Playful Identities

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7. Playing with bits and bytes: The savage mind in the digital age

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Introduction

This chapter focuses on the relation between play and the practices of technological modification and innovation. Playing with technologies has always been an important driving force behind technological transformation. This is even more the case in the digital era, which has given rise to a lively Do-It-Yourself (DIY) culture, in which amateurs and ordinary users have become prominent players in the technological game. It is argued that play offers an interesting angle to understand the characteristics of this DIY culture. In the digital DIY culture, technology is used and tinkered with in an open-ended way. In the process of playing around, new connections, ideas, and applications spring up. Improvisation, trial and error, and playing with the rules characterize these practices. Digital DIY practices are highly socially driven: collaboration and communication with others is a crucial element. The motivation of a digital DIY enthusiast is not so much to produce serious, intentional innovations, but is more intrinsically shaped by the fun and enjoyment of tinkering itself, which can be quite an absorbing pastime. Innovations are often just the accidental results of such processes.

This reminds us of how Johan Huizinga – the great source of inspiration for this book – has described play (1955). He considers play as a free activity standing outside “ordinary” life, in the sense of having no serious purpose (be it “holy” serious in how it may absorb us completely). Play does not serve any material interest or profit, but is intrinsically motivated. Huizinga considers the social aspect of play very important. Although Huizinga actually saw the technologies of his time and play as complete opposites, in this chapter it is argued that digital technologies are essentially playful technologies, not only as apt tools for play, but also as being the result of playful practices. In this chapter we focus particularly on the second aspect: how playfulness shapes technological innovation. Furthermore, we argue that the playful mindset that characterizes the digital era, is similar to what anthropologist Lévi-Strauss has called “the savage mind”.

On amateurs, DIY enthusiasts and ordinary users

Ask anyone how important innovations occur and most will tend to think of clever engineers in a high-tech lab rather than of tinkering amateurs working together in a playful, open, and social atmosphere. Yet it is often these communities of amateurs, with all their improvisation and fiddling with anything that comes to hand, that have stood at the cradle of striking inventions and technological breakthroughs. If it had not been for the efforts of enthusiastic radio amateurs, the radio might not have become such a successful mass medium (cf. Moores 2000). The invention of the radio telegraph by Marconi at the start of the 20th century led to all kinds of experiments with this new technology. Amateur wireless operators – also referred to as “radio hams” – played a prominent role in disseminating and improving the new technology. In Dutch broadcast history these radio hams have a special place even now: the name of the current broadcaster VARA – “Vereniging van Arbeiders Radio Amateurs” (Workers’ Association of Amateur Radio Operators) – harks back to the construction kits of the thirties that enabled VARA members to easily assemble a simple radio, the so-called Varadyne. These self-assembled and operated radios with manuals included can still be found for sale on digital marketplaces, many still in perfect working condition.

Von Hippel (2005) proposes another example of the power of amateur innovation when he describes how the tinkering of a group of fanatical surfers in Hawaii gave professional windsurfing a huge boost. The surfers were all experimenting with acrobatic leaps, which caused many injuries and damage to the equipment. Keeping the board with you on the waves was a true art. So the surfers came up with an experimental design for a surfboard with foot straps. These enabled all kinds of new surfing techniques that have changed the sport considerably. Von Hippel cites one of these surfers:

That’s when I first started jumping with foot straps and discovering controlled flight. I could go so much faster than I ever thought and when you hit a wave it was like a motorcycle rider hitting a ramp; you just flew into the air. All of a sudden not only could you fly into the air, but you could land the thing, and not only that, but you could change direction in the air! The whole sport of high-performance windsurfing really started from that. As soon as I did it, there were about ten of us who sailed all the time together and within one or two days there were various boards out there that had foot straps of various kinds on them, and we were all
going fast and jumping waves and stuff. It just kind of snowballed from there (2005, 1-2).

According to Von Hippel, by 1998 more than a million people engaged in windsurfing, and a large fraction of the boards sold incorporated these user-developed innovations for the high-performance sport (ibid, 2).

A third and final example comes from the history of music. In the late 1970s hip-hop and rap emerged in the subculture of African-American kids in large cities. Rapping, American slang for talking, builds on an old black American tradition of storytelling accompanied by music. In West Africa, the *griots* were traveling singers and storytellers who went from village to village. Today’s rappers are, as it were, the inheritors of this tradition. Rappers started using beats taken from other music (samples) to back their lyrics. This was done by “scratching”: DJs moving the record back and forth as it was playing, thus creating a rhythmical pattern. Various musical traditions and styles were used, from the inspiring sounds of the Jamaican music scene to the high-tech sound of European bands like Kraftwerk. Computers enabled all kinds of samples to be connected or mixed by DJs during live performances in the way that is now popular in dance music. Hip-hop, rap, and dance have not only become a mature commercial product, but the fun “cut and paste” technique of sampling and scratching has also generated various kinds of new techno music in which beats are at the core. Dick Hebdige (1979) has described a similar process of remixing and recombining in his analysis of the punk subculture of the 1970s. At this time, familiar symbolic elements of ordinary consumerism were mixed into a new subversive style, which was then in turn absorbed back into mainstream consumer culture.

These examples make it clear that experimenting amateurs can be a driving force behind innovation processes. In their pamphlet *The pro-am revolution* (2004), Charles Leadbeater and Paul Miller argue that recent innovation history is characterized in particular by the advance of the professional amateur, or the *pro-am*. The twentieth century was largely shaped by professionals who worked in large, hierarchically structured organizations. The production of knowledge also came about mainly within a strongly regulated and streamlined environment in closed R&D laboratories where “amateurism” had no place. But according to these authors, in the last two decades of the last century exciting innovations were more frequently emerging from informal networks of amateurs. These amateurs often playfully experimented with the things that were happening in their own field of practice. In an open-ended process of improvisation and trial
and error, whereby they challenged each other and made smart use of the latent knowledge in their networks, they – often more or less accidentally – invented, improved existing processes, and developed new ideas.

This rise of the pro-am (or “lead users”, as Von Hippel would call them) is particularly manifest in the ICT domain. A famous example of a pro-am ICT innovation is Linux (Bretthauer 2001), which came about when the student Linus Torvalds shared the source code of the kernel he was working on with other amateur software developers. He asked them for comments and suggestions for improvements and invited them to tinker with the software themselves. The outcome is well-known: the famous operating system GNU/Linux. According to Linuxcounter.net some 66 million people worldwide are currently using Linux. Since its birth many communities of users have been helping to improve the system, and Linux has now acquired the reputation for being one of most reliable operating systems in the world. In many ways, Linux has shaped other systems not only in pushing open source code, but also in showing that teamwork and imagination in the community of users can be a driving force behind innovation.

The open source approach of which Linux is probably the most prominent example, originates in the hacker culture, historically associated with the renowned Massachusetts Institute of Technology (MIT). The blogger Tristan Louis claims that hacking and gaming have a common history at MIT, and this can be traced back to MIT’s Tech Model Railroad Club (TMRC) where playing and experimenting with model trains in turn led to all kinds of new technological experiments like hacking and gaming. The underlying driver was a subculture where pleasure and value in experimenting and exploring were highly esteemed. The value of this experimental hacker culture has since become much more broadly recognized. A sign of this is that government institutions and major companies are increasingly employing computer hackers and crackers to help develop high-tech, secure software.

In the ICT world we find many illustrations of the striking role played by enthusiastic amateurs, such as in the development and use of P2P technology in which amateurs were very influential. This innovation, and especially its unintended use, saw users take over a large part of the distribution of digital content. Now file sharing, along with downloading and sharing music and films, has become a standard practice, with quite a disruptive impact. It probably will not be long before physical picture and sound carriers (CDs and DVDs) are consigned to the past for good. This has had serious implications for the music and film industry. Although these implications are quite disruptive, they are not necessarily all negative, as they have also spawned successful new inventions like the MP3 player and the iPod as well
as new services like iTunes and Spotify. The development of text messaging is also often cited as an illustration of how ordinary users can contribute to getting an unexpected technological and economic innovation off the ground (cf. Taylor and Vincent 2005). Since texting was increasingly used as a key tool for everyday interaction, a relatively marginal business application became the cash cow for the telecom industry, contrary to all expectations (cf. Rheingold 2003). And finally, in the explosive emergence and growth of what has been labeled Web 2.0, we are now witnessing many examples of the innovative potential of the ordinary user. The current Internet can be seen as a large playground for users, where many loose building blocks are available which invite them to use their imagination, to contribute actively, and to build up the web by interacting and cooperating with others. Web 2.0 generates a constant flow of new services and applications that come out of the social networks of users and everything they do and share in those networks. Through what is now more commonly being referred to as social media, the everyday trivial contributions of ordinary users suddenly became a fascinating source of innovation and value creation. Because of this trend even the pro-am, the professional amateur, is now being passed left and right by the full-blooded amateur, or the ordinary user. The emergence of social media gave ordinary users not only a joyful playground, but also an exciting innovation lab where they can tinker and experiment to their heart’s content. Although we have to keep in mind that to a certain degree this playground is a “walled garden” where the boundaries of play are determined by others, including big companies which define the rules of the game.

In 1982, *Time* magazine chose the personal computer as its “person of the year”, but now, more than 30 years later, the user has taken over the mantle from technology. In 2006, *Time* magazine voted us (“You!”) person of the year. In the accompanying *laudatio*, we read that the “user has taken over the power of the global media and established a new digital democracy”. Not everyone considers this development with the same degree of positive value. The emergence of social media has also prompted various pessimistic views about the homogenization, trivialization, and loss of the professional culture. One of the most well-known pessimists is Andrew Keen (2008). The title of his book says it all, as he mercilessly slates the social media trend in *The cult of the amateur: How today’s internet is killing our culture*. But whether you belong to the optimist or pessimist camp, it is an irrefutable fact that a remarkable development has taken place in recent years: bottom up, user-driven innovation is now strongly (co)defining further development of the web.
Digital tinkering

In the current phase of development, ICT innovation is increasingly shaped by DIY practices: tinkering with the digital building blocks that every user can access from the abundant web arsenal. The current state of the technology has brought those building blocks within the reach of everyone. Today’s web is extremely user-friendly: it invites play, improvisation, and experimentation and tempts the user to keep discovering new things. Ordinary users have a better infrastructure and more sophisticated resources at their disposal at home these days than the average employee in a professional organization. Facebook for instance gives ordinary users a nearly professional multimedia platform, enabling them to present themselves in a slick and positive way to the network they belong to and to the outside world, using photos, videos, a permanent news line and real-time interaction possibilities. ICT has enabled 21st century users “to beat the pros at their own game”, as Time magazine put it, in “a story about community and collaboration on a scale never seen before”.

The breakthrough of this tinkering amateur, joyfully playing around with all the bits and pieces that the web offers him, may be regarded as a symptom of what Johan Huizinga (1955) has labelled the ludification of our modern culture. A thoroughly playful attitude and style is becoming more and more common in almost every domain of our everyday life, including those domains previously regarded as serious. Andrew Keen considers the emergence of the amateur as a loss of seriousness, e.g. of “serious media” and “serious culture”. In his view, the cult of the amateur leads to the homogenization, trivialization, and marginalization of the “true” experts. Expert knowledge, according to Keen, increasingly has to give way to a “childish game of Trivial Pursuit” (2008, 6). However, if we take Huizinga’s perspective, ludification is not so much a sign of the demise of the serious, but a key constituent element of culture, a real and powerful element of human civilization. The characteristics of digital media, as described in the introductory chapter of this volume, reinforce this play element because they allow the user to give rein to his creativity more than ever before: digital media affords users new opportunities to play. The play concept thus offers useful points of reference to better understand the increasing importance of the amateur as described above.

In her famous study of identity construction on the Internet, Sherry Turkle (1995) shows how computer technology in the 1980s and 90s grew into an “expressive” medium par excellence. The rise of the personal computer and the Internet offered more scope for a style of programming that she referred
to as “soft programming”: an associative style, bottom-up, unplanned, not based on rules, but much more on “playing with the code” (which is very important in the hacker culture described above). Even more programming scope has been created by the enhanced possibilities to visualize, simulate, and manipulate virtual objects – specifically in computer games – which gives users more possibilities to usefully exploit the web and themselves on the web. According to Turkle, this style of programming is reminiscent of the concrete kind of thinking and learning that is quite normal for children as described by Jean Piaget. Concrete elements from daily life are playfully used to gain abstract insights like playing marbles and learning to count. Turkle also links this development to the concept of *bricolage* as used by the anthropologist Claude Lévi-Strauss (1966). This involves a way of thinking whereby the concrete experience is prominent and abstractions derive from intuitive, playful improvisations and associations. Lévi-Strauss terms this kind of thinking the “savage mind”. The rise of the amateur in the digital world can be seen in that light as a breakthrough or, perhaps better, the revival of the savage mind.

**The savage mind**

Recent ICT history and the emergence of the digital amateur reveal striking parallels with what the anthropologist Claude Lévi-Strauss (1966) describes as the “savage mind” or the “science of the concrete”. In his analysis a central role is assigned to the *bricoleur*, the tinkerer, or DIY enthusiast, as the perfect representative of the savage mind. The *bricoleur* – as opposed to the engineer – uses everything in his vicinity that comes to hand, creating something new from previously used materials, things with a history of use. Lévi-Strauss also uses the image of the kaleidoscope as a metaphor for the savage mind: in a kaleidoscope the shards of glass that have already been used elsewhere, time and again display surprising combinations of color and shape along with the natural environment (the light). The current user-driven development of the Internet and the coincidental, kaleidoscopic innovations that continue to spring out of it, can in our view also be regarded as the breakthrough of the savage mind in our modern era.

Lévi-Strauss describes the savage mind as a way of mental organization that is characteristic of “primitive” cultures. The savage mind, or the science of the concrete, is in some sense the counterbalance to modern science. But despite the differences in approach and implementation, both emanate from the same human need for structure. According to Lévi-Strauss, it is
a fallacy to see the savage mind as a not yet mature stage in the evolution of thought. It is a different way of mentally organizing what we perceive around us. By systematically labeling and classifying what we perceive in our everyday environment, we structure our thinking. By organizing we see the coherence, cause and effect, and possibilities to combine and recombine. This process generates explanatory concepts, like myths of creation or technological discoveries and innovations. Such explanations and discoveries are not a matter of coincidence, but the fruits of thorough, systematic perception and of many experiments.

So-called primitive peoples often have very detailed knowledge of their natural surroundings, which is expressed in a rich and differentiated vocabulary along with an extensive arsenal of technology to cope with those surroundings. Lévi-Strauss cites, for instance, a biologist who was very impressed by the inexhaustible knowledge that a hunter-gatherer community in the Philippines seemed to have of the flora and fauna in their surroundings. Not only did they have names for all the animals and plants, they knew all about the animal behavior, all kinds of special properties of the plants, and revealed an amazing insight into the ecological balance between all the species. For example, they had detailed knowledge about fifteen different kinds of bats, twenty species of ants, and forty-five sorts of edible fungi. In terms of technology, they had fifty different kinds of darts. They constantly studied their surroundings through smell and taste and taking everything apart. They knew exactly what they could and could not use by experimenting with what they encountered. The knowledge of medicine men and women was particularly impressive.

According to Lévi-Strauss, the need for order that is evident here translates into practical applications as well as in more magical forms of thinking. Magical thinking and its elaboration in rituals and invocations in his view derive as much from the basic and fundamental human need for order as from the more pragmatic and rational use of plants for curing disease. This relates to a comparable way of understanding the world around us in which immediate perception and imagination play a major role. Magical imagination is important for instance when there is a concrete transition or rupture (birth, death, marriage) in our daily lives. Such transitions stir up insecurity that we try to exorcise by ritual: it is then that we appeal to what we know and trust, a fixed and repeated series of actions, which at first sight appear not to be founded on anything rational.

Now we turn to the definition of play as presented by Johan Huizinga as a free activity standing quite consciously outside “ordinary” life as being “not serious”, but at the same time absorbing the player intensely and
utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means (1955, 13).

If we compare Huizinga's play concept of and the way Lévi-Strauss approaches ritual, we see a striking correspondence. Lévi-Strauss describes these forms of mental organization as “intellectual tinkering”. Therefore, the objects in our surroundings, including technology, form a key tool because they are objects “to help us to think”. The notion of tinkering, *bricolage*, is important for Lévi-Strauss to illustrate the savage mind. He differentiates between the *bricoleur* and the engineer, indicative of two styles of mental organization: the science of the concrete and modern science. The engineer works with a preconceived plan or design, generally with new materials and concepts, and focuses on an abstraction as his target. The tinkerer, by contrast, makes optimum use of the things that he more or less chances across in everyday life. The way he uses the used materials around him – material history – depends more or less on what he wants to do with them. In the words of anthropologist Igor Kopytoff (1986), the things around us have a “cultural biography”. That biography restricts us in one sense but, at the same time, any material that is available can be reused for something else, and what was once a resource can now also become a goal in itself. The tinkerer sees his surroundings as a *trésor* or a treasure chest of experiences that contain opportunities.

Improvisation, coincidence and experiment in this type of thinking are much more important than in the engineer's largely programmatic way of thinking. The savage mind thinks more in terms of possibilities than solutions. The *bricoleur* weighs the possibilities against the history of use and on this basis makes his choices that may subsequently lead to new experimental combinations. From a *bricoleur*'s perspective this gives innovation a more incremental and even, in some respects, conservative character as the tinkerer remains organically and contingently bound to the past to a certain degree. An engineer's perspective of innovation is more likely to make the limitations of the concrete evident. He will endeavor to leap from the past and focus on the development of something new. The modern engineer's thinking is, moreover, abstract while the savage mind is a “science of the concrete”, in the words of Lévi-Strauss, who also suggests that the contrast between tinkerers and engineers is not so absolute. The
engineer also always has to form a picture of what is concretely at hand. Yet he then still has to try to overcome those limitations and attempt to abstract from them, while the *bricoleur* stays within the realms of the possibilities of the concrete world of experiences.

Thus the *bricoleur* also stays close to himself, “giving an account of his personality and life by the choices he makes between the limited possibilities” (Lévi-Strauss 1966, 21). In the savage mind the biography of things more or less coincides with the personal biography of the *bricoleur*. Sherry Turkle (2007) therefore also speaks of “evocative objects”. Inspired by Lévi-Strauss she describes the things around us as things that help us to “think-with”, objects that enable us to order our thinking as well as things that help us to think about ourselves, since they are also an evocation of ourselves and therefore help us reflect on ourselves and help us shape ourselves as creative beings.

Looking now at recent ICT developments, we see not only the emergence of professional amateurs and ordinary users in the digital domain, but in a more radical sense we see a breakthrough in a different way of thinking. In line with Lévi-Strauss’ analysis we might postulate that at the beginning of the twenty-first century the instrumental and rationalist way of thinking of the engineer, which was emblematic for most of the twentieth century, has been surpassed by the savage mind and the logic of the tinkerer. That savage mind in turn reveals striking parallels with the concept of play or playfulness as a constituent element of modern culture. The *bricoleur* is as it were the game leader in the process of ludification in the modern digital culture. This argument is elaborated below.

The breakthrough of the savage mind in the digital domain

Digital technology has become interwoven with all we do at the beginning of the twenty-first century. Network society is no longer a vision of the future, but a reality. As Barry Wellman and Carolyn Haythornthwaite conclude in *The Internet in everyday life* (2002), networks have become the dominant principle of social organization. We no longer live with networks, but in networks (Deuze 2012). Digital media have become the main tools we use to get a grip of the world around us. At the same time, a life in networks forces us to continuously reflect on ourselves. The world around us is extensive, complex, and dynamic and pushes us towards constant rebalancing and reinterpretation. Digital media are our observation hole of the kaleidoscope: opening a new window leads to yet more new combinations
of loose impressions and impels us to constantly improvise and imagine so that we can bring order to what we see. In doing this, we use our earlier online and offline experiences. By playfully ordering and reordering the individual experiences and elements, like the marbles in Jean Piaget’s game, new rules and structures emerge and we get a grip on the world around us. The savage mind enables us to continually modify the rules of the game and to act as if the digital world is “sacrosanct”, as Huizinga put it (1955, 77).

Digital technology has given us easy access to the networks of others. We are part of familiar networks and of new networks that we come into contact with by accident, thanks to technology. We not only meet many other people, but we also gain access to a much more extensive treasury of concrete experiences than we could ever access before and to the tacit knowledge of many others. The biography of technology is interwoven with the history of our personal use and, on top of that, that of all those many others. A characteristic of the web 2.0 phenomenon is, as described above, the exploitation of the value created by the users themselves – the experiences, insights, and products of others that are made manifest by the technology and can be shared. The modern DIY enthusiast, with his social media toolbox, has access to an almost inexhaustible quantity of débris, as Levi-Strauss calls it. It is the débris of aged material that he can and must use to shape his own world (again and again). In that sense, he resembles the modern gamer who is able to simulate and reshape real life with virtual objects.

The huge quantity of “raw material” that we as Internet users constantly and incidentally come across, urges the concrete, the immediately perceptible, the irrevocable on us. A nice example of this is a social network like Facebook. Once you are a member, have created your own profile and invited friends to connect with you, the network begins, as it were, to live a life of its own and constantly urges you to do something. And so you continually have to improvise. On Facebook it is very difficult to rationally and systematically promise to yourself how you intend to behave on this site and what you want to get out of it. You have to dare to experiment and give your imagination a chance as well as have a sense of the rules of the game that make Facebook a temporary kind of “magic circle” in which time and space are organized in their own particular way. On a fairly regular basis you receive requests from relatively unknown people to become friends. And if you consent, you do not really know in advance what this may involve. You can only build on your own experiences from the past and those of other Facebook visitors to find your way around. And in doing this you come across other new things time and time again. On each new page of your
fellow Facebookers a new microcosm unfolds in which the technology more or less coincides with the personal biography of its user. Everyday, trivial and intimate experiences alternate with serious reflections, discussions with others, or calls to action. The next time you drop in the picture has changed again; your new friend has added YouTube clips, shared his holiday snaps with his network, via a link to Flickr, has started up a blog and has given the site yet another new look. And he has another twenty-five friends/connections, all of whom have their own profiles and circles of friends.

In such a hyper-dynamic environment the concrete experience, the immediately perceptible, and that which anthropologist Thomas Hylland Eriksen (2001) calls the “tyranny of the moment” all reign. The science of the concrete may be the only way to deal with this overdose of impressions, experiences, and concrete perceptions. In this light, Jos de Mul (2008) asks whether we should see a typically modern information disease like ADD as a disorder or rather as a symptom of the human condition of the modern web-dweller. Paradoxically enough, the web itself offers the tools to get a hold on all these confusing experiences and impressions and mentally arrange them. In the digital world, we tinker to our heart’s content with all the building blocks provided there. The result of our home industry determines the current face of the Internet and is an odd amalgam of wondrous novelties in a familiar old jacket. Take blogs, for instance. There is nothing new under the sun about blogs when we remember that the diary is a time-honored phenomenon, but still it is different and innovative due to the shameless publication of what we previously considered private. Here, too, an aspect typical of the savage mind is evident: namely repetition with a difference, or “discontinuous continuity” (de Mul 2014, 166ff). The recombination of familiar elements ultimately generates something new again. Take the example of the avatar as a virtual representation of ourselves in a game. Research indicates that people who are active in a virtual world such as Second Life do not so much use the technical possibilities to create a dream world or to slip into an entirely different body, but actually stay very close to themselves and their familiar concrete life in the First Life so that they more or less take this life into the Second Life. Our second life in the digital world is different to our “normal”, first life, and yet again it is not: it is both reality and appearance, deadly serious, because it concerns us, and then again it is anything but serious. Our daily movement in and out of the magic circle of the Internet profoundly reveals this ambivalence that we also see in the descriptions of Huizinga’s Homo ludens. An avatar is in that sense also a nice example of a “thing to think with”, as an evocative object, or an object that enables self-reflection.
In conclusion

Living in digital networks is certainly no sinecure. The constant confrontation with new impressions and experiences, and the embedding of this in what we already know, also brings with it great insecurity. We can see a parallel in this with the savage mind described by Lévi-Strauss. Just like the hunter-gatherers of the Philippines, we use our magical powers of imagination in the confrontation of old and new and develop our own differentiated frame of reference and rich and colorful language and imagery to organize our impressions and exorcize them to a certain degree. The creativity we show in this has an almost magical nature. As Jos de Mul suggests in *Cyberspace odyssee* in the chapter dealing with the relationship between religion and technology: “Where technology aims at controlling reality it is related to magic rather than religion, as a successful continuation of the latter” (2010, 213). Without much insight into the actual operation of the technology, users know how to make very good use of the magical potential of ICT. Which is why imagination is more powerful than ever on the today’s Internet.

If we briefly define digital technology, as Lévi-Strauss probably would have done if he were alive today, as a way of mentally organizing, or “intellectually tinkering”, then we might conclude that the savage mind and the logic of the tinkerer will shape the face of our present information society. The engineers that sculpted the original information era will have only a modest role at the beginning of the twenty-first century. And while the logic of the *bricoleur* may not be primarily geared to discovering the new, paradoxically we see in the current development of the Internet how these “primitive”, “untamed”, and playful ways of thinking can actually lead to many surprising and radical innovations. Our imagination holds sway more than ever.

Notes

1. The term “innovation” is used here in a broad and sensitizing sense and refers to the implementation and realization of new ideas, products, or processes.
2. See also the introductory chapter of this book for a more extensive description of Huizinga’s play concept.
4. www.linuxcounter.net.
6. www.tnl.net/blog/2012/04/01/hackers-and-players/.
7. www.time.com/time/coverstory/0,16641,19830103,00.html.
8. www.time.com/time/magazine/article/0,9171,1570810,00.html#ixzz258oCDipA.
9. Recent examples are Carr 2010; Pariser 2011; Turkle 2011.
10. However, we must not overestimate the creative scope of users, because the number of building blocks offered by social network sites like Facebook is often limited and the platforms have of course not been created by the users themselves. Nevertheless, these kinds of sites often use open standards that enable users themselves to write software that works as a plug-in. So they can relatively easily shape a site as they wish by using the added applications of other sites or applications they have made themselves. However, most users remain within the confines provided. The influence of users is also evident in the various cases of successful resistance to user-unfriendly action by providers, such as Facebook.
11. www.time.com/time/magazine/article/0,9171,1570810,00.html#ixzz258oCDipA.
12. In the work of Lévi-Strauss, the analysis of myths as an illustration of the structures of human thinking is a focal point. “It is in the field of mythology that the spirit appears to be most free; if the human spirit is controlled by the laws even in this field, then this will apply even more so in other fields” (de Ruyter 1979, 7). According to Lévi-Strauss, we specifically see a number of universal patterns of human thinking in the creation of myths from all different kinds of cultures.
13. Turkle uses this phrase to describe the role of ICT in the construction of identity.

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