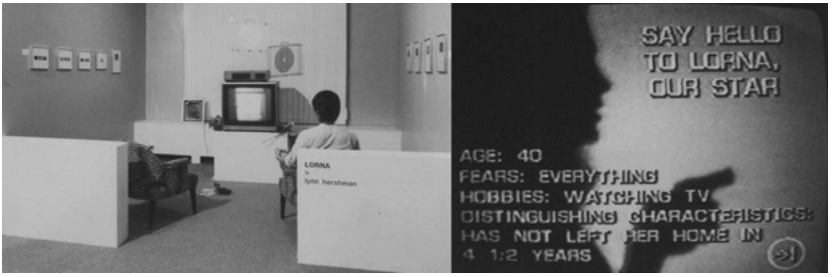
Faked Identities *Before Computer* (B.C.) and *After Digital* (A.D.)

In her film *Teknolust* (2002) the artist Lynn Hershman Leeson explicitly discusses the relationship between sexual desire and AI. I conclude this text by focusing on her, because she deals with the relationship of false identity, desire, and technology in her entire work from the early 1970s onwards — "a panoply of identities" (Weibel 2016: 44) — and has adapted herself over and over again to changing conditions.[13]

The headstone in this context is her creation *Roberta Breitmore* (1973). In this nearly five-year performance, Hershman Leeson lived under a fictional and fake identity as Roberta Breitmore. She documented this performance with false — not forged — documents, which were made in the name of Roberta Breitmore, like an apartment contract, a bank account, a credit card, a driver's license, and even a notebook about meetings with psychologists. Similar to the work *Forensic Fantasies*, mentioned above, the documental artefacts play an essential role for the false identity (Weibel 2016: 45-52). Unlike a double life or a real fake, where persons take over another identity to protect themselves or to act out themselves, *Roberta Breitmore* was more of an artistic experiment. Therefore Hershman Leeson was interested in observing the construction of identity and desire of voyeuristic looks

13 | For an overview of the œuvre of Hershmann Leeson see Civic Radar 2016.

Figure 6: Lynn Hershman Leeson, "Lorna", 1984, interactive installation, installation shot at Hansen Fuller Goldeen Gallery, San Fransisco (left) and screenshot (right).



above all; she even emphasised the effect of this role-playing-game for other real people: "Even with four different characters assuming her identity, the patterns of her interactions remained constant and negative. After zipping themselves into Roberta's clothing, each multiple began to also have Roberta-like experiences" (Hershman Leeson 1994: 4).

Although *Roberta Breitmore* was created simultaneously to the discourse around AI exemplified in other artworks of the period, such as those by Lynda Benglis, Valie Export, Cindy Sherman or Martha Rosler, which dealt with the problems of gender and identity, there is no direct connection between these two dimensions.[14] However, for Hershman Leeson's work the turning point of the era "Before Computers" (B.C.) to "After Digital" (A.D.) (1994: 3) is marked by the interactive work of *Lorna* (1979-84): Here, a video disc is used as an artistic medium for the first time (fig. 6). *Lorna* deals with the story of a lonely girl in a room, who only communicates via TV and telephone with the outside world. In this mixed media installation the user sits in a copy of Lorna's room and can follow her life via the monitor in a hypertextual narrative. Based on *Lorna*, in 1984 Hershman Leeson developed the work *Deep Contact* which attracts the attention of passing visitors by a motion sensor. A woman in a mini-skirt on a red couch invites them to interact and to touch one of her body parts on the touchscreen. Both works allow the interaction with the virtual character: One can watch Lorna taking a bath or follow her to a date at a motel, or see the sexual and voyeuristic fantasy of Marion in *Deep Contact*, and follow her into a secret garden.

These works are actually not forged identities or identity theft nor frauds, they do not refer to a real existing person. *Lorna*, for example, works — like many subsequent digital artworks — with the strategy of hypertext to convey a feeling by

14 | Accordingly, as with AI research, Peter Weibel points out the linguistic dimension of Hershman Leeson's work and therefore the reference as a central category (2016: 48).

Figure 7: Lynn Hershman Leeson, "Agent Ruby", 2002, screenshot.

connecting to the user. But they show how affined digital and telematic artworks are to questions about the construction of facts. They reflect role traces and documents for the construction of faked identities and their authority in this process, as Hershman Leeson also states: "The new technology will be extremely subversive of all Forms of Traditional Authority — political, social, and religious. That is, when one encourages active participation by individual citizens and worshipers in public life, the standing of Authorities to issue commands is greatly retarded" (1985: 1).
Teknolust is another turning point in her work, because here she focuses on the role of cloning and bio-art. Yet, she combines this discourse with the dimension of AI, because simultaneously to *Teknolust*, Hershman Leeson developed *Agent Ruby* from 1998 to 2002; this is an online chatbot, which is similar to *ELIZA* (fig. 7). There are about 35 years between *Agent Ruby* and *ELIZA*, so of course, *Ruby* is more eloquent but it is based on the same concept, it is not pre-programmed and its reaction depends on the questions of the interrogator. But in contrast to *ELIZA* it does not *imitate* a person like a psychiatrist anymore, it *is* some kind of a new person, because *Ruby* incorporated their identity as artificial intelligence into the chats.

In conclusion I wanted to show, that such strategies of forging, counterfeiting, imitating or deceiving are deeply rooted in the electronic or digital arts, even if one cannot speak of actual fakes in the works. Today, there are even more possibilities: Computers are much faster than in Turing's times, countless amounts of information from networks and big data are easily accessible and machines are able to learn. There was even a Roberta Breitmore avatar created by Hershman Leeson for *Second Life*. But besides this, *ELIZA*, *Agent Ruby* or the *RDS* can work if they have the correct work environment. To create that, they use strategies similar to forging by being oriented towards the users' expectations: they are narrative, immersive or

interactive as is necessary to seem credible, and therefore real. In order to convince the users, they use a narrative that disguises their own deficits. Thus, the acquired pieces of the *RDS* were exhibited and the identities in Hershman Leeson's work were displayed through documents and pictures of her alter ego. That is why the German forger Wolfgang Beltracchi also staged his forgeries in a supposedly historical photograph: to suggest, argue and narrate their authenticity.[15]

Forgeries are the expression of a formal rationalisation of reception — which resonates with the rationalisation of digital programmes like AI. Where gaps could be filled, they could be filled with forgeries. Artists use these gaps productively and reflect them critically, whilst forgeries just adapt themselves. The new media artworks I have discussed disclose the schematics of the forging process, because these machines in general and also AI follow a programmed command structure. Forgeries, in the classical sense, on the other hand, aim to disguise this process. Therefore, the description of something is a forgery, or not, as well as whether AI is considered to be real or deceptive, always depends on the conditions and desires of its reference system. Forgeries have no final state, or as *Agent Ruby* says when you ask her several times "Are you a forgery?" —

> Am I a forgery? It is useful for me to have several identities user.
> Am I a forgery? Of course I am.
> Am I a forgery? Only when it matters.
> Am I a forgery? I don't know.[16]

Eventually forgeries are ambivalent and are situated in a reciprocal framework of themselves, the forger as well as the recipient, and depend on the desires seen in them. So, maybe like *Eliza*, I would answer the question for *Agent Ruby* with: "If you can't tell, does it matter?"

Works Cited

Baudrillard, Jean (1996): *The System of Objects*, translated by James Benedict, London/New York: Verso.

Becker, Daniel (2017): "Water — Liquidity as Digital Form", in: *State of Flux: Aesthetics of Fluid Materials*, eds. Marcel Finke/Friedrich Weltzien, Berlin: Reimer, pp. 157-73.

Blumenberg, Hans (2000): "'Imitation of Nature'. Toward a Prehistory of the Idea of the Creative Being", translated by Anna Wertz, in: *Qui Parle* 12.1, pp. 17-54.

15 | On the case of Wolfgang Beltracchi see also the article of Henry Keazor in this volume, especially page 36

16 | Interaction with Agent Ruby on 31 May 2017 at http://agentruby.sfmoma.org/

Bukatman, Scott (1993): *Terminal Identity. The Virtual Subject in Postmodern Science Fiction*, Durham/London: Duke University Press.

Butler, Judith (1991): "Imitation and Gender Insubordination", in: *Inside/Out: Lesbian Theories, Gay Theories*, ed. Diana Fuss, London/New York: Routledge, pp. 13-31.

Civic Radar (2016): *Lynn Hershman Leeson*, exh. cat., ed. Peter Weibel, ZKM Karlsruhe et al., Ostfildern: Hatje Cantz.

Collins, Harry M. (1990): *Artificial Experts. Social Knowledge and Intelligent Machines*, Cambridge, MA/London: MIT Press.

Cybernetic Serendipity (1968): *The Computer and the Arts*, exh. cat., ed. Jasia Reinhardt, Institute of Contemporary Arts London, London/New York: Studio International.

Deep Storage (1997): *Arsenale der Erinnerung*, exh. cat., eds. Ingrid Schaffner/Matthias Winzen, Haus der Kunst München et al., Munich: Prestel.

Dennett, Daniel C. (1971): "Intentional Systems", in: *The Journal of Philosophy* 68.4, pp. 87-106.

Donath, Judith S. (1999): "Identity and deception in the virtual community", in: *Communities in Cyberspace*, eds. Marc A. Smith/Peter Kollock, London/New York: Routledge, pp. 29-59.

European Media Art Festival (2014): *We, the enemy — Leben unter Verdacht*, exh. cat., Osnabrück.

Girard, René (1969): *Deceit, Desire, and the Novel: Self and Other in Literary Structure*, translated by Yvonne Freccero, Baltimore: Hopkins Press.

— (2005): *Violence and the Sacred*, translated by Patrick Gregory, London/NewYork: Continuum.

Grafton, Anthony (1990): *Forgers and Critics. Creativity and Duplicity in Western Scholarship*, London: Collins & Brown.

Hodges, Andrew (1994): *Alan Turing. Enigma*, Vienna et al.: Springer.

Rebentisch, Juliane (1997): "Sex, Crime & Computers. Alan Turing und die Logik der Imitation", in: *Ästhetik & Kommunikation* 26.96, pp. 27-30.

Rheingold, Howard (1991): *Virtual Reality*, New York: Summit Books.

Turing, Alan (1937): "On Computable Numbers, with an Application to the Entscheidungsproblem", in: *Proceedings of the London Mathematical Society* 2.42, pp. 230-65.

— (1950): "Computing Machinery and Intelligence", in: *Mind, A Quarterly Review of Psychology and Philosophy* 59.236, pp. 433-60.

Vec, Miloš (2006): "Defraudistisches Fieber. Identität und Abbild der Person in der Kriminalistik", in: *Fälschungen. Zu Autorschaft und Beweis in Wissenschaft und Künsten*, ed. Anne-Kathrin Reulecke, Frankfurt a.M.: Suhrkamp 2006, pp. 180-215.

Waterfeld, Sarah (2012): "Mimesis 2.0", in: *Mimesis* (=Archiv für Mediengeschichte, vol. 12), eds. Friedrich Balke / Bernhard Siegert / Joseph Vogl, München: Fink, pp. 229-39.

Weibel, Peter (2016): "The Work of Lynn Hershman Leeson. A Panoply of Identities", in: *Civic Radar*, pp. 44-55.

Weizenbaum, Joseph (1966): "ELIZA — A Computer Program For the Study of Natural Language Communication Between Man and Machine", in: *Communication of the ACM* 1.9, pp. 36-45.

— (1976): *Computer Power and Human Reason. From Judgment to Calculation*, San Francisco: Freeman.

Wenk, Silke (1996): *Versteinerte Weiblichkeit. Allegorien in der Moderne*, Cologne / Weimar / Vienna: Böhlau.

Online Sources

Allcott, Hunt / Gentzkow, Matthew (2017): "Social Media and Fake News in the 2016 Election", *Journal of Economic Perspectives* 31.2, https://web.stanford.edu/~gentzkow/research/fakenews.pdf (last accessed on 14 June 2017).

Hershman Leeson, Lynn (1985): "Politics and Interactive Media (An excerpt)", http://www.lynnhershman.com/wp-content/uploads/2015/03/Politics-and-Interactive-Media-Art-Excerpt-Lynn-Hershman.pdf, first published in *Journal of Contemporary Studies* (last accessed on 31 May 2017).

— (1994): "Romancing the Anti-body: Lust and Longing in (Cyber)space", http://www.lynnhershman.com/wp-content/uploads/2016/06/Romancing-the-Anti-Body.pdf (last accessed on 31 May 2017).

Maak, Niklas (2011): "Kunstfälscher-Prozess. Das Schicksal korrigieren", *Frankfurter Allgemeine Zeitung*, Oct. 27, http://www.faz.net/aktuell/kunstfaelscher-prozess-das-schicksal-korrigieren-11508538-p4.html?printPagedArticle=true#pageIndex_4 (last accessed on 31 May 2017).

Turing, Alan (1948): "Intelligent Machinery. National Physical Laboratory Report", http://www.alanturing.net/turing_archive/archive/l/l32/L32-001.html (last accessed on 31 May 2017).