the digital condition

felix stalder

The Digital Condition

Felix Stalder

Translated by Valentine Pakis

polity

The publisher has used its best endeavours to ensure that the URLs for external websites referred to in this book are correct and active at the time of going to press. However, the publisher has no responsibility for the websites and can make no guarantee that a site will remain live or that the content is or will remain appropriate.

Every effort has been made to trace all copyright holders, but if any have been inadvertently overlooked the publisher will be pleased to include any necessary credits in any subsequent reprint or edition.

For further information on Polity, visit our website: politybooks.com

Contents

II

Forms

With the emergence of the internet around the turn of the millennium as an omnipresent infrastructure for communication and coordination, previously independent cultural developments began to spread beyond their specific original contexts, mutually influencing and enhancing one another, and becoming increasingly intertwined. Out of a disconnected conglomeration of more or less marginalized practices, a new and specific cultural environment thus took shape, usurping or marginalizing an ever greater variety of cultural constellations. The following discussion will focus on three *forms* of the digital condition, that is, on those formal qualities that (notwithstanding all of its internal conflicts and contradictions) lend a particular shape to this cultural environment as a whole: *referentiality*, *communality*, and *algorithmicity*. It is only because most of the cultural processes operating under the digital condition are characterized by common formal features such as these that it is reasonable to speak of the digital condition in the singular.

"Referentiality" is a method with which individuals can inscribe themselves into cultural processes and constitute themselves as producers. Understood as shared social meaning, the arena of culture entails that such an undertaking cannot be limited to the individual. Rather, it takes place within a larger framework whose existence and development depend on

communal formations. "Algorithmicity" denotes those aspects of cultural processes that are (pre-)arranged by the activities of machines. Algorithms transform the vast quantities of data and information that characterize so many facets of present-day life into dimensions and formats that can be registered by human perception. It is impossible to read the content of billions of websites. Therefore we turn to services such as Google's search algorithm, which reduces the data flood ("big data") to a manageable amount and translates it into a format that humans can understand ("small data"). Without them, human beings could not comprehend or do anything within a culture built around digital technologies, but they influence our understanding and activity in an ambivalent way. They create new dependencies by pre-sorting and making the (informational) world available to us, yet simultaneously ensure our autonomy by providing the preconditions that enable us to act.

Referentiality

In the digital condition, one of the methods (if not *the* most fundamental method) enabling humans to participate – alone or in groups – in the collective negotiation of meaning is the system of creating references. In a number of arenas, referential processes play an important role in the assignment of both meaning and form. According to the art historian André Rottmann, for instance, "one might claim that working with references has in recent years become the dominant production-aesthetic model in contemporary art."[1] This burgeoning engagement with references, however, is hardly restricted to the world of contemporary art. Referentiality is a feature of many processes that encompass the operations of various genres of professional and everyday culture. In its essence, it is the use of materials that are already equipped with meaning – as opposed to so-called raw material – to create new meanings. The referential techniques used to achieve this are extremely diverse, a fact reflected in the numerous terms that exist to describe them: re-mix, re-make, re-enactment, appropriation, sampling, meme, imitation, homage, tropicália, parody, quotation, post-production, re-performance,

camouflage, (non-academic) research, re-creativity, mashup, transformative use, and so on.

   These processes have two important aspects in common: the recognizability of the sources and the freedom to deal with them however one likes. The first creates an internal system of references from which meaning and aesthetics are derived in an essential manner.[2] The second is the precondition enabling the creation of something that is both new and on the same level as the re-used material. This represents a clear departure from the historical-critical method, which endeavors to embed a source in its original context in order to re-determine its meaning, but also a departure from classical forms of rendition such as translations, adaptations (for instance, adapting a book for a film), or cover versions, which, though they translate a work into another language or medium, still attempt to preserve its original meaning. Re-mixes produced by DJs are one example of the referential treatment of source material. In his book on the history of DJ culture, the journalist Ulf Poschardt notes: "The remixer isn't concerned with salvaging authenticity, but with creating a new authenticity."[3] For instead of distancing themselves from the past, which would follow the (Western) logic of progress or the spirit of the avant-garde, these processes refer explicitly to precursors and to existing material. In one and the same gesture, both one's own new position as well as the context and cultural tradition that is being carried on in one's own work are constituted performatively, that is, through one's own activity in the moment. I will discuss this phenomenon in greater depth below.

   To work with existing cultural material is, in itself, nothing new. In modern montages, artists likewise drew upon available texts, images, and treated materials. Yet there is an important difference: montages were concerned with bringing together seemingly incongruous but stable "finished pieces" in a more or less unmediated and fragmentary manner. This is especially clear in the collages by the Dadaists or in Expressionist literature such as Alfred Döblin's *Berlin Alexanderplatz*. In these works, the experience of Modernity's many fractures – its fragmentation and turmoil – was given a new aesthetic form. In his reference to montages, Adorno thus observed that the "negation of synthesis becomes a principle

of form."[4] At least for a brief moment, he considered them an adequate expression for the impossibility of reconciling the contradictions of capitalist culture. Influenced by Adorno, the literary theorist Peter Bürger went so far as to call the montage the true "paradigm of modernity."[5] In today's referential processes, on the contrary, pieces are not brought together as much as they are integrated into one another by being altered, adapted, and transformed. Unlike the older arrangement, it is not the fissures between elements that are foregrounded but rather their synthesis in the present. Conchita Wurst, the bearded diva, is not torn between two conflicting poles. Rather, she represents a successful synthesis – something new and harmonious that distinguishes itself by showcasing elements of the old order (man/woman) and simultaneously transcending them.

This synthesis, however, is usually just temporary, for at any time it can itself serve as material for yet another rendering. Of course, this is far easier to pull off with digital objects than with analog objects, though these categories have become increasingly porous and thus increasingly problematic as opposites. More and more objects exist both in an analog as well as a digital form. Think of photographs and slides, which have become so easy to digitalize. Even three-dimensional objects can now be scanned and printed. In the future, programmable materials with controllable and reversible features will cause the difference between the two domains to vanish: analog is becoming more and more digital.

Montages and referential processes can only become widespread methods if, in a given society, cultural objects are available in three different respects. The first is economic and organizational: they must be affordable and easily accessible. Whoever is unable to afford books or get hold of them by some other means will not be able to reconfigure any texts. The second is cultural: working with cultural objects – which can always create deviations from the source in unpredictable ways – must not be treated as taboo or illegal, but rather as an everyday activity without any special preconditions. It is much easier to manipulate a text from a secular newspaper than one from a religious canon. The third is material: it must be possible to use the material and to change it.[6]

In terms of this third form of availability, montages differ from referential processes, for cultural objects can be integrated into one another – instead of simply being placed side by side – far more readily when they are digitally coded. Information is digitally coded when it is stored by means of a limited system of discrete (that is, separated by finite intervals or distances) signs that are meaningless in themselves. This allows information to be copied from one carrier to another without any loss and it allows the respective signs, whether individually or in groups, to be arranged freely. Seen in this way, digital coding is not necessarily bound to computers but can rather be realized with all materials: a mosaic is a digital process in which information is coded by means of variously colored tiles, just as a digital image consists of pixels. In the case of the mosaic, of course, the resolution is far lower. Alphabetic writing is a form of coding linguistic information by means of discrete signs that are, in themselves, meaningless. Consequently, Florian Cramer has argued that "every form of literature that is recorded alphabetically and not based on analog parameters such as ideograms or orality is already digital in that it is stored in discrete signs."[7] However, the specific features of the alphabet, as Marshall McLuhan repeatedly underscored, did not fully develop until the advent of the printing press.[8] It was the printing press, in other words, that first abstracted written signs from analog handwriting and transformed them into standardized symbols that could be repeated without any loss of information. In this practical sense, the printing press made writing digital, with the result that dealing with texts soon became radically different.

Information overload 1.0

The printing press made texts available in the three respects mentioned above. For one thing, their number increased rapidly, while their price significantly sank. During the first two generations after Gutenberg's invention – that is, between 1450 and 1500 – more books were produced than during the thousand years before.[9] And that was just the beginning. Dealing with books and their content changed from the ground up. In manuscript culture, every new copy represented a potential degradation of the original, and therefore

the oldest sources (those that had undergone as little corruption as possible) were valued above all. With the advent of print culture, the idea took hold that texts could be improved by the process of editing, not least because the availability of old sources, through reprints and facsimiles, had also improved dramatically. Pure reproduction was mechanized and overcome as a cultural challenge.

According to the historian Elizabeth Eisenstein, one of the first consequences of the greatly increased availability of the printed book was that it overcame the "tyranny of major authorities, which was common in small libraries."[10] Scientists were now able to compare texts with one another and critique them to an unprecedented extent. Their general orientation turned around: instead of looking back in order to preserve what they knew, they were now looking ahead toward what they might not (yet) know.

In order to organize this information flood of rapidly amassing texts, it was necessary to create new conventions: books were now specified by their author, publisher, and date of publication, not to mention furnished with page numbers. This enabled large amounts of texts to be catalogued and every individual text – indeed, every single passage – to be referenced.[11] Scientists could legitimize the pursuit of new knowledge by drawing attention to specific mistakes or gaps in existing texts. In the scientific culture that was developing at the time, the close connection between old and new material was not simply regarded as something positive; it was also urgently prescribed as a method of argumentation. Every text had to contain an internal system of references, and this was the basis for the development of schools, disciplines, and specific discourses.

The digital character of printed writing also made texts available in the third respect mentioned above. Because discrete signs could be reproduced without any loss of information, it was not only possible to make perfect copies but also to remove content from one carrier and transfer it to another. Materials were no longer simply arranged sequentially, as in medieval compilations and almanacs, but manipulated to give rise to a new and independent fluid text. A set of conventions was developed – one that remains in use today – for modifying embedded or quoted material in order for it to fit

into its new environment. In this manner, quotations could be altered in such a way that they could be integrated seamlessly into a new text while remaining recognizable as direct citations. Several of these conventions, for instance the use of square brackets to indicate additions ("[ ]") or ellipses to indicate omissions ("..."), are also used in this very book. At the same time, the conventions for making explicit references led to the creation of an internal reference system that made the singular position of the new text legible within a collective field of work. "Printing," to quote Elizabeth Eisenstein once again, "encouraged forms of combinatory activity which were social as well as intellectual. It changed relationships between men of learning as well as between systems of ideas."[12] Exchange between scholars, in the form of letters and visits, intensified. The seventeenth century saw the formation of the *respublica literaria* or the "Republic of Letters," a loose network of scholars devoted to promoting the ideas of the Enlightenment. Beginning in the eighteenth century, the rapidly growing number of scientific fields was arranged and institutionalized into clearly distinct disciplines. In the nineteenth and twentieth centuries, diverse media-technical innovations made images, sounds, and moving images available, though at first only in analog formats. These created the preconditions that enabled the montage in all of its forms – film cuts, collages, readymades, *musique concrète*, found footage films, literary cut-ups, and artistic assemblages (to name only the most well-known genres) – to become the paradigm of Modernity.

Information overload 2.0

It was not until new technical possibilities for recording, storing, processing, and reproduction appeared over the course of the 1990s that it also became increasingly possible to code and edit images, audio, and video digitally. Through the networking that was taking place not far behind, society was flooded with an unprecedented amount of digitally coded information *of every sort*, and the circulation of this information accelerated. This was not, however, simply a quantitative change but also and above all a qualitative one. Cultural materials became available in a comprehensive

sense – economically and organizationally, culturally (despite legal problems) and materially (because digitalized). Today it would not be bold to predict that nearly every text, image, or sound will soon exist in a digital form. Most of the new reproducible works are already "born digital" and digitally distributed, or they are physically produced according to digital instructions. Many initiatives are working to digitalize older, analog works. We are now anchored in the digital.

Among the numerous digitalization projects currently under way, the most ambitious is that of Google Books, which, since its launch in 2004, has digitalized around 20 million books from the collections of large libraries and prepared them for full-text searches. Right from the start, a fierce debate arose about the legal and cultural acceptability of this project. One concern was whether Google's process infringed upon the rights of the authors and publishers of the scanned books or whether, according to American law, it qualified as "fair use," in which case there would be no obligation for the company to seek authorization or offer compensation. The second main concern was whether it would be culturally or politically appropriate for a private corporation to hold a de facto monopoly over the digital heritage of book culture. The first issue incited a complex legal battle that, in 2013, was decided in Google's favor by a judge on the United States District Court in New York.[13] At the heart of the second issue was the question of how a public library should look in the twenty-first century.[14] In November of 2008, the European Commission and the Cultural Minister of the European Union launched the virtual Europeana library, which occurred after a number of European countries had already invested hundreds of millions of euros in various digitalization initiatives.[15] Today, Europeana serves as a common access point to the online archives of around 2,500 European cultural institutions. By the end of 2015, its digital holdings had grown to include more than 40 million objects. This is still, however, a relatively small number, for it has been estimated that European archives and museums contain more than 220 million natural-historical and more than 260 million cultural-historical objects. In the United States, discussions about the future of libraries led

to the 2013 launch of the Digital Public Library of America (DPLA), which, like the Europeana, provides common access to the digitalized holdings of archives, museums, and libraries. By now, more than 14 million items can be viewed there.

In one way or another, however, both the private as well as the public projects of this sort have been limited by binding copyright laws. The librarian and book historian Robert Darnton, one of most prominent advocates of the Digital Public Library of America, has accordingly stated: "The main impediment to the DPLA's growth is legal, not financial. Copyright laws could exclude everything published after 1964, most works published after 1923, and some that go back as far as 1873."[16] The legal situation in Europe is similar to that in the United States. It, too, massively obstructs the work of public institutions.[17] In many cases, this has had the absurd consequence that certain materials, though they have been fully digitalized, may only be accessed in part or exclusively inside the facilities of a particular institution. Whereas companies such as Google can afford to wage long legal battles, and in the meantime create precedents, public institutions must proceed with great caution, not least to avoid the accusation of using public funds to violate copyright laws. Thus, they tend to fade into the background and leave users, who are unfamiliar with the complex legal situation, with the impression that they are even more out-of-date than they often are.

Informal actors, who explicitly operate beyond the realm of copyright law, are not faced with such restrictions. UbuWeb, for instance, which is the largest online archive devoted to the history of twentieth-century avant-garde art, was not created by an art museum but rather by the initiative of an individual artist, Kenneth Goldsmith. Since 1996, he has been collecting historically relevant materials that were no longer in distribution and placing them online for free and without any stipulations. He forgoes the process of obtaining the rights to certain works of art because, as he remarks on the website: "Let's face it, if we had to get permission from everyone on UbuWeb, there would be no UbuWeb."[18] It would simply be too demanding to do so. Because he pursues the project without any financial interest and has saved so much

from oblivion, his efforts have provoked hardly any legal difficulties. On the contrary, UbuWeb has become so important that Goldsmith has begun to receive more and more material directly from artists and their heirs, who would like certain works not to be forgotten. Nevertheless, or perhaps for this very reason, Goldsmith repeatedly stresses the instability of his archive, which could disappear at any moment if he loses interest in maintaining it or if something else happens. Users are therefore able to download works from UbuWeb and archive, on their own, whatever items they find most important. Of course, this fragility contradicts the idea of an archive as a place for long-term preservation. Yet such a task could only be undertaken by an institution that is oriented toward the long term. Because of the existing legal conditions, however, it is hardly likely that such an institution will come about.

Whereas Goldsmith is highly adept at operating within a niche that not only tolerates but also accepts the violation of formal copyright claims, large websites responsible for the uncontrolled dissemination of digital content do not bother with such niceties. Their purpose is rather to ensure that all popular content is made available digitally and for free, whether legally or not. These sites, too, have experienced uninterrupted growth. By the end of 2015, dozens of millions of people were simultaneously using the BitTorrent tracker The Pirate Bay – the largest nodal point for file-sharing networks during the last decade – to exchange several million digital files with one another.[19] And this was happening despite protracted attempts to block or close down the file-sharing site by legal means and despite a variety of competing services. Even when the founders of the website were sentenced in Sweden to pay large fines (around 3 million euros) and to serve time in prison, the site still did not disappear from the internet.[20] At the same time, new providers have entered the market of free access; their method is not to facilitate distributed downloads but rather to offer, on account of the drastically reduced cost of data transfers, direct streaming. Although some of these services are relatively easy to locate and some have been legally banned – the most well-known case in Germany being that of the popular site kino.to – more of them continue to appear.[21] Moreover, this phenomenon is

not limited to music and films, but encompasses all media formats. For instance, it is foreseeable that the number of freely available plans for 3D objects will increase along with the popularity of 3D printing. It has almost escaped notice, however, that so-called "shadow libraries" have been popping up everywhere; the latter are not accessible to the public but rather to members, for instance, of closed exchange platforms or of university intranets. Few seminars take place any more without a corpus of scanned texts, regardless of whether this practice is legal or not.[22]

The lines between these different mechanisms of access are highly permeable. Content acquired legally can make its way to file-sharing networks as an illegal copy; content available for free can be sold in special editions; content from shadow libraries can make its way to publicly accessible sites; and, conversely, content that was once freely available can disappear into shadow libraries. As regards free access, the details of this rapidly changing landscape are almost inconsequential, for the general trend that has emerged from these various dynamics – legal and illegal, public and private – is unambiguous: in a comprehensive and practical sense, cultural works of all sorts will become freely available despite whatever legal and technical restrictions might be in place. Whether absolutely all material will be made available in this way is not the decisive factor, at least not for the individual, for, as the German Library Association has stated, "it is foreseeable that non-digitalized material will increasingly escape the awareness of users, who have understandably come to appreciate the ubiquitous availability and more convenient processability of the digital versions of analog objects."[23] In this context of excess information, it is difficult to determine whether a particular work or a crucial reference is missing, given that a multitude of other works and references can be found in their place.

At the same time, prodigious amounts of new material are being produced that, before the era of digitalization and networks, never could have existed at all or never would have left the private sphere. An example of this is amateur photography. This is nothing new in itself; as early as 1899, Kodak was marketing its films and apparatuses with the slogan "You press the button, we do the rest," and ever

since, drawers and albums have been overflowing with photographs. With the advent of digitalization, however, certain economic and material limitations ceased to exist that, until then, had caused most private photographers to think twice about how many shots they wanted to take. After all, they had to pay for the film to be developed and then store the pictures somewhere. Cameras also became increasingly "intelligent," which improved the technical quality of photographs. Even complex procedures such as increasing the level of detail or the contrast ratio – the difference between an image's brightest and darkest points – no longer require any specialized knowledge of photochemical processes in the darkroom. Today, such features are often pre-installed in many cameras as an option (high dynamic range). Ever since the introduction of built-in digital cameras for smartphones, anyone with such a device can take pictures everywhere and at any time and then store them digitally. Images can then be posted on online platforms and shared with others. By the middle of 2015, Flickr – the largest but certainly not the only specialized platform of this sort – had more than 112 million registered users participating in more than 2 million groups. Every user has access to free storage space for about half a million of his or her own pictures. At that point, in other words, the platform was equipped to manage more than 55 billion photographs. Around 3.5 million images were being uploaded every day, many of which could be accessed by anyone. This may seem like a lot, but in reality it is just a small portion of the pictures that are posted online on a daily basis. Around that same time – again, the middle of 2015 – approximately 350 million pictures were being posted on Facebook *every day*. The total number of photographs saved there has been estimated to be 250 billion. In addition, there are also large platforms for professional "stock photos" (supplies of pre-produced images that are supposed to depict generic situations) and the databanks of professional agencies such Getty Images or Corbis. All of these images can be found easily and acquired quickly (though not always for free). Yet photography is not unique in this regard. In all fields, the number of cultural artifacts available to the public on specialized platforms has been increasing rapidly in recent years.

The great disorder

The old orders that had been responsible for filtering, organizing, and publishing cultural material – culture industries, mass media, libraries, museums, archives, etc. – are incapable of managing almost any aspect of this deluge. They can barely function as gatekeepers any more between those realms that, with their help, were once defined as "private" and "public." Their decisions about what is or is not important matter less and less. Moreover, having already been subjected to a decades-long critique, their rules, which had been relatively binding and formative over long periods of time, are rapidly losing practical significance.

Even Europeana, a relatively small project based on traditional museums and archives and with a mandate to make the European cultural heritage available online, has contributed to the disintegration of established orders: it indiscriminately brings together 2,500 previously separated institutions. The specific semantic contexts that formerly shaped the history and orientation of institutions have been dissolved or reduced to dry meta-data, and millions upon millions of cultural artifacts are now equidistant from one another. Instead of certain artifacts being firmly anchored in a location, for instance in an ethnographic collection devoted to the colonial history of France, it is now possible for everything to exist side by side. Europeana is not an archive in the traditional sense, or even a museum with a fixed and meaningful order; rather, it is just a standard database. Everything in it is just one search request away, and every search generates a unique order in the form of a sequence of visible artifacts. As a result, individual objects are freed from those meta-narratives, created by the museums and archives that preserve them, which situate them within broader contexts and assign more or less clear meanings to them. They consequently become more open to interpretation. A search result does not articulate an interpretive field of reference but merely a connection, created by constantly changing search algorithms, between a request and the corpus of material, which is likewise constantly changing.

Precisely because it offers so many different approaches to more or less freely combinable elements of information, the

order of the database no longer really provides a framework
for interpreting search results in a meaningful way. Alto-
gether, the meaning of many objects and signs is becoming
even more uncertain. On the one hand, this is because the
connection to their original context is becoming fragile; on
the other hand, it is because they can appear in every possible
combination and in the greatest variety of reception contexts.
In less official archives and in less specialized search engines,
the dissolution of context is far more pronounced than it is in
the case of the Europeana project. For the sake of orienting its
users, for instance, YouTube provides the date when a video
has been posted, but there is no indication of when a video
was actually produced. Further information provided about
a video, for example in the comments section, is essentially
unreliable. It might be true – or it might not. The internet
researcher David Weinberger has called this the "new digital
disorder," which, at least for many users, is an entirely apt
description.[24] For individuals, this disorder has created both
the freedom to establish their own orders and the obligation
of doing so, regardless of whether or not they are ready for
the task.

This tension between freedom and obligation is at its
strongest online, where the excess of culture and its more
or less free availability are immediate and omnipresent. In
fact, everything that can be retrieved online is culture in the
sense that everything – from the deepest layer of hardware
to the most superficial tweet – has been made by someone
with a particular intention, and everything has been made to
fit a particular order. And it is precisely this excess of often
contradictory meanings and limited, regional, and incompat-
ible orders that lead to disorder and meaninglessness. This
is not limited to the online world, however, because the
latter is not self-contained. In an essential way, digital media
also serve to organize the material world. On the basis of
extremely complex and opaque yet highly efficient logistical
and production processes, people are also confronted with
constantly changing material things about whose origins and
meanings they have little idea. Even something as simple
to produce as yoghurt usually has a thousand kilometers
behind it before it ends up on a shelf in the supermarket.
The logistics that enable this are oriented toward flexibility;

they bring elements together as efficiently as possible. It is nearly impossible for final customers to find out anything about the ingredients. Customers are merely supposed to be oriented by signs and notices such as "new" or "as before," "natural," and "healthy," which are written by specialists and meant to mislead shoppers as much as the law allows. Even here, in corporeal everyday life, every individual has to deal with a surge of excess and disorder that threatens to erode the original meaning conferred on every object – even where such meaning was once entirely unproblematic, as in the case of yoghurt.[25]

Selecting and organizing

In this situation, the creation of one's own system of references has become a ubiquitous and generally accessible method for organizing all of the ambivalent things that one encounters on a given day. Such things are thus arranged within a specific context of meaning that also (co)determines one's own relation to the world and subjective position in it. Referentiality takes place through three types of activity, the first being simply to attract attention to certain things, which affirms (at least implicitly) that they are important. With every single picture posted on Flickr, every tweet, every blog post, every forum post, and every status update, the user is doing exactly that; he or she is communicating to others: "Look over here! I think this is important!" Of course, there is nothing new to filtering and allocating meaning. What is new, however, is that these processes are no longer being carried out primarily by specialists at editorial offices, museums, or archives, but have become daily requirements for a large portion of the population, regardless of whether they possess the material and cultural resources that are necessary for the task.

The loop through the body

Given the flood of information that perpetually surrounds everyone, the act of focusing attention and reducing vast amounts of possibilities into something concrete has become a productive achievement, however banal each of these micro-activities might seem on its own, and even if, at first,

the only concern might be to focus the attention of the person doing it. The value of this (often very brief) activity is that it singles out elements from the uniform sludge of unmanageable complexity. Something plucked out in this way gains value because it has required the use of a resource that cannot be reproduced, that exists outside of the world of information and that is invariably limited for every individual: our own lifetime. Every status update that is not machine-generated means that someone has invested time, be it only a second, in order to point to this and not to something else. Thus, a process of validating what exists in the excess takes place in connection with the ultimate scarcity – our own lifetimes, our own bodies. Even if the value generated by this act is minimal or diffuse, it is still – to borrow from Gregory Bateson's famous definition of information – a difference that makes a difference in this stream of equivalencies and meaninglessness.[26] This singling out – this use of one's own body to generate meaning – does not, however, take place by means of mere micro-activities throughout the day; it is also a defining aspect of complex cultural strategies. In recent years, re-enactment (that is, the re-staging of historical situations and events) has established itself as a common practice in contemporary art. Unlike traditional re-enactments, such as those of historically significant battles, which attempt to represent the past as faithfully as possible, "artistic re-enactments," according to the curator Inke Arns, "are not an affirmative confirmation of the past; rather, they are *questionings* of the present through reaching back to historical events," especially as they are represented in images and other forms of documentation. Thanks to search machines and databases, such representations are more or less always present, though in the form of indeterminate images, ambivalent documents, and contentious interpretations. Artists in this situation, as Arns explains,

> do not ask the naïve question about what really happened outside of the history represented in the media – the "authenticity" beyond the images – instead, they ask what the images we see might mean concretely to us, if we were to experience these situations personally. In this way the artistic reenactment confronts the general feeling of insecurity about the meaning

of images by using a paradoxical approach: through erasing
distance to the images and at the same time distancing itself
from the images.[27]

This paradox manifests itself in that the images are appro-
priated and sublated through the use of one's own body in
the re-enactments. They simultaneously refer to the past and
create a new reality in the present. In perhaps the most well-
known re-enactment of this type, the artist Jeremy Deller
revived, in 2001, the Battle of Orgreave, one of the central
episodes of the British miners' strike of 1984 and 1985.
This historical event is regarded as a turning point in the
protracted conflict between Margaret Thatcher's government
and the labor unions – a key moment in the implementation
of Great Britain's neoliberal regime, which is still in effect
today. In Deller's re-enactment, the heart of the matter is not
historical accuracy, which is always controversial in such
epoch-changing events. Rather, he focuses on the former par-
ticipants – the miners and police officers alike, who, along
with non-professional actors, lived through the situation
again – in order to explore both the distance from the events
and their representation in the media, as well as their ongoing
biographical and societal presence.[28]

Elaborate practices of embodying medial images through
processes of appropriation and distancing have also found
their way into popular culture, for instance in so-called
"cosplay." The term, which is a contraction of the words
"costume" and "play," was coined by a Japanese man named
Nobuyuki Takahashi. In 1984, while attending the World
Science Fiction Convention in Los Angeles, he used the word
to describe the practice of certain attendees to dress up as
their favorite characters. Participants in cosplay embody fic-
titious figures – mostly from the worlds of science fiction,
comics/manga, or computer games – by donning home-made
costumes and striking characteristic poses.[29] The often con-
siderable effort that goes into this is mostly reflected in the
costumes, not in the choreography or dramaturgy of the
performance. What is significant is that these costumes are
usually not exact replicas but are rather freely adapted by
each player to represent the character as he or she interprets
it to be. Accordingly, "[c]osplay is a form of appropriation

that transforms, actualizes and performs an existing story in close connection to the fan's own identity."[30] This practice, admittedly, goes back quite far in the history of fan culture, but it has experienced a striking surge through the opportunity for fans to network with one another around the world, to produce costumes and images of professional quality, and to place themselves on the same level as their (fictitious) idols. By now it has become a global subculture whose members are not only active online but also at hundreds of conventions throughout the world. In Germany, an annual cosplay competition has been held since 2007 (it is organized by the Frankfurt Book Fair and Animexx, the country's largest manga and anime community). The scene, which has grown and branched out considerably over the past few years, has slowly begun to professionalize, with shops, books, and players who make paid appearances. Even in fan culture, stars are born. As soon as the subculture has exceeded a certain size, this gradual onset of commercialization will undoubtedly lead to tensions within the community. For now, however, two of its noteworthy features remain: the power of the desire to appropriate, in a bodily manner, characters from vast cultural universes, and the widespread combination of free interpretation and the meticulous attention to detail.

Lines and transformations

Because of the great effort that they require, re-enactment and cosplay are somewhat extreme examples of singling out, appropriating, and referencing. As everyday activities that almost take place incidentally, however, these three practices usually do not make any significant or lasting differences. Yet they do not happen just once, but over and over again. They accumulate and thus constitute referentiality's second type of activity: the creation of connections between the many things that have attracted attention. In such a way, paths are forged through the vast complexity. These paths, which can be formed, for instance, by referring to different things one after another, likewise serve to produce and filter meaning. Things that can potentially belong in multiple contexts are brought into a single, specific context. For the individual

producer, this is how fields of attention, reference systems, and contexts of meaning are first established. In the third step, the things that have been selected and brought together are changed. Perhaps something is removed to modify the meaning, or perhaps something is added that was previously absent or unavailable. Either way, referential culture is always producing something new.

These processes are applied both within individual works (referentiality in a strict sense) and within currents of communication that consist of numerous molecular acts (referentiality in a broader sense). This latter sort of compilation is far more widespread than the creation of new re-mix works. Consider, for example, the billionfold sequences of status updates, which sometimes involve a link to an interesting video, sometimes a post of a photograph, then a short list of favorite songs, a top 10 chart from one's own feed, or anything else. Such methods of inscribing oneself into the world by means of references, combinations, or alterations are used to create meaning through one's own activity in the world and to constitute oneself in it, both for one's self and for others. In a culture that manifests itself to a great extent through mediatized communication, people have to constitute themselves through such acts, if only by posting "selfies."[31] Not to do so would be to risk invisibility and being forgotten.

On this basis, a genuine digital folk culture of re-mixing and mashups has formed in recent years on online platforms, in game worlds, but also through cultural-economic productions of individual pieces or short series. It is generated and maintained by innumerable people with varying degrees of intensity and ambition. Its common feature with traditional folk culture, in choirs or elsewhere, is that production and reception (but also reproduction and creation) largely coincide. Active participation admittedly requires a certain degree of proficiency, interest, and engagement, but usually not any extraordinary talent. Many classical institutions such as museums and archives have been attempting to take part in this folk culture by setting up their own re-mix services. They know that that the "public" is no longer able or willing to limit its engagement with works of art and cultural history to one of quiet contemplation. At the end of 2013, even

the Deutsches Symphonie-Orchester Berlin initiated a re-mix competition. A year earlier, the Rijksmuseum in Amsterdam launched so-called "Rijksstudios." Since then, the museum has made available on its website more than 200,000 high-resolution images from its collection. Users are free to use these to create their own re-mixes online and share them with others. Interestingly, the Rijksmuseum does not distinguish between the work involved in transforming existing pieces and that involved in curating its own online gallery.

Referential processes have no beginning and no end. Any material that is used to make something new has a pre-history of its own, even if its traces are lost in clouds of uncertainty. Upon closer inspection, this cloud might clear a little bit, but it is extremely uncommon for a genuine beginning – a *creatio ex nihilo* – to be revealed. This raises the question of whether there can really be something like originality in the emphatic sense.[32] Regardless of the answer to this question, the fact that by now many people select, combine, and alter objects on a daily basis has led to a slow shift in our perception and sensibilities. In light of the experiences that so many people are creating, the formerly exotic theories of deconstruction suddenly seem anything but outlandish. Nearly half a century ago, Roland Barthes defined the text as a fabric of quotations, and this incited vehement opposition.[33] "But of course," one would be inclined to say today, "that can be statistically proven through software analysis!" Amazon identifies books by means of their "statistically improbable phrases," that is, by means of textual elements that are highly unlikely to occur elsewhere. This implies, of course, that books contain many textual elements that are highly likely to be found in other texts, without suggesting that such elements would have to be regarded as plagiarism.

In the Gutenberg Galaxy, with its fixation on writing, the earliest textual document is usually understood to represent a beginning. If no references to anything before can be identified, the text is then interpreted as a closed entity, as a new text. Thus, fairy tales and sagas, which are typical elements of oral culture, are still more strongly associated with the names of those who recorded them than with the names of those who narrated them. This does not seem very convincing today. In recent years, literary historians have made strong

efforts to shift the focus of attention to the people (mostly women) who actually told certain fairy tales. In doing so, they have been able to work out to what extent the respective narrators gave shape to specific stories, which were written down as common versions, and to what extent these stories reflect their narrators' personal histories.[34]

Today, after more than 40 years of deconstructionist theory and a change in our everyday practices, it is no longer controversial to read works – even by canonical figures like Wagner or Mozart – in such a way as to highlight the other works, either by the artists in question or by other artists, that are contained within them.[35] This is not an expression of decreased appreciation but rather an indication that, as Zygmunt Bauman has stressed, "[t]he way human beings understand the world tends to be at all times *praxeomorphic*: it is always shaped by the know-how of the day, by what people can do and how they usually go about doing it."[36] And the everyday practice of today is one of singling out, bringing together, altering, and adding. Accordingly, not only has our view of current cultural production shifted; our view of cultural history has shifted as well. As always, the past is made to suit the sensibilities of the present.

As a rule, however, things that have no beginning also have no end. This is not only because they can in turn serve as elements for other new contexts of meaning, but also because the attention paid to the context in which they take on specific meaning is sensitive to the work that has to be done to maintain the context itself. Even timelessness is an elaborate everyday business. The attempt to rescue works of art from the ravages of time – to preserve them forever – means that they regularly need to be restored. Every restoration inevitably stirs a debate about whether the planned interventions are appropriate and about how to deal with the traces of previous interventions, which, from the current perspective, often seem to be highly problematic. Whereas, just a generation ago, preservationists ensured that such interventions remained visible (as articulations of the historical fissures that are typical of Modernity), today greater emphasis is placed on reducing their visibility and re-creating the illusion of an "original condition" (without, however, impeding any new functionality that a piece might have in the present).

The historically faithful restoration of the Berlin City Palace, and yet its repurposed function as a museum and meeting place, is typical of this new attitude in dealing with our historical heritage.

In everyday activity, too, the never-ending necessity of this work can be felt at all times. Here the issue is not timelessness, but rather that the established contexts of meaning quickly become obsolete and therefore have to be continuously affirmed, expanded, and changed in order to maintain the relevance of the field that they define. This lends referentiality a performative character that combines productive and reproductive dimensions. That which is not constantly used and renewed simply disappears. Often, however, this only means that it will sink into an endless archive and become unrealized potential until someone reactivates it, breathes new life into it, rouses it from its slumber, and incorporates it into a newly relevant context of meaning. "To be relevant," according to the artist Eran Schaerf, "things must be recyclable."[37]

Alone, everyone is overwhelmed by the task of having to generate meaning against this backdrop of all-encompassing meaninglessness. First, the challenge is too great for any individual to overcome; second, meaning itself is only created intersubjectively. While it can admittedly be asserted by a single person, others have to confirm it before it can become a part of culture. For this reason, the actual subject of cultural production under the digital condition is not the individual but rather the next-largest unit.

Communality

As an individual, it is impossible to orient oneself within a complex environment. Meaning – as well as the ability to act – can only be created, reinforced, and altered in exchange with others. This is nothing noteworthy; biologically and culturally, people are social beings. What has changed historically is how people are integrated into larger contexts, how processes of exchange are organized, and what every individual is expected to do in order to become a full-fledged participant in these processes. For nearly 50 years, traditional