FIDIS

Future of Identity in the Information Society

Title:	"D7.14b: *Idem*-Identity and *Ipse*-Identity in Profiling Practices"
Author:	WP7
Editors:	Bert-Jaap Koops (TILT), Katja de Vries (VUB), Mireille Hildebrandt (VUB)
Reviewers:	Jozef Vyskoc (VaF), Hans Hedbom (KU)
Identifier:	D7.14b
Type:	[Report]
Version:	1.0
Date:	21 April 2009
Status:	[Final]
Class:	[Public]
File:	

Summary

Deliverables 7.14a and 7.14b seek to detect in which way the new type of profiling that is the subject of FIDIS work package 7 – machine profiling based on data mining techniques – is different from previous ways of profiling, and how this relates to the construction of our identity. The concepts of *idem* and *ipse*, coined by the French philosopher Ricoeur, are used to look into the issue of human identity as something that emerges between a person and her environment.

This report, D7.14b, discusses how the concepts explored in D7.14a apply in concrete contexts of profiling. It describes four contexts, ranging from present-day to future ICT-related practices: 1) ICT-based identification in business-consumer and government-citizen relationships, with a focus on trust-enhancing tools; 2) the social web (blogs, wikis, social networking); 3) virtual worlds (gaming and persistent worlds); and 4) a cyborg interacting with his environment. Based on the profiling practices occurring in these contexts, the report tentatively suggests that a constitutional right to *idem* and *ipse* identity should be introduced, to allow citizens to construct their identity in freedom in the world of web 2.0 and its future successors.

Copyright Notice

PLEASE NOTE: This document may change without notice – Updated versions of this document can be found at the FIDIS NoE website at www.fidis.net.

Members of the FIDIS consortium

1. Goethe University Frankfurt	Germany
2. Joint Research Centre (JRC)	Spain
3. Vrije Universiteit Brussel	Belgium
4. Unabhängiges Landeszentrum für Datenschutz	Germany
5. Institut Europeen D'Administration Des Affaires (INSEAD)	France
6. University of Reading	United Kingdom
7. Katholieke Universiteit Leuven	Belgium
8. Tilburg University	Netherlands
9. Karlstads University	Sweden
10. Technische Universität Berlin	Germany
11. Technische Universität Dresden	Germany
12. Albert-Ludwig-University Freiburg	Germany
13. Masarykova universita v Brne	Czech Republic
14. VaF Bratislava	Slovakia
15. London School of Economics and Political Science	United Kingdom
16. Budapest University of Technology and Economics (ISTRI)	Hungary
17. IBM Research GmbH	Switzerland
18. Institut de recherche criminelle de la Gendarmerie Nationale	France
19. Netherlands Forensic Institute	Netherlands
20. Virtual Identity and Privacy Research Center	Switzerland
21. Europäisches Microsoft Innovations Center GmbH	Germany
22. Institute of Communication and Computer Systems (ICCS)	Greece
23. AXSionics AG	Switzerland
24. SIRRIX AG Security Technologies	Germany

Versions

Version	*Date*	*Description (Editor)*
0.1	02.10.2008	• First draft (KdV, MH)
0.2	27.02.2009	• Second, completely revised draft (authors; KdV)
0.3	20.03.2009	• Final draft for internal review (BJK, KdV, MH)
0.4	15.04.2009	• Revised version after internal review (authors; ES)
1.0	21.04.2009	• Final version (BJK, KdV, MH)

Foreword

FIDIS partners from various disciplines have contributed as authors to this document. The following list names the contributors for the chapters of this document.

Chapter	*Contributor(s)*
Executive Summary	Bert-Jaap Koops (TILT), Mireille Hildebrandt (VUB), Katja de Vries (VUB)
1. Introduction	Katja de Vries (VUB), Bert-Jaap Koops (TILT), Mireille Hildebrandt (VUB)
2. Trust Technologies and Profiling Practices	Martin Meints (ICCP), Harald Zwingelberg (ICPP)
3. Idem and ipse in the context of the social web	Thierry Nabeth (INSEAD)
4. Identities in virtual worlds	Arpád Ráb (ISTRI)
5. Implants and cyborgs: the environment and the self	Kevin Warwick (Reading)
6. A right to identity to face the Internet of Things?	Paul de Hert (TILT)
7. Conclusion	Mireille Hildebrandt (VUB), Katja de Vries (VUB), Bert-Jaap Koops (TILT)
References	Els Soenens (VUB)

Table of Contents

Executive summary

In the information society, identification is a key mechanism: it allows us to pigeon-hole people into groups. Individual or group profiling allows identifying the 'right' people, in order to make decisions about, for example, contracts, services, or social interaction. One's identity, which is involved in these practices of identification and division, is therefore a valuable asset. Identity is, however, a complex notion. In FIDIS deliverable 7.14a (Hildebrandt, Koops and De Vries, 2008), the notions of *idem*-identity (sameness) and *ipse*-identity (selfhood) were introduced to clarify the relation between identification from a third-person perspective (objectified identity) on the one hand, and selfhood (the mix of first- and third-person perspectives of oneself) on the other. Identity construction takes place in the interaction between being identified through identifiers ('who is this?') and interpreting one's selfhood ('who am I?'). It always involves a double anticipation: it relies on how we profile others as profiling us. Being profiled thus influences one's *ipse*-identity: it has the power to change the sense of self. However, profiles can be embraced but also rejected, depending on the context.

Armed with these conceptual insights from FIDIS deliverable 7.14a, this follow-up report (deliverable 7.14b) studies profiling practices in varying contexts, in order to see how the interrelationship between profiling, identification, and identity works at a practical level. It explores how profiles are embraced or rejected by the citizens of the information society, in the ever on-going process of identity construction.

The report describes four contexts, which range from present-day commercial and social profiling practices to experimental experiences with more futuristic forms of identification. First, the role of ICT-based identification in business-consumer and government-citizen relationships is studied. Methods for enhancing trust in commercial and public identification practices play a crucial role to ensure reliable and fair, balanced relationships. Trust is related to the double anticipation of identity construction through the expectations people have of how others expect them to behave. In these relationships, customers' and citizens' trust in a business of government is enhanced if they are identified or profiled correctly. Businesses and governments can use a wide range of organisational and technical measures that make the identification process more secure and accurate. By employing such trust-enhancing tools in their ICT-based interactions, they ensure that consumers and citizens will embrace the profile, and by doing so, they facilitate a sustainable, robust, and fair identity construction of their customers and citizens. This, in turn, will enhance customer loyalty and trustworthy citizenship (*citoyenneté*).

The second and third contexts being explored both involve web 2.0: the social web (blogs, wikis, social networking tools like LinkedIn and Facebook) and virtual worlds (gaming, like World of Warcraft, and persistent worlds, like Second Life). In these contexts, people are no longer passive absorbers of information or objects of profiling practices, but they are actors actively participating in the creation of content and subjects of profiling as well. Here, the interaction between profiling and identity construction steps up a level. The self-representation of the individual – e.g., a pseudonymous blogging character, a Facebook profile, or an avatar – functions as an intermediary in the process of double anticipation: the digital persona created by the web user is a projected identity of the user, mediated by the user's expectations of how this persona will be treated in the virtual world. At the same time, the way this persona is actually treated in the virtual world influences the user's identity construction in real life, mediated by the degree to which she identifies with her persona. Thus, in contrast to the first context of 'web 1.0' relationships where profiling is largely one-

way, in web 2.0 contexts, a user's identity is influenced by a two-way profiling process: creating a digital persona that is being profiled by other users.

Perhaps more than in real space, the process of creating one or more *idem*-identities to be used in online social interactions forces users to consciously reflect on their *ipse*-identity and to play with it. 'Who am I?' merges into 'Who do I want to be?', facilitated by the experimentation with roles and identities that web 2.0 allows. This is not idle play, however: life in the online world is 'virtual' but at the same time part of real life. This reality becomes apparent when we view the increasing importance of the social web for people's social lives, but also the finding in the Hungarian gaming case study undertaken for this report that virtual identities do not turn out to be a tool to experiment with twisted or reversed tastes. The realness of being profiled in web 2.0 might function as a check on identity experimentation: the digital persona that is a user's projection of her *ipse*-identity is perhaps less a shield to prevent someone from being profiled in real life, but rather a mouthpiece through which profiles are passed on from virtual to real space and vice versa. Fictional self-representations in web 2.0 that diverge too much from actually perceived *ipse*-identities are profiled by other users in a way that is apparently not evidently easy to reject: somehow, the user must wonder whether some part of this fictional character – when treated by other users in a way that confirms its 'identity' – may be true. The double anticipation in identity construction is thus not diluted by the creation of an intermediary digital persona, but rather reinforced by it.

Moving on to the future, in the fourth context we view how a cyborg interacts with his environment, as this environment seamlessly and continuously, in real-time, profiles him through interaction with his implants. At first sight, it might be expected that a cyborg becomes subjugated or confused by this ubiquitous profiling, since the continuous anticipation of how the environment is profiling him could be quite exhaustive for his sense of self. It turns out, however, that this is not the case: on the contrary, the overriding feeling is one of power. Through quite literally embracing the idem-identity and associated profiles embedded in the chip implant, the cyborg feels empowered over his smart environment, since the possibilities for human action are significantly expanded. In the double anticipation process of identity construction, a reversal seems to occur: rather than passively experiencing the profiling of others and letting this influence the sense of self, the profiling by others is experienced as something under control of the cyborg, through the immediate, seamless connection between self and environment.

And if the environment is connected in the same way with other human beings, as in Kevin Warwick's 2002 experiment, the sense of self even seems to merge with the other's sense of self in a shared *ipse*-identity. Conceptually, it seems to make no sense that an 'I' can construct an 'us' instead of a 'me' as the result of identity construction, but perhaps, in a cyborg world that defies many concepts anyway, each of us will have to let go of the 'I' and instead embrace a 'we' that is collectively responsible for identity construction. Time will have to tell whether such a cyborg vision will ever materialise.

Having canvassed these different contexts evolving over time, we can conclude that an interesting reversal in the process of identity construction seems to take place. In 'classic' ICT-mediated relationships, the double anticipation – profiling how we are being profiled – is a largely one-way process, with consumers and citizens passively experiencing the profiles that businesses and governments apply to them, when they want to make sense of their *ipse*-identities. They have little or no opportunity to interfere with the way they are being profiled, if they are aware of such profiling at all. In web 2.0 applications, the double anticipation becomes a much more interactive process, with users actively creating a profile of themselves, projecting a (perceived or fictional) *ipse*-identity that is profiled by other web users, alongside the traditional profiling that takes place by users being profiled in the 'classic' sense. In a cyborg world, the process could become one-way again, but now in the

other direction, with the user actively projecting his identity on the environment to force his being profiled in a way that is consistent with his sense of self. It remains to be seen, of course, whether this optimistic empowering scenario of cyborg identity will be corroborated by future experiments – a smart environment, after all, will not easily give up its profiling power.

The world of cyborgs lies yet hidden in the future. Today, we are in the middle of extending 'classical' ICT relationships with web 2.0 interactions. The salience of identity construction in the interplay between *idem* and *ipse* identities has never been greater. With ever-present profiling practices, the question arises whether citizens of the information society are sufficiently equipped to deal with identity construction in today's and tomorrow's contexts. Are we adequately enabled and empowered to create and embrace, or to make up and reject, profiles that affect our sense of self? The 'classic' instruments for safeguarding citizens' autonomy and self-development, like privacy and data protection, might not be enough. Can citizens construe their identity – one of the most crucial elements of being human – with sufficient freedom, if they are constantly and ubiquitously being profiled, not only by others but also by themselves in anticipation of being profiled by web users and an intelligent environment? To see whether this challenge can be met, this report reviews how privacy and data protection mechanisms function with respect to the various profiling practices at issue. It tentatively suggests that there is sufficient reason to believe that the time is ripe for an additional protection mechanism: a constitutional right to both *idem* and *ipse* identity. Such a right could empower citizens to construct their identity in freedom, in the face of the challenging and complex interactions between *idem* and *ipse* identities that await us in the world of web 2.0 and its future successors.

To complete the FIDIS exploration of *idem* and *ipse* in relation to profiling, the conclusion of this report links back to our starting point, deliverable 7.14a. It provides a concise analysis of how profiling affects 'differences that make a difference' with regard to identity building and what Foucault has called 'practices of freedom'.

1 Introduction[1]

Our present world is, in a myriad of ways, a world of divisions. Identification is a key mechanism in this world: identifying people allows us to pigeon-hole them into groups. For example, through identifying the 'right' people, we allocate scarce resources – who gets what? –, or we include individuals in a (commercial, democratic, leisure, medical, or whatever type of) community – who belongs to our group? Passports differentiate between who is allowed to pass a border and who is not, credit scores are used to decide who gets a loan and who does not, an impressive profile on *LinkedIn* can make the difference between a job and unemployment, and the appearance of one's virtual character might result in cyber-loneliness or in immense cyberpopularity. Thus, the system of differentiations underlying present-day identification practices has important consequences for individuals; in some cases, it can even be a matter of life and death.

One's identity, which is involved in these practices of identification and division, is therefore a valuable asset. This is not only the case among humans. Also in the animal kingdom identity is of the utmost importance. A predator that is unable to distinguish his prey from a poisonous variety will not live long. On the other hand, from the perspective of the prey, it can be a valuable strategy to mimic another animal's or object's identity – like the hawkmoth caterpillar that has two false eyes and a snake-like skin pattern to frighten off predators. The arms race of identification and mimicry, which takes place between prey and predator, is also visible in the *condition humaine*. A bank that has been 'fooled' once or twice by a nice suit into lending money to unreliable debtors will have to come up with a new strategy of sifting the grain from the husk; whereas the bank's customers will have to invent new ways of boosting one's appearance of trustworthiness and reliability.[2]

From the practical functioning of identification practices and identity assumption, more ephemeral notions like freedom, autonomy and selfhood emerge too. The passport and the social security number, which are identifying tools for the sake of population management, can at the same time be instruments of self-identification, signs of national pride and tools of freedom for the citizen who is endowed with them. This is one of the intriguing things about identification: often its meaning reaches far *beyond* the actual goal it was intended for, and this has much to do with the interplay between *idem* and *ipse* identities.

In FIDIS deliverable 7.14a (Hildebrandt, Koops and De Vries, 2008), the notions of idem and ipse were introduced to clarify the often complicated relation between the structural side of identification and objectified identity on the one hand, and selfhood or the mix of first- and third-person perspectives on one's identity on the other. *Idem*-identity is the third-person attribution of sameness: 'This is Miss Cheung, a blond female executive'; it takes an objectified perspective. *Ipse*-identity blends this with a first-person perspective on what constitutes oneself as a continuous being in the course of time, while experiencing multiplicity and difference in the here and now: 'I am Li-lian, a feminist and executive, even if this male bully is treating me right now as a secretary'; this takes a subjective perspective.

---

[1] The editors thank Els Soenens (VUB) for her assistance in realising this deliverable.

[2] It would be interesting to research the hypothesis that the financial crisis is partly due to the fact that even bankers do not know how to interpret the profiles generated by the securitisation mechanics of high tech law firms, which has in turn interacted with the data mining technologies used by brokers on the financial markets. The increasing invisibility of the growing complexity of computer-mediated risk assessment seems to generate a type of risk that can easily turn the predator into a prey (while leaving ordinary citizens and their governments the task of saving the predators to whom they entrusted their savings).

Identity construction takes place in the interaction between being identified through identifiers ('who is this?') and interpreting one's selfhood ('who am I?'). Identity construction, thus, is not a one-way street: identification by others influences a person's identity construction, and vice versa.

An important insight emerging from this interaction is that identity construction always involves a double anticipation: it relies on how we profile others as profiling us ('I see this man is asking me to get him a coffee; he must be thinking I'm a secretary'). Being profiled thus influences one's *ipse*-identity: it has the power to change the sense of self. However, profiles can be embraced but also rejected, depending on a host of context-dependent variables.

Armed with these insights from the conceptual explorations of deliverable 7.14a, we now return to the practical functioning of identification practices and identity assumption. In this follow-up report, we study profiling practices in varying contexts, in order to see the interrelationship between profiling, identification, and identity working at a practical level, and explore how profiles are embraced or rejected by the citizens of the information society, in the ever on-going process of identity construction. In particular, we will describe four contexts, ranging from present-day to future ICT-related practices. First, the role of identification in business-consumer and government-citizen relationships is studied, showing the role that methods for enhancing trust in identification practices can play to ensure reliable and fair, balanced relationships (Ch. 2). Then, we move to web 2.0, exploring both the social web (Ch. 3) and entertainment and serious gaming applications (Ch. 4), both of which rely heavily on self-representations of web users anticipating being profiled by other users. Moving on to the future, we get a glimpse of how a cyborg interacts with his seamlessly and continuously, real-time profiling environment and how this influences his sense of self (Ch. 5).

Combining these various contexts and applications into a vision of an overarching 'Internet of things' in which people and their environment are immersed in ever-present profiling practices, we end this report with a reflection on the legal protection that is needed in the age of profiling (Ch. 6). Can citizens construe their identity – one of the most crucial elements of being human – with sufficient freedom, if they are constantly and ubiquitously being profiled, not only by others but also by themselves in anticipation of being profiled by web users and an intelligent environment? Are fundamental rights of privacy and data protection adequate to deal with this future challenge, or should we consider introducing a new fundamental right: a constitutional right to idem and ipse identity?

2 Double anticipation: trust-enhancing tools for profiling

Martin Meints and Harald Zwingelberg

2.1 Double anticipation and trust[3]

In this chapter we will investigate the state of the art with regard to technical and organisational tools to enhance trust between users and service providers, especially in the case of profiling.

As has been discussed in deliverable 7.14a (Hildebrandt, Koops and De Vries, 2008), people develop their identity by incorporating or rejecting the way others seem to categorise, interpret, or approach them. Basically, to anticipate the social consequences of our actions, we need to consciously or intuitively understand how others interpret our actions and how this affects their actions in return. In other words, you need to be able to *anticipate how others anticipate your actions*, in order to move around with a certain degree of certainty. This double anticipation allows developing the confidence needed to construct an ipse-identity and to sustain one's 'self' in the face of the many *idem*-identities one finds attributed to oneself by others.

Trust entails a measure of risk-taking; it refers to a situation in which one does not have total control and basically depends on the person or organisation to whom one entrusts one's interests. In the case of profiling, one will typically have little control about what will happen to one's data once they have been collected. Mostly one will have no idea how the data matches the automated group profiles that are relevant to oneself as a consumer, patient, credit-seeker, employee etc. If one's trust is betrayed, i.e. if the risk taken proves greater than expected, the trust may diminish or break down and further dealings with the trustee will probably be circumvented, rejected or resisted. Obviously, for business enterprises as well as government authorities trust is an important asset, if not the precondition for a successful relationship with potential clients or citizens.

In FIDIS deliverable 7.12 (Hildebrandt, 2009) transparency enhancing tools (TETs) are examined in terms of their capacity to provide citizens with a better picture of what profiles match their data and what may be the consequences of such matching. This is evidently relevant for the double anticipation that is constitutive of ipse-identity. In this chapter, we will focus on the broader issue of trust, seeking to develop an overview of which organisational and technical tools are presently available to facilitate trust between those profiled, the service provider and those that actually provide the profiles.[4] First, however, we analyse in some more detail the concepts of trust and trustworthiness.

2.2 Trust and trustworthiness

Trust has been discussed throughout many scientific disciplines and many diverse definitions have been brought forward (see, e.g., Haenni, 2009, for an overview). In a very broad definition trust may be characterised as a set of expectations held by one person that another person will act in an appropriate manner with regard to a specific issue (Farrell and Knight, 2003: 541). However most authors concretise the definition for example by adding normative elements, e.g. that trust implies one's supposition that the expected behaviour of the other

[3] Web sites referenced in this chapter were last visited on 20 February 2009, unless stated differently.
[4] Cf. also the related analysis of trust in light of virtual persons in FIDIS deliverable D17.4 (Jaquet-Chiffelle and Buitelaar, 2009).

party is advantageous to oneself (Sartor, 2006: 355) or by adding that one supposes that the other party will at least not impede the trustor (Lewicki and Tomlinson, 2003). A person is considered trustworthy when one can place his trust in this person and rely that this trust will not be betrayed.

The core tests used in the named definitions of trust map with many other understandings of trust[5] and will be the basis for our understanding of trust within this contribution:

- Trust requires some kind of expectation of the trustor in another person, the trustee.
- The expectation is that the trustee will act or behave in certain way.
- The assessment that the trustee will act in the interest of the trustor, meaning that he is concerned enough about the welfare of the trustor to either act in his favour or at least will not impede him.

Development of trust is favoured by certain preconditions, some of which may be intentionally influenced such as the history of interaction between the trustor and the trustee. The shared history may contribute to the emergence of trust when the parties already have shared mutual experiences with one another in which the other party has reacted in the desired or expected way (Sartor, 2006: 357). Special abilities, knowledge or skills of the trustee may influence the onset of trust, for example physicians, pilots, lawyers and other specialists are trusted more than others within their specific area of expertise (Sartor, 2006: 357), as the trustor recognises that the trustee has the ability to perform in a manner that meets the expectations (Lewicki and Tomlinson, 2003). Also the affiliation with a group or organisation that is particularly trustworthy in the eyes of the trustor may enhance trust building (Sartor, 2006: 358). This might be assumed for human rights organisations, e.g., the Red Cross, but also for any organisation the trustor is aligned with, e.g. business clubs. Such social institutions can affect trust as they provide information about the possible actions of the trustee, mandate honesty for certain kind of transactions and punish cheaters (Farrell, Knight 2003: 545, 550). Also, publicity (as a means for transparency) can account for long term trust building, for example in settings where betrayal and fraud are regularly made public the building of trust is more likely than in settings in which actors can effectively hide their deeds and particularly their misdeeds (Nissenbaum, 2001: 112).[6] Following this argumentative pattern, privacy regulations, enabling actors to hide negative actions and thereby manipulate one's social image, can impede the level of trust: however, other important values outbalance these negative impacts of privacy such as protecting freedom, intimacy or the possibility to change (Sartor, 2006: 361; Nissenbaum, 2001: 112, 118).

In a typical setting for profiling, three actors participate: the profile provider who carries out the profiling, the entity who is interested in the profiles, and the data subject (client). From the profile provider's point of view, it is done in two steps. For the data subject it may be difficult

[5] See the varying definitions given by various authors (Marsh, Dibben, 2005), (Lewicki, Tomlinson, 2003), (Marsh et al., 2000), (Farrel, 2003), (Nissenbaum, 2001: 109-111, 121). For an overview table on the different notions of trust and trust related topics across several disciplines including references to the various authors see Ulivieri, *Trust across Disciplines*, available online http://www.istc.cnr.it/T3/map/ (last visited 29 May 2008).

[6] For example in the context of information technology and information security publicity of errors and weaknesses in hard- and software, cryptographic algorithms etc., and corresponding countermeasures provided by manufacturers became a standard instrument to enhance trust into manufacturers and their products. See e.g. the corresponding advice in international standards such as ISO/IEC 27002, see also section 2.3. However, in a short term, in many cases an (illegal) strategy of concealment instead of transparency may also be effective. Examples for such a situation are well covered pyramid sale schemes.

to discriminate these two steps, as the consent to use personal data has to be given for both steps at the same time and the collection of data may happen indirectly, e.g. through a service provider (see description of roles below).

In the first step the profiling is being set up ("set up of profiling"). This is typically done by optimising the parameters of profiling algorithms for a specific purpose, based on the attributes. In this step the data subjects provide the attributes which are processed by the profile provider. In this context personal data are processed to generate anonymous profiling parameters. In the second step the prepared profiling algorithms are applied ("application of profiles"). Participants in this step typically are the clients, whose data are processed and analysed in the profiling process, the profile provider and the entity that uses the profiling services, usually a service provider which needs some evaluations of its customers, but also organisations that wish to enhance their advertising efforts by targeted ads or to gain an evaluation of risks.

In the relationship between profile providers and data subjects (business-to-customer, B2C) regarding the second step usually neither commercial transactions nor communications take place. The customer of the profile provider is the service provider. If profiling is procured in private law relations (i.e. for credit scoring), it often takes place with the informed consent of the customer. However, the outcome of the process is seldom communicated directly but rather by the outcome of the credit application. While the law provides for a right to access the personal data, the scoring process and the weighting of the data is usually kept a business secret.[7] Profile providers have started to offer online access for data subjects to their respective data sets. This transparency and trust-enhancing measure encouraged by privacy protection legislation serves the profile provider as it offers a convenient way to update the datasets by the user - and having up-to-date data sets is after all in the interest of the profile provider, too.[8] But it also serves the data subjects as they may demand for corrections in the core data stored with the profiler and thereby have a possibility to align idem (attributed) and ipse (experienced) identities within certain boundaries. However, the profiling process or its result may not be influenced and thus idem and ipse often fall apart in profiling cases, meaning that the statistically inferred group profile that matches one's data does not fit with one's sense of self. Because one does not have access to this group profile, one can also not anticipate how one is being profiled by others in these contexts. This hampers the building of one's ipse identity, which depends on a kind of double anticipation (profiling how others profile us), discussed in sections 2.4 and 3.1 of FIDIS deliverable D7.14a (Hildebrandt, Koops and De Vries, 2008). The relation between organisations conducting profiling or scoring and the data subject may usually be characterised with a large asymmetry in power caused not only by the size of the organisation but by the fact that the organisation does not depend on the data subject as its customer. However, as Farrell (2003) asserts, trust requires some credible commitment of the trustee. Even though trust is possible with an asymmetry of power, this is valid only up to the point where one actor becomes so powerful that he is no longer able to make a credible commitment to the trustor. According to Farrell the powerful party then does not have any reason to take the others party's interests into account. This may even lead to a point where there is not even the interest to act in accordance with ethical values to meet expectations of external third parties for reputation building. However, opposite to this utilitarian view, there may be remaining reasons to adhere to ethical values due to intrinsic reasons which are not visible for the trustor.

---

[7] In Germany a draft bill for a federal law promises enhanced consumer protection and information on the process and outcome of scoring and other profiling techniques. This bill is discussed in the FIDIS deliverables D7.12, section 5.3.2 (Hildebrandt, 2009) and D7.16, section 5.3 (Custers, 2009).

[8] See for example http://www.meineschufa.de/.

In the business-to-business (B2B) relationship between profile providers and service providers, trust building takes place in the way described above. Often the partners have had long lasting relationships and have conducted many successful interactions in the past. The quality of the data sets and the experience of the provider are also of major importance when deciding on a profile provider. Further it can be observed that the affiliation with certain associations is of relevance.[9] Some means of trust-enhancing measures in the B2B relation are discussed below.

2.3 General methods for trustworthiness of technology-oriented products

Generally a number of methods to gain or increase trustworthiness are established in both organisation to client and in organisation to organisation relationships. In this chapter the - from the perspective of the authors - most relevant measures in the context of technology oriented services and products are presented and discussed.

Trust-enhancing measures can be process or product oriented. Though certain mechanisms work in both areas, the way how they are implemented may differ.

In the context of process-related trust-enhancing measures, the application of good practice or standards for quality management is a very important instrument. Organisational measures apply for both steps of profiling, i.e. the set up of profiling and the application of profiles. In the context of organisations the standards of the ISO/IEC 9000 series are well established in process design and management. However, in the trust relationship to clients the adoption of these standards does not yet seem to play a big role.

Technology-oriented products and services are increasingly complex. As a result, security breaches cannot effectively be prevented in the design; this implies that production phase and customer oriented incident handling becomes increasingly important in the context of trust. Trust-enhancing measures include measures to detect and evaluate incidents, proactive incident management (e.g. recalls of faulty products), proper incident handling (including standard procedures to escalate incidents in cases where they cannot be solved in a defined time frame) and incident related communication with the customer are relevant aspects in this context. For IT services the IT Infrastructure Library (ITIL) describes good practice procedures and related ICT infrastructure.[10] Recall procedures for faulty products are broadly implemented, in some contexts such as the production and approval of pharmaceuticals they are recommended by law in many countries (e.g. the Good Manufacturing Practices for Pharmaceuticals and Medicinal Products in the EC and USA[11]).

User aware communication is an important instrument. Relevant aspects in this context are:

- Adherence to the context in which the customer uses the service/product; this may include the use of a social group or business branch specific vocabulary

---

[9] The German real-estate owner association (Haus- und Grundeigentümerverein) arranges scoring services for its members regarding possible tenants; http://www.haus-und-grund.net/infoscore.html.

[10] ITIL currently is developed co-ordinated by the British Office for Government Commerce (OGC). Information can be found at http://www.itil.co.uk/.

[11] For the EC see the Rules Governing Medicinal Products in the European Union at http://ec.europa.eu/enterprise/pharmaceuticals/eudralex/vol-4/pdfs-en/2005_12_gmp_part1_chap8.pdf, and the United States - EC Mutual Recognition Agreement (Pharmaceutical Good Manufacturing Practices) http://www.fda.gov/oia/mrarcll.htm. See also http://ec.europa.eu/enterprise/pharmaceuticals/mra/index_d.htm for other Mutual Recognition Agreements the EC concluded with inter alia Canada, Australia, Japan and Switzerland providing rules for communicating batch recalls (web sites last visited 27 May 2008).

- Relevance of the content of the communication in the customer's context
- Appropriate emotional component of the communication

These aspects are not met in many cases, for example by most speech automats used in telephone hot lines or announcement automats at train stations. In many cases the information given has no context to the user's situation, is from his point of view irrelevant ("If you need further information about the product, please dial 7.") or is presented in an automatic voice that does not meet the general accentuation of the language used.

In the context of human-machine-interaction the design of interfaces and dialogues are relevant (see also FIDIS Deliverable D3.13 (Pettersson and Meints, 2009) titled 'Study on Usability of IMS' and references cited therein).

Increasingly, instruments for community building and support are used. They include set up and maintenance of online guest books, fora, portals and the like.[12] In the context of organisation to organisation communication user groups are common.[13]

Another instrument commonly used is a reputation system. Reputation systems are well established whereby a large number of manufacturers or vendors meet a large number of customers. Examples can be found at auction and sales platforms[14], in reputation ratings for members in social networks[15], and even in ratings of the quality of information e.g. postings in fora.[16] Obviously, reputation systems may show limitations, such as in the case of e-Bay, where the system until May 2008 was set up in such a way that there was no incentive for poor ratings.[17] Another problem may be the choice of attributes that are used in the context of reputation systems, as pointed out by Gerald Beuchelt. [18]

In the context of new technologies showing challenges with respect to compliance, self regulatory approaches by enterprise associations are commonly found. In most cases they lead to codes of conduct suggested to be used by the association's members. These codes of conduct typically do not lead to legally enforceable rights for citizens or customers. Recently self regulation approaches took place in the context of RFID[19], but many of them fell short of

---

[12] Most newspaper and magazine publishers provide news tickers for their users, see for example http://www.heise.de/ (computers, technology), http://www.spiegel.de/ (politics), http://www.eltern.de/ (community for parents). Guest books are used e.g. in the context of special products that take benefit in their use by exchange of experienced users. One example is Globetrotter Ausrüstungen in Germany, see http://www.globetrotter.de/de/forum/gaeste.php?archiv=4seasons. Portals directed at different target groups are run by many vendors. Examples are found commonly in the context of computer vendors or telecommunication service providers (http://www.msn.com/, http://www.aol.com/, or http://www.1und1.com/). Also support fora are widely spread, i.e. http://www.opera.com/ (browser software). Some companies actively support communities of users, providing fora or linking to fan sites. This is especially popular among publishers of computer games: http://www.gothic.com/, http://www.worldofwarcraft.de/. In a business to business context community building in is not carried out online only. User groups are supported via events, fairs or in-house fairs directly by the vendors.

[13] E.g. in the context of ITIL the IT Service Management Forum (ITSMF, http://www.itsmf.org/) which consists of national sections.

[14] See e.g. http://www.ebay.com/ and http://www.amazon.com/.

[15] See e.g. http://www.linkedin.com/ and http://opened.net/.

[16] See e.g. http://www.heise.de/.

[17] See e.g. http://www.rossdawsonblog.com/weblog/archives/2008/02/why_online_repu.html.

[18] See http://blog.beuchelt.org/2008/10/16/Applicability+Of+Reputation+Systems+In+Information+Systems.aspx.

[19] E.g. for German speaking countries implemented by GS1 (the official representation of EPCglobal), see http://www.heise.de/newsticker/Neue-Vorstoesse-zur-RFID-Selbstregulierung-der-Industrie--/meldung/73621/.

compliance with data protection legislation. This lead to the conclusion by the European Data Protection Supervisor (EDPS) Mr. Peter Hustinx in December 2007 that self regulation in the context of RFID probably needs some guidance with respect to data protection.[20]

Another instrument is a policy and compliance statement often used for both the communication of organisations with their clients as well as for the communication between different organisations (business to business, business to administration communication). Most enterprises processing personal data use a privacy or data protection policy, stating how personal data are processed and legal requirements are met. Policies are also commonly used in the context of information security, as internationally relevant standards such as ISO/IEC 27001 or CobiT require them as one of the initial steps for setting up an information security management system.

The effectiveness of policies and compliance statements can be raised by making transparent the workflows or technical instruments used to achieve compliance. In this context security technologies, Privacy or Transparency Enhancing Technologies (PETs or TETs) used can be detailed. Traditional examples in this context are the use of SSL/TLS to encrypt data transfer of the content of web forms via the internet, the use of identity management frameworks allowing a certain amount of user control or the use of privacy policy stating protocols (such as P3P or EPAL). The use of policy negotiating and enforcement protocols still is a matter of research (see FIDIS Deliverables D7.9 "A vision of Ambient Law" (Hildebrandt and Koops, 2007), D7.12 "Behavioural Biometric Profiling and Transparency Enhancing Tools" (Hildebrandt, 2009), D3.8 "Study on protocols with respect to identity and identification – *an insight on network protocols and privacy-aware communication"* (Hansen and Alkassar, 2008) and D3.9 "Study on the Impact of Trusted Computing on Identity and Identity Management" (Alkassar and Husseiki, 2008)).

Much more formal is the use of service level agreements (SLAs) in contracts. They can be used to mutually agree on properties of services or the use of certain technologies. In the context of security based on a jointly accepted security concept the contract parties can agree on security service levels. They may include technical and organisational security measures. To be effective, SLAs need to be accompanied by controlling instruments such as (mutual) audits and agreements on how to enforce the SLAs in case they are not met by one (or more) contract parties. Typically disciplinary sanctions (related to persons within an organisation) and financial sanctions (related to persons and organisation) can be used for enforcement purposes.

A proof of compliance with legislation, standards or codes of conduct can be given using certificates and seals. In the context of process related services web seals[21], ISO/IEC 27001[22] or data protection audits[23] are frequently used. In the context of products security, certificates based on ISO/IEC 15408 (Common Criteria) or data protection seals[24] can be used. In any case it is an important part of the concept of certificates and seals that they are granted by an

---

[20] See http://www.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/Consultation/Opinions/2007/07-12-20_RFID_EN.pdf.

[21] E.g. TRUSTe, see http://www.truste.com/.

[22] See http://www.iso27001certificates.com/ (no official ISO site).

[23] E.g. the data protection audit of the Federal Land of Schleswig-Holstein in Germany, see https://www.datenschutzzentrum.de/audit/.

[24] E.g. the data protection seal of the Federal Land of Schleswig-Holstein in Germany, see https://www.datenschutzzentrum.de/guetesiegel/. A European Data Protection Seal has been developed and first seals have been granted in the context of the eTEN project EuroPriSe, see http://www.european-privacy-seal.eu/.

independent - and from the perspective of the parties involved - trustworthy organisation.

The following table gives an overview of the described instruments to increase trustworthiness and describes qualitatively their use ("X" major use, "x" minor use, "-" no use known to the authors):

No.	**Organisational trust-enhancing measure**	**Used between clients and organisations**	**Used between organisations**
1	Quality management of the service	X	X (e.g. ISO 9000)
2	Incident detection, incident handling and incident related communication	X	X
3	User aware communication	X	X
4	Supporting communities of users / customers	X	X
5	Reputation systems	X	X
6	Self regulation	X	X
7	Policies and compliance statement	X	X
8	Transparency	X	X
9	Contracts / SLAs / SSLAs / fines if required	X	X
10	Proof of compliance (service or process oriented audit, certificates etc., e.g. ISO 9000, 27001 etc.))	X	X
No.	**Technical trust-enhancing measure**	**Used between clients and organisations**	**Used between organisations**
11	User interfaces and human machine interaction	X	X
12	Policy management (stating, negotiating, enforcement)	X	X
13	Product certificates (e.g. data protection seals, ISO 15408/CC)	X	X
14	Use of Privacy Enhancing Technologies (PETs)	X	x
15	Use of Transparency Enhancing Technologies (TETs)	-	-

Table 2.1. Overview of measures to increase trustworthiness and their areas of use

2.4 Trustworthiness and profiling practice

The methods to create or support trustworthiness presented in the previous section are mostly used in a direct organisation-client or organisation-organisation relationship. In many cases business relationships may be more complex.

2.4.1 Communicational relationships in profiling practice

Commonly there is no direct relationship between profiling providers and data subjects, which are often clients of a different organisation. Profiling in these cases is used as a backend / background technology. Examples for this situation are the use of profiling in the context of credit scoring or three-party-relationships in the context of customer loyalty programs (see e.g. FIDIS Deliverable D7.2 "Descriptive analysis and inventory of profiling practices" (Hildebrandt and Backhouse, 2005), and chapter 11 of "Profiling the European Citizen" (Kamp et al., 2008) for further information).

In these cases profiling is also only a part of an integrated or combined service.

In some of the combined services including profiling the awareness of the customer is drawn from the profiling part to other parts of the services, e.g. in the case of customer loyalty programs or social networks. In those cases the profiling remains largely non-transparent from the point of view of the data subject, if not unnoticed. Another important aspect in these communicational relationships is that the client typically does not receive any direct feedback concerning the use of his personal data in the context of the improvement of the quality of the profiling (step 1, set up of new versions of the profiling). In addition the data needed for the improvement of profiling typically is not directly collected from the data subject, but automatically transferred by the service provider.

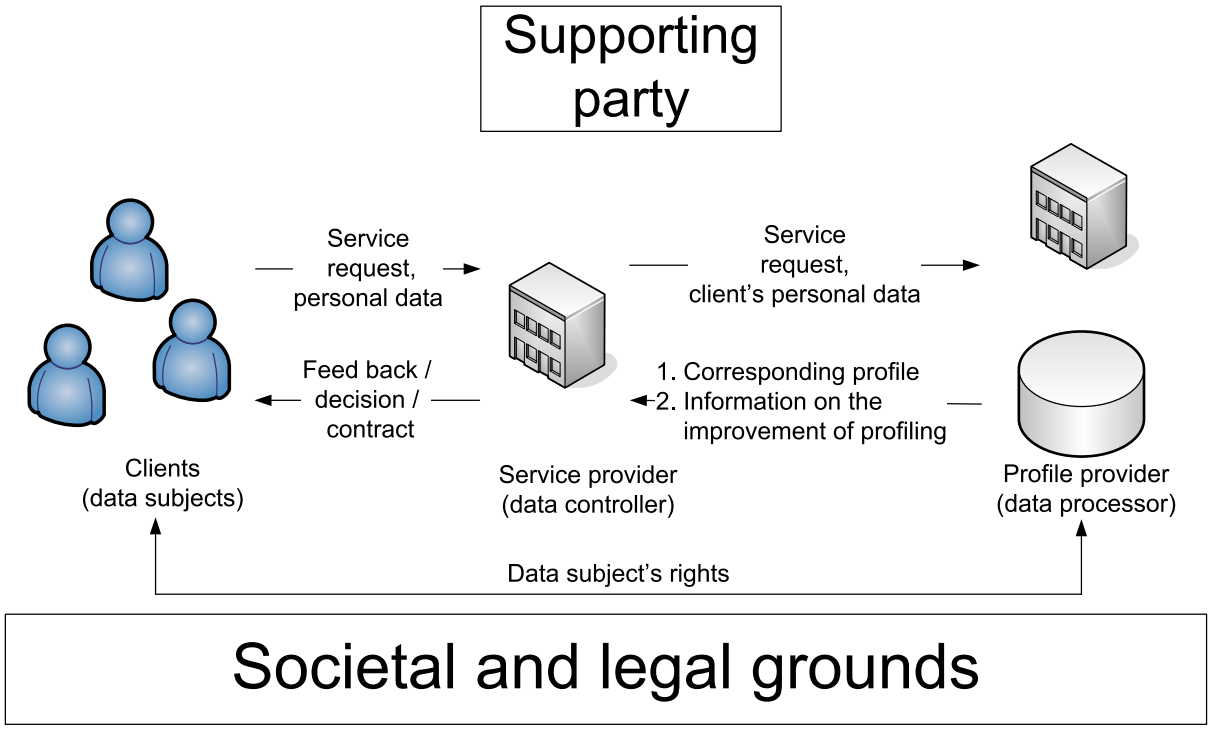

Figure 2.1. Possible communicational relationship in the use of profiling technologies

In this context trust-enhancing measures most effectively used between organisations will be observed, while trust-enhancing measures concerning profiling directed at customers or citizens will play a minor role.

2.4.2 Application of trust-enhancing methods in profile setup and application

Standard good practice procedures are well established in the context of process related trust-enhancing methods. Examples for these procedures are CRISP-DM or the semiotic model for Knowledge Discovery in Databases (KDD, see FIDIS Deliverable D7.2 "Descriptive analysis and inventory of profiling practices" (Hildebrandt and Backhouse, 2005) for further information). These procedures include cyclic sub-processes in which after a profiling step the quality of the results is checked and improved if necessary. These kind of cyclic processes strongly refer to the Deming cycle, the prototypic process used in quality management based on the ISO/IEC 9000 series.

Another important aspect of quality assurance in the context of profiling is whether a prognosis carried out based on a profile was right or wrong. In the context of credit scoring profiling providers get feedback indirectly via additional information on how the financial situation of the data subject develops. In some cases direct feedback is given by the service provider to help optimise profiling in special cases. The data subject typically is informed about this information flow via his contract with the service provider.

For data subjects, specific information on quality assuring measures are typically not available. Reasons for this seem to be (ULD, 2005):

- The data subject and the user of the results of the profiling process himself do not know how profiling is been carried out and how quality is ensured. This for example often seems to be the case in the context of credit scoring, where the bank clerk in many cases does not seem to be able to answer corresponding questions from the credit applicants.
- Details on the data mining methods used are classified as trade or business secrets by the profiling providers.

In the context of credit scoring in Germany, tests and studies have shown that often an outdated or incorrect database was used for the profiling (ULD, 2005: 107).

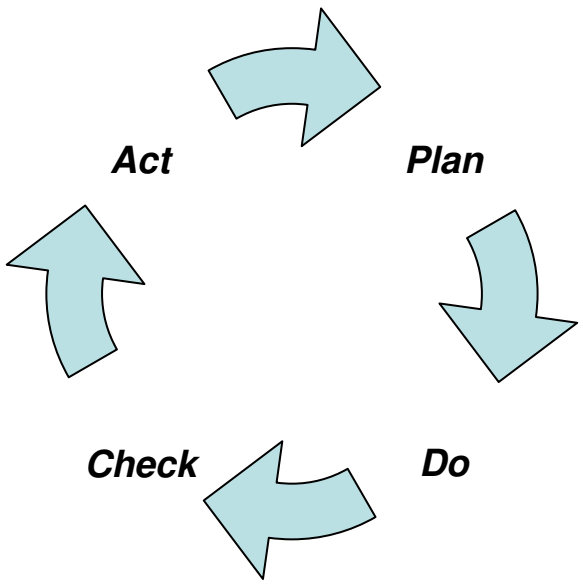

Figure 2.2. Deming cycle

Incident and security incident detection, incident handling and incident related communication in relations between organisations is state-of-the-art. Standards described in 2.2 also apply in the context of profiling. From the perspective of the data subjects an "incident" in many cases seems to be caused by profiling. Examples are changes or modifications in credit contracts. In some cases there are legal grounds not to notify a data subject, e.g. in cases in which a profile indicates that an account holder may be involved in money laundering where further investigations will follow, possibly unnoticed by the data subject.

User aware communication with respect to profiling in most cases means that profiling procedures, resulting profiles and the use of these profiles is presented in a simplified way. One example of this is the quite general statement that data collected in the context of customer loyalty programs are going to be used for marketing and sales purposes (ULD, 2003: 78-79). The impact of intended use it is rarely explained to the data subjects. Data for profiling purposes are collected in various ways. They may be extracted from warehouses, logs or collected using electronic or traditional forms. In the first cases extraction is done by experts, user interfaces are developed specifically to be used by them. In the latter cases forms are optimised to collect data with the best possible quality from the point of view of the service provider. In most cases, these forms do not provide the data subject with information about how, why, or for what purpose the data are going to be used. However, often a reference to the data protection policy is available. But in many cases these policies use technical legal terminology, whereas they do not include specific information on the use of personal data. Typically they provide general rather than concrete information and are difficult or tiresome to explore by typical customers. The suggestion to use data protection policies in a three layer model made by the Article 29 Data Protection Working Party to overcome these transparency issues[25] seems not to be adopted widely yet.

Currently little information seems to be available about the use of communities, reputation systems and self regulation in the context of profiling. Obviously these instruments are not broadly used, at least not with respect to data subjects.

Policies and compliance statements are used by service providers as well as profiling providers. Typically they refer to data protection. Studies in the context of credit scoring and customer loyalty programs have shown that these policies regularly fall short of meeting legal requirements. For further information see also FIDIS Deliverable D7.2 "Descriptive analysis and inventory of profiling practices" (Hildebrandt and Backhouse, 2005) and chapter 11 of "Profiling the European Citizen" (Kamp et al., 2008). Policy management obviously is not used broadly, though solutions for the communication with clients (e.g. P3P) and within or between organisations (e.g. EPAL) are available (see FIDIS Deliverable D3.8 "Study on protocols with respect to identity and identification – *an insight on network protocols and privacy-aware communication*" (Hansen and Alkassar, 2008) for further information). One reason for the fact that these protocols are not commonly used is their lack of integration in commonly available products (e.g. lack of integration of P3P-support in web browsers) and solutions (e.g. lack of integration of EPAL). In some cases, e.g. the filling of forms by hand for credit application, automated policy management is not supported by commonly used procedures.

Transparency in the context of profiling for various reasons obviously is difficult to achieve.

[25] See the Working Paper 100 (WP100) of the Art 29 Data Protection Working Party, available at http://ec.europa.eu/justice_home/fsj/privacy/docs/wpdocs/2004/wp100_en.pdf Further research regarding the accessibility and readability of privacy policies is conducted in the EU-funded project PrimeLife http://www.primelife.eu/.

We refer to the FIDIS D7.12 report on "Behavioural Biometric Profiling and Transparency Enhancing Tools" (Hildebrandt, 2009). Reasons given are, amongst others (e.g. ULD, 2003; ULD, 2005):

- The complexity of the technology used;
- Trade or business secrets of the profile providers;
- Fears that knowledge by the data subjects may lead to manipulation of data and profiles or changes in behaviour of the data subjects and thus may render profiling ineffective;
- Lack of interest on the side of the data subjects.

These reasons are discussed in controversial ways. Weichert for example argues in the context of credit scoring that manipulation of scores is impossible as far as they are based on objective data.[26] However, this argument can not be transferred to other areas of use of profiling where the data used already could be manipulated, especially forensic profiling. Nevertheless, in cases where personal data are processed a certain level of transparency is required at least in European member countries. Studies in the context of credit scoring (e.g. ULD, 2005) and customer loyalty programs (e.g. ULD, 2003) have shown that these requirements are not met in some cases. It is not clear to what extent the obligation for data controllers to provide access to 'the logic of processing' in the case that a person is seriously affected by the application of a profile (Art. 12 D95/46 EC) is an effective remedy.

Regarding contracts between profiling providers and service providers, not much is known as they are typically subject to non-disclosure agreements. Contracts with clients/data subjects are typically focused on the service offered. SLAs and SSLAs with respect to data use and data handling in the context of profiling are not usually included or, based on a data protection policy, very general. Nevertheless in this context fines may play a role e.g. through regulatory authorities and Data Protection Commissions. But to the current knowledge of the authors there is no case yet where fines in the context of profiling were applied (February 2009).

Proof of compliance and product certificates obviously do not yet play a big role in the context of profiling. In the context of ISO/IEC 9000 series related certificates, no central sources of information are available. Thus the application of these certificates could not be analysed. While only one ISO/IEC 27001 certificate has been issued to software development in the context of profiling[27] and no ISO/IEC 15408 certificates to profiling related products[28] yet, in three cases data protection seals have been issued. [29]

Privacy enhancing technologies are available in the context of profiling. They are summarised as Privacy Preserving Data Mining techniques (PPDM techniques). PPDM techniques may have an impact of the quality of the profiles. Techniques available are in many cases very specific; in some cases they can be used only for one mining algorithm. In addition no integrated frontends offering a broad variety of PPDM techniques are available on the market (Oliveira and Zaïane, 2004). Nevertheless PPDM is applied. Known techniques aim at the

---

[26] See https://www.datenschutzzentrum.de/scoring/weichert_diskriminierung.htm.

[27] Search based on available description of the business processes covered by the ISO 27001 certificate available at http://iso27001certificates.com/. Result: Tamper-Proof Verified Systems Kft. in Hungary as of 10th of June 2008.

[28] See http://www.bsi.de/zertifiz/zert/report.htm as of 10th of June 2008.

[29] See https://www.datenschutzzentrum.de/guetesiegel/register.htm: "Wonderloop Integrated Targeting Platform" and "Predictive Targeting Network", both systems for predictive targeting of customers and https://www.european-privacy-seal.eu/awarded-seals/: ixquick, a meta-search engine as of 3rd of February 2009.

anonymisation of data before profiling is carried out.[30] However, it is not clear how this would benefit the person whose data match the profile, i.e. the person who will suffer from or enjoy the consequences of the application of the profile.

Transparency enhancing technologies are mainly a concept today. They are not implemented yet, prototypic solutions such as the iJournal (now integrated into MozPETs) are in the development phase. Underlying concepts and state-of-the-art in predecessor technologies are further described and analysed in the FIDIS Deliverables D7.9 (Hildebrandt and Koops, 2007) and D7.12 (Hildebrandt, 2009).

2.5 Overview and conclusions

Below we summarise the organisational and technical tools available to generate justified trust between citizens/consumers and organisations and between organisations.

No.	Organisational trust-enhancing measure	Used between clients and organisations	Used between organisations
1	Quality management of the service	-	X (e.g. CRISP-DM, semiotic models for KDD)
2	Incident detection, incident handling and incident related communication	x (in many cases focused on the perspective of the service provider)	X
3	User aware communication	X	X
4	Supporting communities of users / customers	-	-
5	Reputation systems	-	-
6	Self regulation	-	-
7	Policies and compliance statement	X	X
8	Transparency	x (with significant limitations)	X
9	Contracts / SLAs / SSLAs / fines if required	Typically mainly general legal grounds such as data or consumer protection legislation applies	X
10	Proof of compliance (service or process oriented audit, certificates etc., e.g. ISO 9000, 27001 etc.)	-	-

[30] See e.g. https://www.datenschutzzentrum.de/guetesiegel/kurzgutachten/g080502/.

No.	Technical trust-enhancing measure		
11	User Interfaces and human machine interaction	x (mainly forms)	x (forms and expert tools for data extraction)
12	Policy management (stating, negotiating, enforcement)	-	-
13	Product certificates (e.g. data protection seals, ISO 15408/CC)	x (data protection seal in some cases)	x (data protection seal in some cases)
14	Use of Privacy Enhancing Technologies (PETs)	X	x
15	Use of Transparency Enhancing Technologies (TETs)	- (prototypes only)	-

Table 2.2. Overview of measures to increase trustworthiness in profiling

To support the anticipation of how others anticipate your actions (double anticipation) in the context of profiling, established trust-enhancing measures may play a role. However, most of them cannot easily be directed at the data subject as the communicational relationship between data subject and profiling provider in many cases of profiling is an indirect one.

Referring to concepts of Ambient Law and 'values in design', discussed in FIDIS deliverable 7.9 "A Vision of Ambient Law" (Hildebrandt and Koops, 2007), we think that it is of utmost importance to proactively embody public values and interests into the socio-technical architecture in which we are investing so much capital, time and energy today. Close cooperation is needed between those involved in political theory and conceptual analysis of public values and interests, and those involved in the actual design of the future and emerging socio-technical infrastructure, which will depend on profiling. For this reason we think that further research needs to be initiated, bringing together ethicists, lawyers, philosophers, policy-makers and computer scientists in order to build the affordances for justified trust into the technologies presently under construction.

3 Idem and ipse in the context of the social web

"On the social web, does everybody know you're a dog?"[31]

Thierry Nabeth

3.1 Introduction: the need to redefine identity in the context of the social web

The social web refers to an important constituent of the latest Internet (r)evolution (also termed Web 2.0), which is the result of the transformation of the Internet from a space centred merely on access to a huge amount of **information** into a space aiming at supporting **social interaction**. This social space is determined by a number of tools that have appeared as part of Web 2.0 and that are aimed at supporting the social process. These tools consist of social networking, blogs, wikis, social bookmarking, recommendation and opinion systems, and more generally any online tool mediating people interaction and contributing to people participation in an online social exchange.

In this context, the importance of *online identity* is determinant in the success of the social interaction since it represents one of the principal instruments for helping people to evaluate the benefits and the risks of engaging in and pursuing interaction with others. The perceived benefit and trust indeed constitute two of the most important elements intervening in the likelihood for people to interact.

Practically, *online identity,* which can be associated with how the person is perceived in the online environment, consists in a variety of information such as: self-presentation of the person (i.e. information entered in her user profile); self-expression of the person (such as when she posts an opinion in her blog), feedbacks provided by others (which indicate the influence of this person), and automatic indicators (such as popularity) allowing "human profiling" of the person in the social sphere. It also includes information that can be inferred (using machine profiling) from the digital traces of the activity of these people.

However by opening a new territory in the digital world, the *social web* has also created the need to rethink the concept of identity itself. Indeed, we will see in this chapter that the application of old schemas of identity to the online world is difficult given the particular characteristics of *online identities*. These include (1) their apparent lack of reliability (people can easily self-describe with false information, although we will see later that they may also have difficulty to lie about their 'true self'); (2) the possibility to bring transparency to a new level, by making people's actions visible (and increasing the importance of public opinion via human profiling) and by conducting machine profiling on a massive scale (exposing some characteristics of people that used to be hidden); and (3) their possible total disconnection from the physical world (these identities may be used in purely virtual territories that are governed by different laws). In particular this situation asks for a reflection and for a reinterpretation in the context of these new social digital territories of the two concepts proposed by Paul Ricoeur (1992): the *idem identity* (i.e. the third person view of identity) and of the *ipse identity* (the first person view). Indeed, if the *online identity* may appears at first

[31] Paraphrasing the adage "On the Internet, Nobody Knows You're a Dog" that originates from the caption of a famous cartoon published by *The New Yorker* on 5 July 1993 and authored by Peter Steiner, displaying a dog browsing the Internet.

sight to be a perfect example of an *idem identity*, since it appears to be a 'façade' that people construct for interacting with others, a second analysis shows a different picture that is more directly connected to a first person view. More specifically, the *online identity,* by resulting more from the voluntary choice of the individual (people are more in control of who they desire to be in these spaces), may reflect who the person really is, bringing back the first person view. Secondly, the facet of the *online identity* resulting from machine profiling of the individual, may appear as providing an exposure of the inner self, and therefore represents what the person really is.

The following chapter constitutes a first attempt at providing a reflection of the concept of identity in the social web, and in particular in relation to *idem identity* and *ipse identity* proposed by Paul Ricoeur. The sub-title of this chapter, "On the Social Web, Does Everybody Know You're a Dog?", is aimed at provoking a reflection on the articulation between the identity that a person constructs and projects in the social web and the true identity of the person (who she really is). In doing so, we propose to confront the reader with the imaginary and humoristic situation: If you were a dog on the social web, would you be able to pretend to be a man, or would you be discovered because your online identity would betray you, since it would disclose your "inner self" (being a dog)?

3.2 Background: online identities

"On the Internet, Nobody Knows You're a Dog" is the caption of a famous cartoon published in *The New Yorker* on 5th July 1993, authored by Peter Steiner, displaying a dog in front of a computer, using the Internet as if it were a person. It illustrates the idea that you can never be sure of the identity of the person with which you are dealing when you are on the Internet. Even if we can reasonably believe that the "thing" we are dealing with on the Internet will not be the dog of the cartoon, it may be difficult to be sure about the gender of the person[32], to determine her age or physical appearance[33], position in society, or geographical location. Furthermore, with progress in artificial intelligence, you may not even be sure that this person is real[34].

A hasty reasoning would make us believe therefore that on the Internet the art of appearance (showing) and disguise is everything. Paraphrasing the famous pop artist Andy Warhol, we can even imagine that every person can potentially create a new identity and have access to at least her "15 Minutes of Fame" whatever her physical, age, social origin and status. This is the case because the digital world allows a person to hide their real attributes (the attributes of the person in the "physical" world) in favour of invented ones displaying a better image of herself, offering a chance for the normal person to distinguish herself from the masses and become famous based only on her own imagination and not on inherited physical (or non physical) attributes. This can be reinforced by a certain feeling of impunity originating from the fact that in most cases people that meet on the Internet will never meet in the physical world, and that there is little to lose in being dishonest.

If we relate all this to the concepts of Ipse and Idem identity of Ricoeur, we appear to be in an

---

[32] In "The Strange Case of the Electronic Lover", Van Gelder (1991) describes the case of a man interacting on a bulletin board who was able for a long period of time to pretend to be a woman, and gain the confidence of a group of woman using a subterfuge.

[33] Epstein (2007) for instance indicates people massively lies in dating sites, and for instance mentions a woman that was displaying a totally false photograph of herself as of a marketing strategy.

[34] In an article of BBC News, Mark Ward (2004) reports some experiments in a MUD (Multi-Users Dungeon) virtual environment in which a bot (computer programme) Julia was able to fool a user for several days in the early 1990s. Mark Wards also mentions the Natachata chatbot, written by former rocket scientist Simon Luttrell, that was widely used by porn chat merchants to lure young men.

ideal situation in which the selfhood identity (the first person view) and the sameness identity (the third person view and how we are perceived) can be totally separated: online, a person could theoretically 'invent' an identity that is in total contradiction to what she is in her inner self. However, a closer examination of reality may show us a different picture of the situation, in particular in the perspective of the evolution of the Internet towards the social web, focussed on supporting social interaction and its implications in terms of the construction of an online identity. First, the online ipse identities that the person displays in these online social spaces are far from being totally defined and controlled by the person herself. For instance the definition of this identity may also rely on information or validation provided by others (e.g. on eBay, a vendor is evaluated by the customers, and social relationships in LinkedIn have to be validated by the two parties), or may reflect the activity or the impact of the person online (e.g. the observation of the blog of a person helps to determine the inner beliefs of this person, as well as the level of attention this person receives from others determined by the popularity and the profile of the readership in the blogosphere).

Second, as people are spending more time online, their "digital life" is becoming increasingly important for them and becomes an integral part of their "real life". As a consequence, the inner self is nourished by all the online experiences that people have interacting with others, is transformed, and develops in the new virtual territories. In particular, it is probable in the case that the person 'invents' an identity in an online world, that after some time she would no longer consider this identity only as an instrument used to interact with others, but that this 'identity' would become an inner part of herself. This trend may even accelerate in the future with ambient intelligent environments by means of which the virtual is invading the physical world, blurring the distinction between the two. We can even observe in some situations that the virtual world influences the physical world; e.g. Ellison, Heino & Gibbs (2006) report the case of a woman who adapted her physical identity to the digital identity she had provided on a dating site.[35]

With people's activities leaving "digital traces" in the digital environments and with the considerable increase of traceability that has resulted, what used to be in the inner and private sphere (such as psychological aspects) is now exposed, erasing the difference between the social, the economic and the psychological.[36] Besides, concepts that used to be relatively abstract in the physical world and not easily formalisable, such as "motivation" or "reputation", are becoming very concrete and directly observable in the new settings via mechanisms displaying people activities, or popularity of the person. In other words, some of the attributes of the inner self, that were until now considered as inaccessible to outsiders, would be made available for a manipulation both for a first person view, and for a third person view.

To finish, the Idem Identities that people create in these digital worlds are far from being disposable items, they represent elements in which people invest (by creating profiles, by

---

[35] MaryMoon, Los Angeles Female: "I've lost 44 pounds since I've started [online dating], and I mean, that's one of the reasons I lost the weight so I can thank online dating for that. [Because] the first guy that hit on me, I checked my profile and I had lied a little bit about the pounds, so I thought I had better start losing some weight so that it would be more honest. That was in December, and I've lost every week since then." Ellison, Heino, & Gibbs (2006).

[36] Cf. Bruno Latour (2007) who suggests that having access to large masses of data traces has important implications for the social sciences: like science, the social sciences will have access to hard data representing "reality", and will therefore need to rely less on "abstract concepts". For instance, "rumours" or "fads" that used to be relatively vague and abstract in the physical world, can be almost as precisely described as a "piece of news", "information", or even a "known fact".

creating validated connections with others, and by leaving traces in an informed way) so as to create "visible" and "reputable" identities. These identities, which represent real "personal brands" that will be managed, that will represent an important asset that will be critical for their success in digital environments.

In this chapter, we would like to reflect on the constructions of the identities in the context of the social web and in particular: the self-identity (or ipse identity) that people develop in the digital social environments, and the identity that they build as an instrument for interacting with others.

First, the concept of the social web will be presented, and an overview of the digital social environments that the social web offers users to support their interactions will be given (3.3). Then, we will describe the online identities that are constructed in the social web, and in particular what they are used for, what their constituents are, and what their characteristics are (3.4). The third part then discusses how the *online identity* relates with *ipse identity* and *idem identity* (3.5). The last part concludes by summarising the findings and providing an outlook of the evolution of identity in the social web and beyond (3.6).

3.3 Presenting the social web

Practically, the social web, and more generally the Web 2.0, has produced a flurry of new approaches proposing different ways to support interaction and collaboration such as blogs, micro-blogging (Twitter), wikis (Wikipedia), fora, social bookmaking & tagging (del.icio.us, Flicker), opinion & reputation systems (eBay), online social networking (Facebook, LinkedIn), 3D virtual worlds (Second Life), instant messaging & telephony (Skype), etcetera (Bernoff and Li, 2008). Using these systems, people can express their ideas using narrative or videos and get comment from readers (with blogs, videos sites), participate in the collaborative knowledge construction (with wikis), share their bookmarks with others (social bookmaking), express their instant thinking (micro-blogging), participate in open discussions in forums, or meet and chat in virtual worlds using avatars (3D virtual worlds). Indeed, a very important aspect of the social web, and more generally of the Web 2.0 is that people are no longer considered as passive absorbers of information, but are actors participating in the creation of content. The Web 2.0 is sometimes termed as the "writable web" (versus the read-only web for the Web 1.0) in reference to this idea. Besides, a whole series of mechanisms such as the activity stream of content that people create, and social translucence tools (making this social activity visible) also help reinforcing this vision of the web as a social space in which a lot of "human related" activities happen. For instance, blogs export RSS feeds of the postings to help people get informed of the latest additions and provide different means to add a comment to a posting (via the possibility to directly answer in the blog or to trackback responses). Finally, social web systems, that are monitoring the activities happening in these platforms, exploit this information for motivating users' participation by displaying the more active users (contributing to their reputation) or the entries that are the most popular (making people aware of the impact of their action).

Relationship management tools and processes (social networking)

With online social networking tools (such as LinkedIn or Facebook), these systems can also be used not only as communication tools, but also as personal relationship management tools. With these systems, a person can declare information about herself (such as current and past positions in organisations and diploma in LinkedIn), but also specify her relationships (her social network) and her affiliation to groups. This information will be used to contribute to an up-to-date person database that she will use to get information about other people but also as a way to present herself. A very central aspect of this definition of identity is the importance attached in the social capital: people define themselves to a large extent by the people that

they know (Nardi, Whittaker and Schwarz, 2000). Other characteristics of these systems that have emerged recently (with systems such as Facebook, and imitated by LinkedIn) are (1) the availability of the activity stream originating from the people of their networks and groups, contributing to a feeling of "connectiveness" or of belonging to the groups (for instance a user is notify of new connections and affiliation of the "people he knows"); (2) the exploitation of this social information by an ecology of applications proposing to the user ways to better use these relationships (by proposing network visualisation or matching services).

Social networking systems are used for a number of purposes such as job searches (some of these systems clearly target people for job searches, and are largely used by recruiters), for managing business relationships and keeping in touch with previous colleagues and acquaintances, or dating. However, it is fair not to attach too much importance to these systems: in many cases, people register to these systems, but quickly abandon them after a first phase of curiosity.

3.4 Identities in the social web

Online identity, which can be associated with how the person is perceived in the online environment, represents a critical element of people performance, since it is determinant during the phase of interaction establishment (such as relationship bonding), as well as the exploitation and the sustainability of this interaction in the long term. More particularly, this *online identity* is important, first, when assessing the benefit of establishing a relationship – the social exchange theory (Thibaut and Kelley, 1959) relies on the idea that people tend to manage social exchanges according to an economic perspective. Second, it is important as it contributes to trusting the other party – trust represents an important factor in the success of online community systems (Tung et al., 2001). In particular, "trust or lack of trust may be a key factor in determining whether an online relationship will thrive and move to deeper levels" (Green, 2007).

An important characteristic of identities in the social web is that they are defined to a large extent in relation with people's social dimension: people consider the social web as spaces that represent a new playground for their social life, or in the case of blended or Ubiquitous environments its extension.

Practically, this *online identity* is constituted of a patchwork of information of different origins and of various levels of quality including: (1) information provided by the person herself explicitly or more implicitly. This information may consist in the data that a person enters in her public profile, but also of the different contributions of this person (such as the postings in her blog) and in which she exposes her beliefs; (2) information that others provide about this person explicitly or more implicitly. This information may consist of different feedback that this person receives (such as when another person confirms information present in a public profile, or expresses a good opinion of this person), as well as elements helping to judge this person (such as indicators displaying the popularity of the person). This information represents an element that will be used to facilitate the human profiling process; (3) the information that can be inferred from the observation of people actions, typically by mining the digital traces that people leave when using these systems, and that can be referred to as machine profiling.

<u>The characteristics of online identities and consequences</u>

Online identities have characteristics that distinguish them from the more traditional identities offered by the physical world, and that oblige us to invent schemas to manage them.

The first characteristic is related to the difficulty to assess the reliability of these *online identities*, since they are not constructed nor validated by any trusted authorities but by the

people themselves. Besides, in the context of online worlds, the human five senses (sight, hearing, taste, smell, touch) are useless in helping to identify false information. Data (such as digital photos) can easily be forged or more simply "borrowed". Thus an important gap may exists between the *online identity* that a person exposes (knowing that this person may not be totally in control of this information), and the "reality" of this identity in the "physical world". Indeed on the Internet, it may appear easy for a person to provide erroneous information such as wrong age or gender. For instance, people are known to generally lie in dating sites (Epstein, 2007), and more specifically, women declare themselves slimmer than they are in reality, and men pretend to be richer. In the job seeking sites (such as Monster.com), or professional online social networking sites (such as LinkedIn), people do not hesitate to make some arrangement with the reality, exaggerating their role, inflating their achievements, or hiding their failures. Thus Steven D. Levitt (2005) has found in his research elements that suggesting that more than 50 percent of people lie on their online resumes.

The second characteristic is their possible existence only in the context of purely virtual environments totally disconnected from the physical world, that may be governed by different laws: these worlds may have specific codes of behaviour (also named Netiquette), and may include aspects that do not exists in reality such as magic (that exists in the case of some MMORPG – Massively Multiplayers Online Role Playing Games). In this context, it may be difficult to judge and deny the legitimacy for a person to create in the virtual world an *online identity* that is totally disconnected from her physical existence, in particular if this identity is very improbably in the physical world such as becoming a knight or a magician. After all, being a knight or a magician (or even changing gender!) appears to be perfectly legitimate and not a pretention in a MMORPG, since people can truly fight dragon or send curses. Therefore in Virtual Worlds, participants may without lying "wear" advantageous avatars and embrace roles reflecting in some case their inner inspiration and what they believe to be their true being. Indeed should the physical world always be more real than the virtual word, knowing that people increasingly dedicate their attention to their online activities? Should the perception of the age of their physical body always be the ultimate element determining their age rather than their behaviours expressed in their actions, and that better reflect the age of their mind. The answer to this question can however be tricky if you consider the case a 50-year-old man would that would masquerade as a 13-year-old child with the intention of conducting paedophilia activities More generally, some of these systems represent playgrounds and new territories in which people can adopt an identity that reflects what they believe to be their "real self", and for instance become an opinion leader (by writing a blog), lead a team (in a role playing game) or even become part of a totally different "milieu" (such as art). In the latter case, these new territories may give them the opportunity to assume in the virtual worlds roles that was never given to them in the physical world, not because of themselves, but because of exogenous constraint such as inadequate social capital.

Finally, virtual environments also represent potentially huge (human and machine) profiling systems exposing people characteristics to a level unthought-of in the physical world. The consequence of the creation of massive transparency may lead the creation of new ghettos or on the contrary help the person to know better about herself. In the first case, this situation may indeed augment the process of human and machine profiling by facilitating the classification of people into boxes. In the second case, by revealing aspects that the person would not be aware of, it would help the person to be better in control of her destiny.

3.5 Idem and ipse Identities in the social web

Having previously defined the concept of identity in the online world, we would now like to reflect on how the *online identity* relates to *ipse identity* and *idem identity*.

The *ipse identity* in the social web

The ipse identity in the social web is principally defined in perspective of the relationship and interaction with others. Indeed, people have to define themselves as social actors to get most benefit from participating in the social web. For instance, an expert will use a personal blog to present ideas and knowledge and have an impact in some communities. A person may use a social networking system as a way (amongst other things) to manage in a single place her social memory (people she had known in the past) and as a point of comparison for her personal evolutions (how to engage with people that she knew over a period of time). Finally, people may live a totally new life in virtual worlds (a good example is the online role playing game World of Warcraft), and in particular play some roles that they would have some difficulty to hold in the "real" word (such as coordinating a community of players) or that simply do not exist for them (like engaging in a battle with others players).

Furthermore, as already mentioned, in the social web, defining an online *identity* should not only be seen as an instrument for interacting with others (and considered according to a third perspective), but should also represent a way that people can use to define themselves: Life in the online world is not a peripheral aspect of the "real life" or an *ersatz*, but is a real life that takes place in an online territory.

Determining the role of this digital social ipse identity is difficult given the relative novelty of the social web and its constant evolution, but we can imagine that it will be increasingly important as people use more electronically mediated communication for supporting their activities.

For instance, in the context of work, we can observe an evolution towards a growing importance of work activities conducted online. Back in 2000, Bonnie Nardi and Steve Whittaker (Nardi, Whittaker and Schwarz, 2000) already argued that in the new economy, traditional institutional resources are being replaced by resources that workers mine from their own networks, making the personal social network a critical element of success of the knowledge workers. In 1998, Thomas W. Malone and Robert J. Laubacher (1998) envisaged a future in which the dominant business organisation model would evolve into an elastic network in which small, focused companies and individuals (freelancers) will operate. If the full realisation of these visions has not yet been completed as of today (except for a minority of people), various elements lead us to believe that the conditions are already in place and the evolution is already well engaged. For example, the virtualisation / flexibilisation / externalisation of work is making people more likely to work remotely and with a larger variety of people for their job. Also, the disappearance of lifelong employment is forcing people to rethink their commitment in a unique organisation and to start exploring external opportunities.

In the context of private life, the activities conducted online with others (from the friends or family members that live in another place, to complete strangers met on the Internet) are also increasing. For instance, and as indicated previously, some online games can represent a context in which users can develop a totally new identity for themselves, but we can also mention shopping activities for which users may have the opportunity to interact with other customers via opinion systems and forums, or dating sites that are increasingly used by people to search for romance. In all these cases, the person will define an inner (ipse) identity defining herself in these contexts.

The *idem identity* in the social web

The concept of the *idem identity* on the social web has been largely presented previously: It corresponds to the *online identity* that is exposed in these online systems and it is constituted by the aggregation of a variety of information that are provided explicitly or implicitly by the person or by others, as well as the information that is inferred from people activities. The online *idem identity* should in particular be seen as instrumental for facilitating the social

process.

People have to build a good idem identity in order to project an image of themselves that will maximise the effectiveness of the interaction with others. First, the availability of a good *idem identity* will be instrumental in the process of identification: people with a high level of visibility (presence and reputation) are more likely to be identified by other actors. The quality of this identity (such as reputation, credibility) will appear very important in the likeliness for people to enter in an interaction since it will intervene in determining the level of trust, and well as in determining the level of effort that another person is ready to invest. It will also represent an important element in the success of trying to initiate an interaction with another person. Finally, this identity may also be important in maintaining an interaction with others: For instance a person that will appear as active or as valuable (in terms of social capital) may be more likely to continue interacting with its acquaintances.

3.6 Conclusion

Reflecting about (online) identity in the social web and relating it to concepts of *idem identity* and *ipse identity* proposed by Paul Ricoeur is interesting on two levels.

First, it provides a tool that helps us to better understand the meaning of identity in online social systems, a domain destined to expand considerably in the future, and in particular to distinguish clearly between two aspects:

(1) a third person perspective that we can associate with the *idem identity* and that is considered as an instrument aiming at facilitating the interaction in the online social space provided by the social web. It should be noted however that this view applies not only to the person herself as a way to manage her relationships with others (via the concept of personal brand management), but also to the whole social system, since the person is far from being in control of all information;

(2) a first person view that we can associate with the *ipse identity* and that corresponds to how the person constructs herself in the online world. It should be noted that in this perspective the online world does not represent a peripheral aspect of "real life" or an ersatz, but represents life itself, since people are dedicating an increasing amount of time to conducting online activities, and in particular social interactions.

Second, it also contributes to developing the concepts of *idem identity* and *ipse identity* by providing a context in which they help to extend our understanding. Thus in the social web, the concept of the *idem identity* becomes very concrete since it can be formalised and made available in social systems via all the information that are available to define the user (via user profiles, user contributions, opinions, indicators resulting from the profiling of the person, etc.). More interestingly, and what is new, is that online social systems also provide the possibility to expose the inner self, that we can associate with the *ipse identity*. In the physical world, the *ipse identity* appeared as something mainly hidden, and difficult to reach. In the social web this situation is totally different, with processes such as profiling that can be used to reveal and to expose the inner self. Another interesting idea is that the social web can be seen as an instrument for people to express and to develop their inner identity, since it represents a territory in which people have more possibilities to define themselves (contrary to the physical world that has many constraints), and in particular in deciding who they want to be, and in adopting a role that is more consistent with whom they really are. Finally, the social web provides a very social perspective of identity: the identity of a person in the social web is primarily defined according to her interaction with others.

To conclude this chapter, we would like to reiterate that the vision we have proposed is still at a relatively preliminary stage, and much progress still remains to be made (in particular

related to profiling) for this vision to be fully realised. However, the maturation of social systems, the integration of the semantic web concept into social systems (Mikroyannidis, 2007), and the advent of ubiquitous computing represent elements that will contribute to the realisation of this vision.

A second interesting point is that the advent of the *semantic web*[37] and of the *Internet of things*[38] may contribute to blurring of the distinction between *idem identity* and *ipse identity*, in two respects. First, with profiling, the personal information exposed may reflect the inner characteristics of the person. Second, the roles adopted (and displayed) by people in online worlds are more the result of the decisions of the person, and therefore reflect more the inner self of the person.

[37] The *semantic web* refers to an evolution of the web towards a more explicit and semantic representation of the information, which makes it easily processable by machines.

[38] The *Internet of things* refers to the vision of bringing connectivity to the physical objects, in particular making them accessible from the Internet.

4 Identities in virtual worlds

Árpád Rab

4.1 Introduction

Virtual worlds are a very alive and fast expanding area kept in rapid motion by innovation as well as by the ever increasing number of participants and the influx of funds. Reports appear on a daily basis about broken records, new solutions as well as new positive and negative influences in virtual worlds. However, these reports are indicators and do not convey the full picture. Furthermore, they are not clear from a methodological point of view, and they are aimed at attracting attraction, wonder and (also negative) sensation.

All things considered, the last four years have brought about significant changes in the area of virtual worlds, which in our case includes MMOs[39] and PWs[40]. The games market is expanding and the number of Internet users is on the increase, contributing to the growth of virtual worlds. Besides the strengthening of the business segment, new models have emerged, especially in serious games.

It has been a point of debate for a long time what we mean by the expressions "massively multiplayer online" (MMO) and "persistent world" (PW), since the former does not only apply to role-playing games, and the latter points beyond the complexity of simple adventure games. It is a generally accepted view that software can be called MMO if the potential number of players simultaneously logged on to the same server exceeds a certain level. For example, more than 2,000 players can play simultaneously on Everquest. Based on this, a lot of games that only have multiplayer features and are built on this quality (e.g. Quake Arena) cannot be called MMOs, and neither can the predecessors in this category, the multi-user dungeons (MUDs).

A Persistent World is a virtual world that continues to exist and operate even after a user exits that given world. This rather broad approach opens the way for a great number of phenomena that are not included in quantitative definitions, like the one above that are difficult to define, to be merged into the term persistent world. The abbreviations MMO and MMORPG have become broadly used to denote virtual worlds because at present the overwhelming majority of virtual worlds are multiplayer gaming worlds (MMO), and the vast majority of these are role play games (MMORPG). Our research focuses on the social and economic impact of virtual worlds, especially in those areas that are in the making right now (serious games). Since these games are still evolving, I can gain experience and knowledge only from the great number of MMO worlds which have been around for longer (for over ten years) and which have high numbers of players. The function of a given virtual world plays an important role in my analysis.

Since the terminology of virtual worlds is still in the making, several terms are used simultaneously to denote the same phenomenon, and some of them are only used on one or two occasions with the simple reason of attracting attention. The phrase synthetic worlds is often used (especially by Edward Castronova (see e.g. 2006b), one of the main theoreticians

[39] MMO – Massively Multiplayer Online (game); is a video game which is capable of supporting hundreds or thousands of players simultaneously. By necessity, they are played on the Internet.
[40] PW – Persistent World. A persistent world is a virtual world that continues to exist even after a user exits the world and that user-made changes to its state are, to some extent, permanent. See (Deal, 2007).

of the field), while in Asia digital spaces is in use. A number of useful resources focussing on the cultural aspects of virtual worlds can be found under "virtual cultures".

4.2 Virtual worlds: the present

Virtual worlds are experiencing an astounding degree of expansion in regard to the services they render, the number of their players and the amount of time spent in them. The participants of Second Life, the biggest 3D virtual world, have so far spent 36.8 million hours, i.e. 4,200 years, online, as active users. In late 2008, this world had over 16,000,000 players. The largest gaming world for children are Habbo with 100 million participants and Neopets with 45 million registered users. The most successful online role-playing game is World of Warcraft with 11.5 million active players.

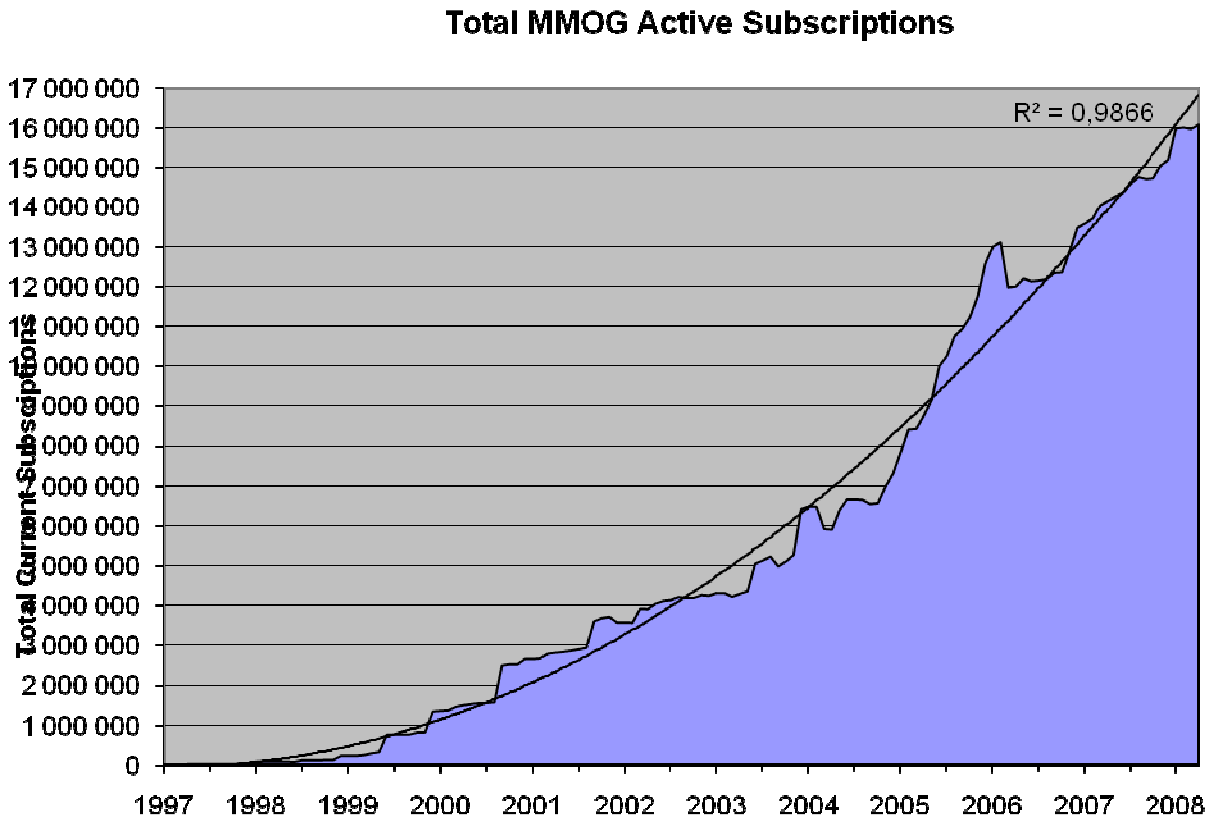

Figure 4.4.1. Changes in the number of MMO players worldwide (Source: MMOGCHART[41])

Data are changing at an incredible pace. There is no information about the number of those who participate in more than one game, those who enter the world only once (as a general rule accounts are not terminated for six months), those who play with several identities, etc. Moreover, since one of the main sources of data are the company records, their reliability can be questioned – they do not lie *per se* but distort figures by for example not clarifying the aforementioned categories of players.

As an example, World of Warcraft, the biggest MMO, has more than 11.5 million players[42], while Second Life has 14 million players[43]. These are the two largest worlds[44] but added

[41] www.mmogchart.com.
[42] WoW Insider World of Warcraft hits 11.5 million subscribers http://www.wowinsider.com/2008/12/23/world-of-warcraft-hits-11-5-million-subscribers/.
[43] Second Life Economic Statistics http://secondlife.com/whatis/economy_stats.php.
[44] The Chinese clone of Second Life has started to pick up recently, and it will certainly attract masses of people, HiPiHi, http://www.hipihi.com/index_english.html.

together the two figures come to more than the total MMOG figure of 17 million worldwide. The deviation is the result of factors such as players with multiple identities, data rounded down, etc., which make the full picture more subtle.[45]

Coming up with accurate figures is especially difficult in the Asian region, where business models are at variance with western ones and are more chaotic than the western model of assigning accounts to credit cards. The differences here are sometimes staggering: in one of the games a figure of over several million users was announced although the number of actual players might "only" be in the hundred thousand bracket.

In statistics about western players, a significant distortion is caused by the fact that a lot of virtual worlds were launched (also) for young people, but keeping records of minors adds extra problems since data-protection rights carry added weight where children are concerned.

Virtual worlds are a new fad, a new phenomenon, inviting a reaction from everybody: business players (e.g. 600 million dollars were invested in this market segment in 2008), the various representatives of the press and even government institutions. After the battle fought to become the market leader is over, in the next stage users will be targeted with new "bests", offering more impressive visual displays, better and more easily manageable virtual spaces and more services. The era of specialised worlds has begun.

The figure below clearly shows the huge participant numbers and their distribution by age groups. These data might well be a surprise for many.

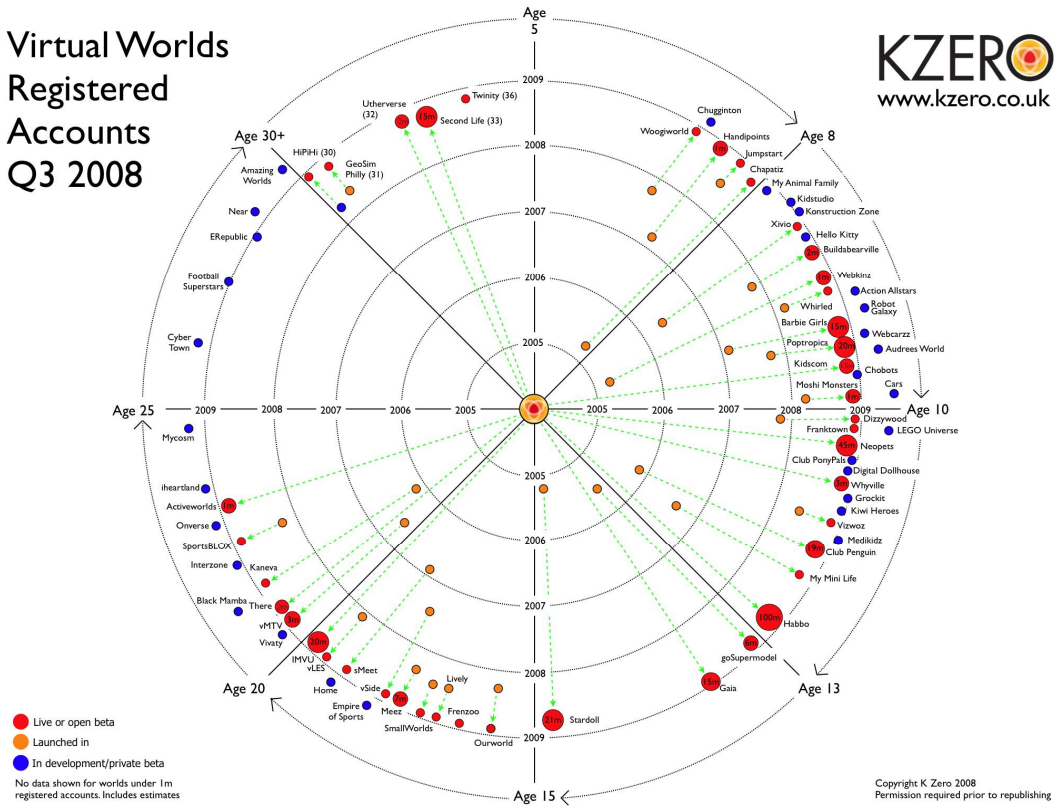

Figure 4.4.2. Virtual worlds and participant numbers (Source: KZero 2008[46])

[45] The list of all MMO type games can be found a MMORPG.com. http://www.mmorpg.com/gamelist.cfm/show/all, ca. 300 registered games. About the most popular ones see the GIGAOM list at http://gigaom.com/2007/06/13/top-ten-most-popular-mmos/. There are only MMO games for children on the TenTonHamster page, for example. The list of the most popular MMO-s reveals that they have huge numbers of players: http://www.tentonhamster.com/.

[46] KZero Radar: http://www.kzero.co.uk/blog/?p=2485.

4.3 Researching various aspects of virtual worlds

These virtual worlds are radically different from each other in their appearance, objectives and services. Players have different objectives and the experience of playing differs from one game to the next. Accordingly, research is carried out at different levels and examines various aspects, such as virtuality, roleplay, tamagochi experience, dependence, communities, virtual communities, roles and identities, games creating new value and games causing damage, etc.

There are numerous connections between real and virtual worlds with the player having the role of mediary. These connections do not only exist on a mental but also on a physical level. Players are often in contact both in the real and the virtual world. Typically, a lot of players enter a game together with their friends or join on the advice of a friend; these people maintain contact in the game, too. There is a less close but nevertheless valid cohesion between regions. For example, in the case of Hungary, which is a small country, this means the entire country. Hungarian players have their own clans and worlds; they keep in touch and organise (this is also true for other PC games played in groups).

The popularity of and visits to virtual worlds can be best compared to the most successful community portals, since they are practically just that. Besides examining the behaviour of players and their avatars in the online gaming space, their (typically online) life outside the virtual world is also important to be studied. From my research, it appears that players spend a lot of their net time outside the game with activities related to the game: they read forums, exchange information and do trade.

Despite the topic of virtual worlds being a fashionable one on the surface, research on it is limited and mostly focussed on economic aspects (virtual economy – real money). Virtual worlds are digital translations of the offline world and have a specialised, unique and at the same time borrowed economic and cultural model. Despite the fact that virtual worlds will have a great number of uses in the future, their mechanisms of operation are not fully understood.

Virtual worlds are excellent tools for disseminating information, education, and value-added communication. IBM has integrated this model into the world of work,[47] and the BBC is building a world for children:[48] it is planning to design a virtual world familiarising children with the culture and language of China. The increased interest in virtual worlds and increasingly sophisticated technology will have an impact in the areas of education and training. Currently, there are close to 300 such worlds.

Digital culture has undergone vast qualitative and quantitative changes in the last ten years. This culture did not merely stay a computer-based side-product of traditional culture but evolved into an alive and expanding social phenomenon interacting with traditional culture, mainly as a result of the profound changes in the information society. Although the change began some fifty years ago, the explosive development of digital culture was particularly triggered and subsequently kept in motion by the dynamic spreading of broadband Internet and digital imaging devices.

The above-mentioned technological and cultural shift could be virtually felt and observed

---

[47] The IBM's project about virtual worlds:
http://domino.research.ibm.com/comm/research_projects.nsf/pages/virtualworlds.index.html.

[48] Adventure Rock is the subject of a year-long joint research project between CBBC and the University of Westminster, funded by BBC Future Media and Technology, and the Arts and Humanities Research Council which began in July 2007, and aims to look at how children engage with virtual worlds. The BBC's virtual playground http://www.bbc.co.uk/cbbc/adventurerock/, and some plus information from BBC http://news.bbc.co.uk/2/hi/technology/7415442.stm and the Wikipedia article: http://en.wikipedia.org/wiki/Adventure_Rock.

from the start; however, the most important changes take place in people's heads. Virtual worlds are among the most significant and complex elements of digital culture and they exert an influence on the lives of participants and non-participants alike.

Exploring virtual worlds is of key importance since as a kind of essence these worlds sum up a great deal of positive and negative aspects of digital culture. We have a unique and irreproducible opportunity to familiarise ourselves with virtual worlds and in a wider sense digital culture: the changes are happening right now and their origin can still be grasped.

The research of virtual worlds involves a number of approaches: of course ludologists[49] were the first ones to be interested. Then, when attention was turned to the addictive power of these games (the highest of all the game types) and playing started on a mass scale, mostly psychological, motivational analyses were carried out, focussing on the reasons and on the nature of the addiction. After it became clear that in virtual worlds players not only play but also live and create something, the attention of social scientists was attracted to this area. Later, as the number of players increased and these games represented greater importance for business (millions of dollars), research projects examining the economic interrelations between virtual possessions and real money were done in great numbers. Last but not least, an expansive dialogue is on-going about the legal issues related to virtual worlds.

Most research areas regard virtual worlds as their means and not their objective (see law and economics). The main goal can be to understand the laws governing virtual economy, or in the case of law to study the complexity of issues related to the legal regulation of an international virtual environment. In the latter case at least three areas overlap: the interest of the proprietor companies, the regulatory system in force in the players' mother country and the personal rights of users, as well as the value and ownership issues of contents created by the players.

Motivational research and social science focus more on virtual worlds directly, and on the people living a social life in them in particular. The main question is: what benefits do these worlds bring and what impacts do they have on different people?

The following large themes can be identified in the research on virtual worlds:

- **motivation and attitude of players**: Taylor (2006): gigantic ethnographic monograph, description, a diary of observations written by a participant observer identifies virtual worlds as community spaces but does not feel that they are unique cultural spaces; Kelly (2004): explores the formation of addiction in players, uses three years of research and hundreds of interviews, economic attitude, and changes in language, through changes in morality, Bartle (2003) identifies game types, approach from the perspective of game developers; Gervassis (2004): studied the electronic personality's search for values by identifying the levels of such a personality; Jesper (2005): places computer games in the history of human civilisation from ancient Egypt to interactive filmmaking, exploring the historical roots of people's interest in such games; Yoon (2005): the central issue raised is whether MMO games are multiplayer versions of computer games or they are gaming communities?
- **psychology**: Armando Simón (1987): the earliest research of this type, studied the effect of roleplays on psychological stability – and found no scientifically proven connection; Nick Yee (2006) and the Daedalus Project: research that has been conducted for years, and uses stratified sampling, with data gained from players' personal answers which in my opinion are distorted, mostly conducts research into players' motivations, and most findings are about players' need to form relationships; Ren Reynolds (2002): studies the

[49] Ludologists are specialized social-science researchers, their focus is on (computer) games.

morality of games through the game GTA 3, and the choice is not accidental since it is an action-centred maffia story; Moore-Ducheneaut-Nickell (2007): the authors researched the body language, gesticulation and eye contact of avatars

- **economic approach**: Castronova (2004, 2005): Castronova, the most prolific, key publisher on the theme, has written numerous books, articles, carries out scientific experiments. His interest is focussed on how the economy of virtual worlds is structured and to what extent it has an impact on the economy of the RL[50] world. To answer the first question he constructed a model to examine the complexity of the games: the more complex a game, the more complex its economy. To answer the second question his assumption is based on the natural process that the more a virtual world is part of people's everyday lives, the more it influences their lives, and it is these influences that he explores; Lehdonvirta (2005): studied the value judgement of players, who is willing to pay and for what. An in-depth and detailed bibliography can be found about virtual economy on the research network homepage dedicated to the field, which of course is mostly the work of the members of the research network.[51]
- **international and information society law**: Lastowka and Hunter (2008); Grimmelmann (2004); Gervassis (2004). So far the most detailed list about the issues of virtual law – contaning 66 items, the first one dating back to 1996 – was made by Greg Lastowka. The list strives to be all-inclusive, and includes conference presentations and even the smallest comments.[52] Some additional information can be found among the comments. See (Lastowka and Hunter, 2008).
- **education, training**: Galarneau and Zibit (2006); Delwiche (2006): studied Everquest and Second Life, examining whether they could be used in education, it is suggested that they are excellent opportunities for roleplay learning; de Freitas-Griffiths (2007) and Childress-Braswell (2006): the authors give an account of a successful teaching experiment in the world of Second Life; McFarlane, Sparrowhawk and Heald (2007): they conducted surveys in primary and secondary schools in Britain about the usefulness of computer games in learning, and in their opinion a number of valuable skills used in schools can be developed with the help of these games; Bonk and Dennen (2005): they identified virtual worlds as a training ground in military education, with special focus on team work.
- **technological challenges**: Chen et al. (2006): studied the several-million-strong data transfer of the game ShenZou Online, established that the Poisson works here too, thus provided game developers with valuable help. Compared with general data transfer, the data transfer in online games changes drastically as a result of personal decisions.
- **government sphere**: MacInnes, Park and Whang (2004); Jenkins (2004): studying the efficiency of freedom of speech in a virtual post-nuclear military world.
- **experiments using virtual worlds**: one of the leading researchers in the field, Castronova, launched and manages a virtual world called Arden, evoking the world of Shakespeare.[53]

Google has started an interesting project to develop the display of virtual worlds in real space (Terdiman, 2007) – it seems some people envision Multiverse networks. Contact Consortium have been the leading player in the field since the second half of the 1990s

[50] RL – Real Life.
[51] Virtual Economy Research Network http://virtual-economy.org/bibliography.
[52] The ever expanding list can be read online at http://terranova.blogs.com/terra_nova/2008/03/virtual-law-b-1.html.
[53] http://swi.indiana.edu/ardenworld.htm.

(http://www.ccon.org/). Their TimeLine project (http://www.vwtimeline.org/) is especially useful as a historical review of the theme, since it provides a comprehensive history of social virtual worlds from the pioneering days in a picture presentation of hundreds of pages.

There is only a limited amount of sources available on virtual worlds. MMOGCHART must be mentioned as a source of statistics; Nick Yee's Daedalus Project (http://www.nickyee.com/) has also been collecting data for years, focussing especially on the motivations of players but he has done some other surveys of interest too. Yee's data usually come from questionnaires filled in by volunteers and provide little data about these people, yet they are important, precisely because of the deficiency of data.

One of the most important sites on virtual worlds is called Terra Nova: http://terranova.blogs.com/terra_nova/, where professionals interested in the theme exchange and publish their views. A great number of web pages and periodicals deal with games, but of course only some of them explore the subject in depth. One of the best magazines is The Escapist http://terranova.blogs.com/terra_nova/, and GameLife, the games blog of Wired (http://feeds.feedburner.com/Gamelife) is also an important source. Virtual Cultures (http://virtualcultures.typepad.com/virtualcultures/), a blog devoted to virtual cultures, was an interesting initiative but it has slowed down recently.

An important source dealing with the relationship between virtual possessions and real money is Virtual Economy Research Network (http://virtual-economy.org/).

There is also a news page dedicated especially to virtual worlds that aims to provide interesting news and data for the business sphere (http://www.virtualworldsnews.com/). The serious side of virtual worlds is dealt with by the Worlds in Motion page (http://www.worldsinmotion.biz/), which has some very useful analyses.

A separate blog called Educational Games Research (http://edugamesblog.wordpress.com/) deals with the educational potential of games (education games, edugames, see opportunities offered by serious games). The Phantom Compass project also addresses similar issues. A page called Izzy Neis (http://www.izzyneis.com/) is dedicated to issues such as the opportunities children have in virtual worlds and the dangers they have to face.

Develop (http://www.developmag.com/) is a page that deals with game development in general, but it offers some useful data on MMO games from time to time.

The blog PlayOn (http://blogs.parc.com/playon/) is dedicated to the social aspect of virtual worlds. It is rarely updated but contains some very important materials.

4.4 The problems of social network research in a virtual environment

In the research of virtual worlds, social network analysis seems to be a logical and potentially successful solution. As a theoretical experiment, the difficulties faced by identity research are outlined below, presenting some of the characteristic features of online identity.

Some problems arise in connection with virtual MMO environments:

- can the borders of the network be delineated?
- can the characters be identified?
- can the online and offline networks be connected?
- are the characters interchangeable?
- are the avatars replaceable?
- what opportunities do individual characters have? etc.

Below is an attempt to answer these questions.

4.4.1 The problem of identification

The question of identification creates a special situation in the social network analysis of virtual worlds. Players have at least **three identities** during a game:

- own RL identity (e.g. secondary school pupil);
- information society identity (this somewhat forced term basically refers to the identification of the ICT – username, password, credit card number, etc.). A lot of players join the system anonymously or under an alias;
- identity in the game, RPG identity (e.g. Jedi knight).

During MMO games the players operate with these three identities simultaneously. E.g. during a fight in the game the player's RPG identity is the strongest; however, if he is involved in a friendly chat or social activity, his offline, RL identity becomes emphatic.

Is it possible that if a player switches from one identity to the next, it affects the strength of his relationship with others? Are their bonds and relationships linked to the different identities? Is it possible that some identities create a different network of relationships? Is there an interrelation between these different networks?

The answer is more probably yes. The strength of bonding between online and offline identities is discussed later. For now, it is suffice to say that of the three identities the second one probably does not have the power to build and maintain a network, while the other two have a great deal of such power.

Besides alternating between identities players also need to have trust – online identification in virtual worlds is made difficult because an avatar can practically be any RL person. One of the important activities of players is to find out who is behind an avatar. The question is whether a strong relationship can be formed between people who only know each other online, when their online relationship is very deep. If the answer to this question is yes, it means a new victory in the realm of digital culture.

4.4.2 The size and the two levels of the social network

As stated above, although in theory the MMO world is a closed one (the number of registered players, the number of those simultaneously online, etc.), in practice research must reckon with huge numbers and too many variables: thousands of players can be moving about in the system, can enter and exit any time, and can travel great "geographical" distances, etc.

One of the most critical points in social network analysis is connected to sampling, i.e. how the boundaries of the multitude being studied were delineated. There are two possible ways to delineate boundaries. The realistic approach deals with the boundaries of a group according to who the actors being studied regard as members of that group. The nominalist approach, however, is based on a researcher's theoretical field of interest: the network that will be explored is determined by this interest and it is the basis for what is regarded as relevant during the research.

In virtual worlds the whole multitude of the network is either too large or the number of members is too changeable to be analysed. Thousands of players might be simultaneously logged on to the same server. This figure can reach tens of thousands in whole worlds and in larger ones it can even be millions. Theoretically, anyone can contact anyone in the system but in practice one player is connected to one server, although even this can amount to thousands of players. Moreover, players can be playing with more than one account and on more than one server.

Mapping up the online network provides no answers to offline relationships. Thus, another

problem arises, namely that we must think in terms of a two-level network: online and offline.

An analysis of the network of relationships must be carried out:

- to examine the online space (clan, participants in the same game, those trading, acquiring information, chatting, etc.),
- and the offline space (what relationships players have in real life).

It must be taken into consideration that there is also a transitory online space, that of forums in connection with the games, exchange, auction and fun pages, etc. In this space players are not present in the virtual world but they are connected online. Dealing with the game outside playing is a communal activity that takes up a huge amount of time.

Exciting findings can be achieved by making a comparison between the above two spaces, and especially from their temporal analysis: how does the online space influence the offline space in regard to the world of relationships?

4.4.3 The quality of relationships

In virtual gaming worlds the quality of bonds is not determined by physical proximity (neither is it in the real world, although there it has a stronger influence) since relationships are formed in a shared virtual space which brings players closer together. Instead of physical proximity the objective and function of relationships dominate.

The avatars are physically close to each other in shared virtual worlds but it is important to research whether psychological ties are formed and whether they produce strong bonds. Although the nature of these games demands strong bonds, it remains a question whether or not these strong bonds develop and are as strong in virtual space as in offline space and which identity they are connected to. (see problems of identity)

Based on the above, five kinds of relationships can be distinguished in virtual worlds:

1. no offline relationship, weak online relationship;
2. weak offline relationship, weak online relationship;
3. strong offline relationship, weak online relationship;
4. weak offline relationship, strong online relationship;
5. strong offline relationship, strong online relationship.

The first type is very common in MMO games. It is basically the most frequent one. Since players live in all parts of the worlds, they usually do not know each other's RL identity and they do not need to – it is unimportant if trade in a virtual world is done with a baker from California or an old woman from a neighbouring village because it is the avatar's characteristics and completing interactions that play an important role.

In the case of the other four types there is an offline relationship between the two endpoints. Examples can be brought for all the four variations. If both the online and offline relationship is strong, we can talk about an offline friendship or love relationship that has an online manifestation. In my research I have found that good friends often play together, but there are a number of cases where e.g. a husband and wife play in the same game. Online and offline relationships can also generate each other: an online relationship can generate a strong offline one, in which case we are practically dealing with the extensive area of online dating and looking for friends.

There are probably fewer instances when the offline and online relationships are not proportionate, i.e. there is a strong offline but a weak online relationship, or there is a strong online but a weak offline relationship. Such scenarios are possible, e.g. friends who occasionally play together, or virtual fellow warriors who have the opportunity to form an offline relationship but never or rarely do this.

The strength of bonding is definitely influenced by the number of interactions between given players: it is stronger if the players have taken part in numerous adventures requiring hard teamwork, or if they are in the same clan, etc.[54] An important question is: to what extent is a character interchangeable in a relationship? Since the number of actions carried out by avatars is rather low, interchangability is high.

4.4.4 The opportunities for the avatars

In MMO games avatars do not have an unlimited number of opportunities for interaction. It is another matter that it is the same in the RL world, since our behaviour and opportunities are determined by our social, economic and cultural environment. Players do everything in their power to exploit their opportunities to the greatest possible effect and carry out as complex actions as the given opportunities allow. For example, a lot of avatars can meet in one place in the virtual space: they organise meetings and even rituals – there have been a number of online weddings, and similar events. In theory, the avatars of the fantasy world do not have such opportunities (there is no separate function for such actions designed in the games), but the human factor, the community, adds this type of content to the game.

It can be seen that players have more opportunities than the game's rules and built-in functions make possible, but "of course" fewer than in a RL environment. Extra opportunities in the games are mainly a result of communication, to which are added the usually temporary rules and consensuses set up by micro- and other, bigger communities: e.g. avatars can throw lances, which is one of the combat functions of the game, but if some avatars co-operate and decide not to fight with this function but instead they organise a sports competition, e.g. long distance- or target throwing, this becomes a communal experience beyond the game.

Interactive opportunities of the players:

- communication – conversation, getting information, organisation, knowledge sharing, entertainment;
- trade – producing, selling and buying virtual goods;
- combat – every avatar does it with the tools of his caste.

Activities pursued by players alone or without any significant impact (walks or explorations for a personal reason, etc.), cannot be included among interactive opportunities.

Due to the nature of MMO games, the strongest bond is forged in combat. Players are organised in clans and teams and at high levels it is impossible to survive without being a member of a group. For example, in one of the games tasks can be carried out in groups of maximum 40 members. What is more, teamwork on this scale is absolutely necessary at higher levels. Such tasks require a great degree of discipline from the RL identity of players since they must be online and active for a given period of time (until the end of the game). It is severely frowned upon if someone abandons his team by exiting in the middle of playing, etc. In the aforementioned game the number of castes (the RPG identities that can be assumed are actually the "professions" of the players' avatars) is far smaller than 40, usually about 5-8 members depending on the accessories. This means that when a team is formed, it consists of avatars that have similar "professions". Every member of a caste has a specific task assigned to him: characters with healing powers must heal, wizards must use magic, warriors must fight, etc. When a team is organised, it usually observes strict rules: e.g. when they can use magic and for what purpose, what consequences the negligence of an action will have, etc.

---

[54] This appears from a survey, consisting of twenty interviews with Hungarian players and a questionnaire of 670 MMO players in one server (Everquest in Hungary). The results of this survey will be published in 2010: *Social structures in MMO games*, PhD thesis, forthcoming.

All that was described above clearly shows that in MMO games every avatar can be easily replaced by another even during the activity with the strongest constraints (going on adventures with one's team), except if the player's avatar or RL identity has some special sustaining power.

In the case of MMO players the network of relationships operates on three layers: on the level of virtual worlds, below it on the transitory level, and on the RL level below that. Problems arise when the boundaries of these spaces must be delineated, especially because these three levels are different in their nature. When studying RL space emphasis must be restricted to relationships connected to the game and to online space (Internet, PC).

4.5 Hungarian case study

We have conducted a national, representative survey among Hungarian Internet users about virtual worlds.[55] The omnibus questionnaire did not only examine the virtual worlds, but also the general attitude of Internet users, their methods of obtaining information and in addition we analysed the phenomena of Web 2.0, etc. The following presents the data pertaining to online games and an outline of the main trends.

Close to half of Hungarian Internet users have heard of online role-playing games. This is a huge proportion, bearing in mind that the actual players represent only 6% of all Internet users. This form of entertainment does not only interest players, but it is likely that thanks to the media a lot of non-players know about it too (or think that they are familiar with it and thus form their opinions).

Have you heard of online role-playing games?

Yes	45.1%
No	44.3%
Not sure	10.6%

Is there somebody in your immediate environment (family, close friends, neighbours, etc.) who regularly plays online games?

There are a lot	9.4%
There is such a person	24.3%
None	55.7%
Not sure	10.6%

Close to a quarter of Hungarian Internet users know somebody who plays, and this also supports the idea that the virtual world extends beyond its own boundaries.

[55] The survey method was online surveying. There were 2.000 respondents from a 25.000 sample. The data are representative for Hungarian online population. The style of questionnaire was omnibus, the other modules asked about information seeking, entertainment, digital culture, communication culture etc. The data collection was developed by professional market researcher firm (NRC, http://www.nrc.hu/eng). This is the first national representative data collection in the world in the topic of virtual worlds.

Have you ever thought of trying online role-playing games?

Yes, I plan to	8.9%
No, because it is too expensive	4.1%
No, because it is too complicated	4%
No, because I am not interested in it	79.2%
Not sure	3.8%

Of Hungarian Internet users who are not yet playing these games, 9% plan to try out virtual worlds, thus an increase of close to 10% can be predicted! Approximately another 8% are interested in the phenomenon, but find it either too complicated or too expensive, while close to 80% of Hungarian Internet users are not interested in it at all.

How many hours per week do you spend playing online role-playing games?

0-5 hours	**70.5%**
5-10 hours	**11.8%**
10+ hours	**17.7%**

Close to one fifth of players spend more than ten hours playing RPGs and 12% spend between 5-10 hours. The majority spend less than five hours, which means less than three quarters of an hour per day. A significant difference can be seen here compared to Nick Yee's data, which are far higher than the ones in the Hungarian survey. The most fundamental reason for this is that Yee works with self-filling questionnaires, which are naturally filled in by more interested and committed players, and the Hungarian survey used representative, random sampling.

4.5.1 The triumph of independence

Analysis of the data shows that MMO players prefer to roam in the virtual worlds alone, rather than in groups. This fact fundamentally overturns our view to date, namely that group games have the power to draw people into a community.

Do you prefer to pursue your adventures alone or in a team?

Exclusively alone	17.5%
Rather alone	52.4%
Rather in a group	25.2%
Exclusively in a group	4.9%

How important is it for you that your character be viable on its own?

1 – not important at all	8.8%
2	6.9%
3 – neutral	7.8%
4	21.6%
5 – very important	54.9%

The same aspiration for independence is reflected in the second question, from which it transpires that for more than half of players it is very important that the avatar be viable even on its own.

4.5.2 The spirit of competition

How important is it for you to compete with other characters?

1 – not at all important	19.4%
2	13.6%
3 – neutral	26.2%
4	18.4%
5 – very important	22.3%

Have you ever killed any of the other players' avatars?

Yes, it has sometimes happened	33.3%
Yes, once	15.7%
Never	51%

The two questions above indicate how motivated a player is by the spirit of competition and the desire to defeat other players. The above data illustrate that for some 58% of players it is not at all important, or that competition with other characters is of no interest. The same restraint in regard to other players is reflected by the PvP (Player verses Player) data too, according to which half of all players have never fought against another character in the game.

The above data demonstrate that players would rather struggle against the challenges of the virtual world than against one another.

4.5.3 Members of a community

How important is it for you to be part of a reliable guild?

1 – not at all important	20.4%
2	15.5%
3 – neutral	27.2%
4	22.3%
5 – very important	14.6%

How important is it for you to have a live chat with other characters?

1 – not at all important	19.4%
2	22.3%
3 - neutral	30.1%
4	19.4%
5 – very important	8.7%

At the same time the players are members of separate communities.

From the question in regard to guilds it transpires that for a little more than a quarter of players virtual communities – which offer numerous types of advantages – mean nothing (neutral), for more than one third they are not at all important, and for more than another third they are very important. This is a very even distribution and does not allow for special conclusions. The question about chats makes the picture more subtle: it shows a similarly even distribution but shifts somewhat towards the lesser importance of communication.

How important is it for you that your character match your chosen role/profession?

1 – not at all important	29.1%
2	13.6%
3 – neutral	14.6%
4	19.4%
5 – very important	23.3%

For a third of players it is not at all important that their RL and virtual characters are matched. However, for a quarter it is very important and for a fifth it is rather more important than not.

How important is it for you that your character's clothing and weapons look tasteful, e.g. they harmonise in colour and style?

1 – not at all important	21.4%
2	19.4%
3 - neutral	13.6%
4	19.4%
5 – very important	26.2%

How important is it for you that your character's appearance differ from those of other players?

1 – not at all important	20.2%
2	16.3%
3 - neutral	21.2%
4	21.2%
5 – very important	21.2%

The two questions above examine the manifestation of the tastes of RL identity and the gaining ground of individuality. It is interesting that the answers to both questions are evenly distributed in both cases, shifting a little towards individuality, but not significantly. It can in no way be claimed that virtual identity is some kind of heightened tool for self-expression, or a tool to experiment with twisted or reversed tastes.

Do you use ready-made modules or character-generating programmes to create your character?

Yes	14.4%
No	85.6%

We received a far more emphatic answer to this question, and it appears that the overwhelming majority of players aspire to create an individual character rather than selecting one from among the ready-made templates.

Did you create a background story for your virtual character?

Yes	8.%
No	91.3%

The lack of attachment of players to their avatars and the low level of sophistication in this regard are well proven by the above data. A significant proportion of players do not devote their attention to elaborating a detailed virtual identity.

Do you roam in the MMO world merely for the sake of discovery?

Yes, many times	61.2%
Yes, it happened once	22.3%
It has never happened	16.5%

Do you collect objects that are not crucial for the advancement of the game?

Yes, many times	53.3%
Yes, once	14.3%
Never	32.4%

The two questions above examine how absorbed a player becomes in a game, i.e. flow. More than half of all players often play games merely for the sake of discovery or out of curiosity.

How important is it for you to take a look and enjoy the virtual environment you are in?

1 – not at all important	19.2%
2	18.3%
3 – neutral	14.4%
4	24%
5 – very important	24%

How important for you is it that the virtual world allows you to detach yourself from your everyday life?

1 – not at all important	16.3%
2	9.6%
3 – neutral	22.1%
4	23.1%
5 – very important	28.8%

Do you think that MMO games distract your attention from your everyday problems?

Yes	60%
No	40%

The three questions above also measure the degree of absorption in virtual worlds. 60% of players feel that virtual worlds distract their attention from their everyday lives. This is confirmed by the answers to the other two questions: players like to enjoy the visual experience their virtual environment provides them with and they become absorbed in it in similar proportions.

How much would you charge for your character?

1-10,000 HUF[56] (less than the price of the basic game)	51.3%
10,000 – 20,000 HUF (price of basic game plus six months playing)	16.7%
20,000 – 50,000 HUF (price of basic game and 12 months playing)	10.7%
50,000+	21.3%

Our final examination was of players' commitment to the game. From the table above it transpires that more than half of players would in practice sell their character for a lower price than they bought it for. These players were probably disappointed in this form of entertainment and it did not have especial value to them.

However, close to a quarter of players would only sell their characters for a large sum, i.e. a price which is a multiple of that of the basic game, which means that they have endowed their virtual identities with far more than mere material value over time and an emotional commitment has formed.

4.6 Conclusion

The advent of the information society has fundamentally changed people's way of thinking and their sense of reality (time, space, individual and community). The spreading of broadband Internet and strong computers has made a new form of entertainment, 3D virtual realities, possible. The demand is visible in the huge improvement of and the strong addiction to these worlds. It has been proven that participants do not only play but also "live" in these virtual worlds of games.

The firmness, verifiability and trustworthiness of an individual's identity have always been major indicators of people's status in society. Digital environments, from passwords to 3D-avatars, have created new, uncontrollable identity models. Human culture is now in the process of getting to know the cultural background of managing these new types of identity. Because of this learning process we can meet plenty of controversial phenomena; for example, an unnaturally strong bondage and a highly superficial approach may appear simultaneously, but we can also witness the merging of several perceptions, extreme defenselessness and perhaps even new lifestyle success stories.

The management of the identities of the physical world is the result of cultural processes that have been shaped for thousands of years, and even though it is changing permanently, it has always been fed by some historical precedent. We can see failures of identity management between cultures, but also between generations within the same culture. Accordingly it is hardly a surprise that a phenomenon without any precedents – digital identity – appears as a real culture shock. All members of society should learn the management of these digital identities in their own best interests. Virtual gameworlds are splendid opportunities to complete this (voluntary) learning process in an entertaining manner.

The management of digital identities is a challenge that is cultural rather than technical in nature. The learning process has three levels:

- individuals learn to build their own digital identity;
- they need to learn to manage identities between individual and individual;

[56] 10,000 HUF is approximately 32.5 EUR.

- the community needs to learn how to manage their digital and RL (real-life) members simultaneously.

Studying virtual gameworlds shows us how fundamental this cultural change is and how difficult it is to manage even for those who address this task voluntarily and with a high level of information literacy. Digital identities are not new identities but the extensions of existing ones in a peculiar manner, which holds out numerous promises. Yet still, exactly because of the close connection with real-life identity – they are built upon each other – virtual identities represent an enormous threat, a 'security gap', to the psychological protection of individuals. Because of the growing interconnectivity of society this phenomenon can also be observed at a community level. Indeed, exactly because of the birth of global online networks, it can also be experienced in meta-communities.

In an information society, people are forced to represent their identity through digital channels in circumstances that are artificial or very different from what they are used to. This difficult process can be eased by numerous forms of cultural assistance (for example the culture of telephoning or the emoticons used in written texts). The two notions of the narrative identity (idem and ipse) appear in a very special way in the virtual words. The basic question is: can we stay ourselves while we are not the one we used to be? Is it possible that the experience of acting without the tether of the body and projecting the self into a digital environment are fundamentally changing our identity? The use of technology does not affect the way we see ourselves. But the main goals of virtuality are to absorb us, to engage and to blindfold our senses and thoughts – so as to heal us, teach us or entertain us. Could it be possible that the virtual identity (affected by very intensive experience of pictures, sounds, mimicry, moves etc.) become a real identity? This question is not only relevant at the individual level (in this case it is the topic of psychology), but also at the level of society. Our research shows that the identities that come into existence in virtual words are really special ones: their primary goal is to create deep, long-time attachment. Using this identity interaction happens in different ways (movement, mimicry, figure, sound, text), which can radically increase personalization and engagement.

It is becoming clear that the development of controllers (controlling with brain or thoughts) and the embedding nature of information technology are making our virtual identity a basic part of our real identity, and not a separate one. Our research shows that a deep commitment to digital identities exists at the individual level. Avatars are interim identities which are no longer interim.

5 Implants and cyborgs: the environment and the self

Kevin Warwick

5.1 Introduction

In August 1998, as an experiment, a Radio Frequency identification Transponder Device (RFID) was surgically implanted in the arm of the author. With this in place the individual concerned was monitored at different locations in the Department of Cybernetics building at the University of Reading.

As the main door was entered, a radio frequency signal across the doorway excited a coil in the transponder, providing current to the silicon chip circuitry, allowing for a repetitive transfer of 64 bits of information, identifying the carrier to the controlling computer in the building. The computer was able to recognise the author (idem) by means of the unique signal transmitted from the implant. So a welcoming "Hello Professor Warwick" could be heard.

As a follow up the computer switched on the foyer light, selected the appropriate web page and checked for any newly arrived emails. Further into the building, as the appropriate laboratory was approached the door opened automatically, allowing the author to enter freely. The computer kept a record of when each room was entered and when it was exited, which room was occupied at a certain time and when it was not.

A location map on the computer – generally accessible – gave a real-time picture of the author's whereabouts at all times whilst in the building. As a result, there was no hiding place, if Warwick needed to be located then he could be instantly found. Computer records meanwhile could be used to obtain a profile of habits. What was the daily arrival time? When was coffee taken? How long was spent in the toilet?

5.2 The Experience I

In terms of Ipse-Identity, the overriding feeling was one of power. Technology operated and lights came on simply by moving in a particular direction. So much so that several other faculty members expressed their jealousy that it was not them who had been implanted and so they could not experience the control provided.

It has to be said that generally the technological response brought about was a positive one: lights came on, doors opened, the computer said hello. Perhaps it would have been different if lights had been switched off and doors had been locked shut as might be the case for an implanted prisoner – no escape, no hiding place. This is intriguing both in terms of Idem and Ipse-identity aspects – because positive tendencies are at work does this make the individual feel positively about themselves in the latter case and perhaps happier with their recognised profile in the former case?

As for the records of habit – well this too could be turned into a positive – the building could be organised to suit the implantee – with heating switching on, windows opening and lighting being suitably settled based on the individual's requirements. However it does impinge directly on Idem-identity, as it allows for apparent identity manipulation of the individual by merely changing habitual activities. Such appearances could then also be used by employers to force employees to conform within empowered Idem-identity boundaries.

For example there were spin offs with the experiment that we hadn't thought about beforehand. With exact location timings it was possible to see how long it took to get from the main entrance to the laboratory. Cutting a few seconds off here and there became a challenge,

helping with fitness. Timekeeping also was assisted. If the implantee was due to be at a certain place at a specified time then the pressure was on not to linger, not to idly chat for a few seconds more. It would have been possible to sound an alarm or send a reminder message if a late arrival occurred.

But what of the lack of privacy? What of the fact that the implantee could always be located in the building? Well this was definitely felt in a positive way. No missed telephone calls – there was no excuse for the secretary to say "I couldn't find you". When a visitor called they could be directed to the exact location.

5.3 Sense of self (ipse-identity) – 1998 style

Clearly there was a new link formed. On receiving an implant, individuals quickly regard the implant as part of themselves. This is the same experience related by those who have received cochlea implants, Parkinson Disease stimulators, artificial hips and even transplanted organs.

But in this case the implant also provided a direct link with the computer and the building. The extra powers obtained and the change in perceived identity were considered to be because of this shared existence – the person, the implant, the computer, the building. It was through the combined abilities that the overall effect was achieved.

So the feeling of self changed – to a more powerful self, to a less human self, to a communal self. But above all the overriding feeling was a vision into the future. What was implanted back in 1998 was a relatively simple piece of technology, yet it had enabled significant advances. With a more powerful, a more integral implant, what might be possible? The most forthright feeling therefore was of excitement of being on the threshold of a Cyborg future.

When the implant was removed there was an immediate sense of loss – a sense of back to ordinary humanity. For several days there was a feeling of inadequacy. When you have had something and lost it, it takes time to adjust. Clearly an identity reversion.

5.4 Implant revisited – 2002

In March 2002, as a follow up experiment, an array of 100 electrodes was fired into the nervous system of the same author. The concept resulted in, for the first time, linking a human nervous system with a computer and hence onto the internet.

In the weeks that followed a robot hand was controlled by neural signals across the Atlantic ocean, with feedback enabling a sense of how much force the hand was applying. Extra sensory input was experienced in terms of ultrasonic sensors, the output of which was employed as a stimulating signal to give an accurate sense of distance – rather like a bat experiences the world.

But the cream of the experimentation was when the author was able to communicate telegraphically with his wife, who had electrodes inserted in her nervous system, directly, electronically nervous system to nervous system. This presented something of a shared identity, a collective persona.

5.5 The Experience II

The sense of self, of one's identity, is completely changed. There is no question – with a neural implant, you are a different person – your abilities are different, your means of communication is different, how you experience the world is different. All this because of a direct link with the computer – which is, after all, in a sense, now part of you.

The overriding feeling was again a vision of the future. Of the sheer power of the capabilities that were being unfolded. Of the considerable limitations of humankind as stand-alones and

how these could be overcome with such technological links.

5.6 Sense of self (ipse-identity) – 2002 style

With a neural implant the divide between human and machine is reduced, but not removed. The value of the machine, as part of the whole new entity, is enhanced but not insurmountably so. The abilities apparent are those of the combination, the symbiosis – not those of human and machine combined. It is the cybernetic system – the human and machine acting as one – that is the perceived new entity – it is the characteristics of the system that can be witnessed.

Individual (ipse-)feelings of the author clearly indicate a desire to be part of a powerful, more capable whole, rather than to be a stand alone human, possibly with some external technical assistance, but extremely limited, human centred, abilities. The overriding feeling is the desire to be a Cyborg.

Figure 5.1. Experimentation and testing of an ultrasonic sense

5.7 Conclusion

For the Cyborg individual (or individuals), the experience is conceptualised more as a neurological phenomenon as opposed to a physical one. Wearing a pair of glasses or driving a car certainly alters the range of abilities of an individual and, from an outside observational perspective, may be viewed, in a complete entity sense, as constituting a different or new individual. For the individuals themselves, however, wearing a pair of glasses merely means they are the same person wearing a pair of glasses. If implant technology is used or an external device is linked to the person's nervous system, then they start regarding themselves in a completely different light. With an implant there may be no external indications until the individual performs a feat. Alternatively an external device controlled or stimulating a nervous system changes both people's outward and inward appearances.

6 A right to identity to face the Internet of Things?

Paul De Hert

> *"State Parties undertake to respect the right of each person to preserve and develop his or her ipse and idem identity without unlawful interference."*

6.1 Introduction

In a world of "Internet of things", computing is enabled to melt invisibly into the fabric of our business, personal and social environments, supporting our economic, health, community and private life. In a world of "Internet of things", it will be easier to establish new relationships, but also to identify people, since all possible everyday objects will be part of a network. After having introduced two notions of identity, viz. ipse and idem identity, we look briefly at the impact of new modern and future computing. The European Court of Human Rights (ECtHR), in its interpretation of Article 8 of the European Convention of Human Rights (ECHR), in particular the right to respect for private life, has ruled that this right covers an individual's physical and social identity, such as gender identification, name, sexual orientation and sexual life and the right to personal development and personal autonomy. However, in the light of emerging technological threats to the individual and in the light of certain resistance to the privacy right, the suggestion to create or recognise a specific 'right to identity' needs to be taken into consideration. Such a right could be useful, taking into consideration the challenges of the Internet of things, and the problems of existing human rights law to cope with these. Even more weight can be given to the recognition of new human rights when looking at some broader identity issues, such as the double nationality issue. New human rights could be instrumental to the delicate balancing of interests which must be struck with respect to these issues, provided that they are conceived as liberty rights to both aspects of identity.

6.2 Two kinds of identity

When the police speak about identity checks, they refer to the legal or administrative identity of a person. This civil identity is the instrument societies use to identify citizens and determine their rights and duties, for example, whether persons have legal access to certain goods and services. Civil identity in reality is no more than a convention, although it is a very important one in a person's life and not many people are ready to give up their national identity. Slightly distinct are collective identities, such as those shaped by religion, gender, ethnicity, race, and sexuality (Appiah, 1994 & 2005). Often, if not always, these are internalised conventions, and, again, not many people consider these volatile assets of their life. On the contrary we consider these issues very tightly linked with our personal identity, a term we use to denote the image that we have for ourselves and about ourselves and that we want to use to make us known to others (Prins, 2007).

Mireille Hildebrandt drew my attention to the important distinction between *ipse identity* and *idem identity*. Both terms nicely illustrate the interesting back and forths between me and the others that look at me or me looking at the others. Personal identity is understood as a mix of ipse identity and idem identity. Ipse (or self) identity is the irreducible sense of self of a human person. It is reflexive consciousness of oneself. Idem (or sameness) identity is the objectification of the self that stems from comparative categorisation (Ricoeur, 2005; Hildebrandt, 2008a). Elements of idem identity are social identity, cultural identity, legal identity ('identité civile'). It would however be wrong to see this idem identity mainly in terms of a through the outside world imposed identity. As I understand the difference, the

comparative labour is also done by persons themselves. In fact we are constantly comparing with others and adapting our self-image. Psychology teaches us that the development of personal identity follows a double movement, one towards resembling the other through identification (resembling people nearby) and one differentiating one self in a perspective of individualisation (Neyrand, 2002).

Ricoeur, whose interrogative work lays at the basis of this distinction between ipse and idem identity, was puzzled by the observation that persons change continuously, but are at the same time in need of some stability in the recognition of the other:

> despite change, we expect from others that they are responsible for their actions, being the same as the persons who acted yesterday and today must give account and tomorrow bear the consequences. But are we still talking about the same identity (sameness (*mêmeté*))? Should we not – taking as a model the promise, the basis of all contracts, of all agreements, of all understandings – talk of maintaining a self despite the change – maintenance in the sense of keeping one's promise?[57] (Ricoeur, 2001:92)

It is quite clear that law and in a broader sense, society does not and cannot function solely on the basis of ipse identity. Idem identification allows societies to integrate the person and allows the person to integrate himself in society (Neyrand, 2002). "the person is always taken to be identical to herself, one does not take into account (one is not able to) the variations in her sentiments, in her secret urges"[58] (Ellul, 1963, quoted by Christians, 2002:67).[59]

6.3 The Internet of Things as a technology of freedom

The term "Internet of Things" has come to describe a number of technologies that enable the Internet to reach out into the real world of physical objects. The Internet of things predicts a world wherein billions of everyday objects are linked in a network and are intercommunicating. This idea has grown from advanced concepts from the last twenty years, such as ubiquitous communications, pervasive computing and ambient intelligence (EC, 2006). In a world of "Internet of things", computing is enabled to melt invisibly into the fabric of our business, personal and social environments, supporting our economic, health, community and private life (EC, 2006).

This foreshadows an exciting future that closely interlinks the physical world and cyberspace – a development that is highly relevant to individuals and their identity.

Partly this future is already happening. New technological developments see the light, such as RFID and biometrics, that are already making the paradigm "the Internet of things" more realistic. On the basis of what has been achieved so far and on the basis of the predictions of what lays ahead, some important consequences can be canvassed. The human interdependencies become subject to change. Through al these technologies people see their possibilities of actions heightened, e.g. using mobile phones when standing in line. Also, they can become part of larger social networks and start relationships with people and machines far away, without this being checked by people nearby and with less dependency (Stol, 2007). Virtual communities without geography become part of life (Mesch and Talmud, 2007;

---

[57] Our translation. The original reads: "en dépit du changement, nous attendons d'autrui qu'il réponde de ses actes comme étant le meme que hier a agi et aujourd'hui doit render des comptes et demain porter le consequence? Mais s'agit-il encore de la même identité (mêmeté)? Ne faut-il pas, prenant pour modèle la promesse, base de tous les contrats, de tous les pactes, de toutes les ententes, parler d'un maintien de soi malgré le changement –maintien au sens de la parole tenue?"

[58] Our translation. The original reads: "La personne est toujours tenue pour identique à elle-même, on ne tient pas compte (on ne peut pas) des variations de ses sentiments, de ses pulsions secretes".

[59] Hildebrandt rightly stresses that identity needs to be understood in dynamic terms, necessitating a mix of negative and positive freedom to reconstruct one's identity in the course of time (Hildebrandt, 2008). I will come back to this observation below.

Gennaro and Dutton, 2007). However specific someone's preferences are, she can always find likeminded people, as long as a connection to communicate exists. Identity plays have always existed, but new technological identities allow playing it at a far better performing level. Identities can become more multifaceted and specific than ever before. Every possible lifestyle is conceivable (Frissen, 2002).

Already in 1984 Pool contended that the then existing telecommunications technologies had the potential to enrich the freedom of speech guaranteed us by the existing human rights instruments. In his book *Technologies of Freedom* he held that electronic media could provide a broader access to more knowledge than ever before and therefore had the potential to open new vistas of freedom of speech and of access to information and ideas (De Sola Pool, 1983; Stol, 2007)

On reflection this assumption can be generalised. Technical advances often change the way in which we exercise our rights and freedoms, and thus broaden the practical scope of these rights. Freedom of movement now extends to moving around by car, plane and Internet, and not just by foot, boat or bike (Harris, 2007: 76).

To believe Paul Frissen, a Dutch political scientist studying the societal impacts of ICT, these 'second and third life' possibilities are more than minor changes to human condition. In his book *The State* (2002) he takes growing diversity as a starting point for a provoking analysis showing the failing grip of political systems on the life of citizen. Public debate is less and less monopolized by the political system. Citizens organise themselves outside the party system. Classical political institutions become an actor amongst others within a more horizontalized spectre. The public domain, more fragmentised than before, stretches out and encloses new issues. Frissen holds that contemporary developments towards globalisation, facilitated and radicalised by new technological developments, will bring about new conceptualisations of the public domain and a new style of politics that reflects the ethics of the networking society with nomadic operating actors. There is no longer one public domain built upon a set of shared values and traditions, but there are more and more public domains that need to be balanced against each other and go far beyond the territorial limits of states. Although Frissen pretends that this 'new multiculturalism' (Frissen, 2002: 181) should be regarded as an empirical fact, one that one cannot reject or applaud to, he is clearly not opposed to the new opportunities for the individual operating trough many identities and travelling in this virtual worlds without the lasting (community) bounds and cultural codes of the past (Frissen, 2002: 177).

These technology driven developments should be understood as part of a broader cultural development towards individualism. People become more aware of their authenticity and uniqueness and do not longer accept descendence from (certain) social groups and certain determining factors that used to be seen as unalienable, viz. name, sex, nationality, etc. All these issues become the object of struggle and of claims for more subjectivity and flexibility.

Needless to say that Frissen's analysis, based on an intelligent personal mix of authors such as Castells and Negri, can be easily confronted with many other writings stressing the vulnerabilities of the new autonomy of this nomadic operating citizen. Many authors, borrowing on Charles Taylor's anti-individualist work, assess critically this urge for more identity-flexibility or more individualism (Nys, 2007; Neyrand, 2002; Christians, 2002). We recall Taylor's important analysis of the risks of centring on the self and of classical liberal theory with its abstract image of individual having no one but him or herself to give meaning to life. The individual, Taylor holds, needs the others to understand what is meaningful in life. Even our deepest feeling of authenticity is coloured or produced in a given social context (Taylor, 1989). Central to most authors in the massive treaty *L'identité de la personne humaine. Etude de droit français et de droit comparé* (2002), edited by J. Pousson-Petit, is

this feeling that contemporary emphasis on subjectivity and authenticity and choice with regard to identity, resonating through some important recent judgements of the European Court of Human Rights, neglects important societal interests and choices behind certain social and legal arrangements that are the object of identity claims. Even when not all authors go as far as to reject overtly these subjectivist identity claims, most of them retain cynical distance. Neyrand, for instance, critically stresses the efforts of the contemporary 'authentic' individual to engage him or her, without ever engaging totally. *L'engagement implique le dégagement* (Neyrand, 2002). Another author ironically notes that claims for the individualisation of the regulatory framework of names and other personality aspects is countered and compensated by a growing use of strong identification schemes (Lemouland, 2002). Liberty, what liberty?

Contrary to most of these authors, we do not see too many judgements of the European Court threatening the fabric of law by recognising subjectivist identity claims. Take for instance the *Stjerna v. Finland* Judgment of November 25, 1994.[60] The applicant wants to change his surname from Stjerna to Tavaststjerna. He claimed that as an old Swedish name, Stjerna was frequently misspelt and difficult to pronounce in Finland where Swedish-speaking people amounted to only some six per cent of the population and resided mainly in the coastal regions. His mail was delayed as a result of his name being misspelt and the name had given rise to a pejorative nickname: "kirnu" in Finnish, derived from the Swedish word "kärna" ("churn" in English). The newly proposed name was by no means unconnected with the applicants life. His ancestor, Mr Fredrik Stjerna was born in 1764 and had been the illegitimate son of Mr Magnus Fredrik Tavaststjerna. The applicant maintained that his ancestors had used the proposed name and that he and other members of the Stjerna family had always felt it an injustice only to bear half of the original name.

The European Court held that Finland's refusal to permit a change of surname based on the remoteness of the ancestor and the fact that he was born out of wedlock did not violate Articles 8 and 14 of the European Convention on Human Rights, protecting against interference in the right to respect for family life and discrimination, respectively. Public interest is the rationale behind the power of states to limit claims to have names changed: states are in need to identify people, to trace them back to their families, and to register them.[61] The Court also concluded that the inconvenience such restrictions imposed upon the applicant were not great: the sources of inconvenience were not sufficient. Although the applicant's name may have given to a pejorative nickname, this was not a specific feature of his since many names lend themselves to distortion.[62] The latter argument of the Court shows to what degree choice of names is *not* perceived as a liberty choice, contrary to what one would expect in issues relating to personal identity (Harris, 2007). In a full blown liberty perspective the onus of proof (of the inconvenience) should not be on the side of the individual, but on the side of the government arguing that needs to demonstrate that there are compelling interests to impose restrictions to liberty. Although the European Court accepts that that an individual's name pertains to his or her private life, its starting point is that 'national authorities are in principle better placed to assess the level of inconvenience relating to the use of one name rather than another within their national society'.[63] It is up to the individual to adduce sufficient grounds about disproportional inconvenience. Stjerna's argument 'that decisive weight should be given to the fact that he himself resented these

[60] European Court of Human Rights, Case of Stjerna v. Finland, Judgment of November 25, 1994, Application number 00018131/91 (all European cases referred to in this chapter are available via http://www.echr.coe.int).
[61] Para. 39 of the judgement.
[62] Para. 42 of the judgement.
[63] Para. 42 of the judgement.

sources of inconvenience' was thus rejected.[64] A name that becomes a nickname; a family history where 'natural children' had no right to bear the real fathers name; an attempt to sound less Swedish in a Finnish society, mails that do not arrive, …. We personally feel that here is more at stake than an irresponsible individual changing personality items like changing clothes.

Interestingly for our purpose is Stjerna's argument that public interests considerations not to allow his choice of name were flawed, since not names but 'identity numbers are now used for this purpose'. The Court simply contradicts this argument by holding that "despite the increased use of personal identity numbers in Finland and in other Contracting States, names retain a crucial role in the identification of people".[65]

6.4 Risks of abuse and risk of normalisation

Linking people to identification numbers allows more choice. Of course this sounds a bit like a trade off. Are we really considering technologies of freedom, or should we rather speak about technologies of control (Stol, 2007 with ref. to Garland, 2001)? We saw that technology offers more choice and allows people to reproduce a social reality where informal social control has a harder time getting a grip on their behaviours allowing for more norm deviating behaviour. They can thus search more easily for the limits of the acceptable (Frissen and Van Lieshout, 2003). On the other hand it will be (or it might be) easier in a world of "Internet of things", to identify people, since all possible everyday objects will be part of a network. Continuous monitoring by government authorities (dataveillance) becomes possible. More identification will then allow more formal social control (Van Der Ploeg, 2009). It is very important to distinguish between what *could* be and what *will* be. Human-rights-based regimes will most certainly oppose technological developments that might erode the fundamental values that they aim to protect. We do therefore not believe that there will be a straightforward government policy towards a culture of control, although some initiatives point that way. One author adds an important subtlety to Orwell's dark scenario. Control strategies, based upon technology, imposed by the government will often fail, since governments need people to collaborate in one way or another before control schemes succeed. They have to bind themselves to technological artefacts, and in fact they are doing so in the world of the Internet of things by using RFID-integrated passports and mobile telephones (Stol, 2007).

However not the identification, but the profiling that follows the identification should attract our concern, especially when there is in principle no human intervention in the identification process (Hildebrandt, 2008a). Indeed, in the Internet of things privately and publicly owned machines, not humans, gather and exchange data on people's behaviour. The human involvement is even less, since the data controllers behind these machines are not really interested in our selves or even in what we do, they just want to assess their opportunities and risks regarding our future behaviour. What they are interested in is knowledge, not our data. Hildebrandt therefore allies with Solove who judges Orwell's Big Brother scenario to be inadequate for our understanding of real risks posed by surveillance, profiling and data mining. The real scenario we are facing is not that of governmental agents looking at us and listening to us, but rather one as depicted in Kafka's *Trial* where Josef K. gets arrested and entangled in judiciary machinery without logic or due process for an unspecified crime. In this scenario human indifference is replaced by the indifference of the machines that collect and store our data, forming a multiplicity of 'dossiers' on our whereabouts, "without accusing us – yet – of anything specific, but capable of providing the evidence for a conviction at some

[64] Para. 40 of the judgement.
[65] Para. 39 of the judgement.

point in time" (Hildebrandt, 2008a).

"Being profiled" therefore supplements "being identified" as the real threat to identity posed by the Internet of things. Because profiles matching our data will be established without us knowing how and when and if they will be used, 'behaving normal' will eventually become the ultimate practice in the Internet of things. Both governments and private actors will monitor us and assess our behaviour continuously in order to fit us into new idem identities that we cannot control and that we are often not aware of. Hildebrandt rightly notes that the point is not just whether profiles are abused (e.g. unfair discrimination) but "that (1) an abundance of correlatable data and (2) the availability of relatively cheap technologies to construct personalised knowledge out of the data, create new possibilities to manipulate people into behaviour without providing adequate feedback of how their data have been used. This may lead to major shifts in power relations between individual citizens on the one hand and commercial or governmental organisations on the other. It is not as much abuse, but the fact that we have no effective means to know whether and when profiles are used or abused" (Hildebrandt, 2008a). Not disclosure, but loss of control is the central issue (Solove, 2002:1436). Identity suffers in two ways. Phrased in Berlin's famous distinction between negative liberty (absence of interference) and positive liberty (the possibility to act), profiling impacts negatively by bringing individual characteristics and preferences to the lights and positively by curtailing one's autonomy and social development. Persons will be approached, for instance by private actors, with information in a selective way. Differences in approaches will not result from their choice but from consumer profiles established without their consent. Personal identity cannot flourish when ipse identity-building is deprived from the idem identity-input. Persons will abstain from certain a-typical social and societal contacts out of fear of being profiled negatively.[66]

6.5 Traditional human rights will protect identity (Germany)

Let us go back to our observation that one should never confuse what *could* be with what *will* be. The foregoing is based on possible negative scenarios and we already expressed our view that human rights might very well prevent these things to happen, at least in part.

In particular German constitutional law with its strong ethical footing seems capable of responding to the identity threats we discussed earlier.[67] Already in the *Mikrozensus Urteil* of 1969 the German Constitutional Court held that the inner space of the right of self-determination should not be intruded by the state (27 BVerfG I, 1). This right was identified by the Court as a tenet of the constitutional rights to human dignity under Article 1 of the Constitution. The case, dealing with a federal law on the population census, was brought before the Court by a person claiming that compulsory disclosure of private information (e.g. on recreational aspects of citizens), even if for statistical purposed, violated this right. Although the Court held that in this concrete case there was no unconstitutional violation of the 'most intimate realm into which a state may not intrude', the tone was set. Fourteen years later, in the *Volkszählungsurteil* of 15 December 1983 (BVerfGE 65 E 40) the same Court was asked again to pronounce itself on the German census act. The Court affirmed the existence of a right to self-determination based on the *allgemeines Persönlichkeitsrecht* as protected under Article 2 of the Constitution in conjunction with Article 1 on human dignity. On this basis individuals need "to be protected from unlimited collection, storage, use, and transmission of personal data as a condition of the development of his or her free personality under the modern conditions of data processing". With a precision that is unmatched even

[66] About the risks generated by the Internet, viz., manipulated identity, borrowed identity, spied identity, and profiled identity, see (Pousson, 2002b).
[67] This section borrows from the Chapter on Germany in (Brouwer, 2007).

today the Court spelled out in detail the shift of power that occur when state and private actors subject persons to information technology. The Constitutional Court made it clear that even a person's awareness that his or her movements are being watched could affect his or her freedom to move or act:

> Anyone who is uncertain whether his or her deviating behaviour will always be noted and recorded, used or transmitted in the longer term, will try to not attract attention by such behaviour. Anyone who is concerned, for example, that his participation in a gathering or civil action could be recorded by the government and that this will involve risks for him, may refrain from exercising his constitutional rights. (…). This would not only be detrimental to the possibilities for individual self-development, but also to the public interests, because individual self-determination is a basic condition for the functioning of a democratic society, based on the freedoms of citizens to act and to cooperate.

Brouwer (2007) rightly stressed that these and other considerations are still valid today, or even more so, with regard to current developments. The Court also pointed out that "the use of networks, information shared by different authorities, could lead to the situation that individuals have no control on the use and accuracy of their data". Integrated information systems, compiling data, could produce an overall personality picture (*Persönlichkeitsbild*) without giving individuals the opportunity to check the accuracy or use of this picture. Specific guarantees are needed, including organisation and procedural measures designed to safeguard the individuals form infringements on their right to personality. One of the guarantees identified by the Court, is the prohibition to collect personal information by anticipation (*Verbot der Sammlung personenbezogener Daten auf Vorrat*) if these data are to be used for non-statistical purposes.

If there was ever any doubt about judges not reading Kafka then these passages should take it away completely. This sensibility for human rights issues of modern technology resonates in the *Rasterfahndungsurteil* of 4 April 2006 (1 BvR 518/02) concerning the complaint by a Moroccan student concerning whom (and others) the police had gathered personal information using data profiling. The Constitutional Court decided that this use of data profiling, based on an earlier transmission of 5.2 million data items was a disproportionate breach of the applicant's constitutional rights. In the judgement, the Constitutional Court explicitly referred to the extended scope of the collection of information by the German authorities, the use of many different information systems and the higher risk for the person concerned of becoming a target of criminal investigation through this use of data profiling. Persons to whom data profiling is applied, the Court held, risk becoming the subject of further administrative control measures. The possibility exists that it will lead to stigmatisation of groups of persons in public life, especially when it concerns, as in the refuted practice of data profiling, persons from specific countries who are also Muslim. The Court concluded that data profiling could only be justified on the basis of a specific threat of an attack which could cause substantial harm and this based on concrete facts. For the Court the general situation in Germany after 9/11 did not give sufficient reasons to justify the refuted practice of data profiling.

6.6 Traditional human rights will protect personal data (European Convention)

Brouwer correctly observes that the strong German constitutional history of human rights protection exists alongside a tradition, which is possibly even stronger, of massive personal data gathering by authorities (Brouwer, 2007: 378). Notwithstanding this important observation, the framework of principles elaborated by the German Constitutional Court is impressive. Unlike other legal regimes, such as the Netherlands and Belgium, the German right to privacy was never considered the starting point for this framework. The right to privacy played an important role with regard to the balancing of interests, but was not seen as an appropriate basis for a general and preventive framework. The Court relied on rights such

as human dignity and the general personality right (*allgemeines Persönlichkeitsrecht*) to affirm the existence of the right to informational self-determination. We emphasize that these rights are absent in most other constitutions of the world and in the 1950 European Convention on Human Rights. The right is introduced in Article 1 of the non-binding Charter of fundamental rights of the European Union (published in the *Official Journal of the European Communities,* C 364/1, 18 December 2000). The provision is of a general nature ('*Human dignity is inviolable. It must be respected and protected*'), and although some courts refer to the non binding the 2000 EU Charter, it is difficult to predict whether European constitutionalism will generate principles similar to the German principles discussed *above* regarding new technologies.

Although the European Convention and the case-law of the European Court on Human Rights does not recognise a right to informational self-determination, many data protection aspects are brought under the scope of Article 8 of the Convention (right to privacy) by the Court. In its case-law, the Court recognises the right of individuals to control to a certain extent the use and registration of their personal information (Brouwer, 2007) and has considered claims regarding access to personal files (*Gaskin v. the United Kingdom*), regarding deletion of personal data from public files (*Leander v. Sweden* and *Segerstedt-Wiberg v. Sweden*), regarding claims of transsexuals to have their 'official sexual data' corrected (*Goodwin*). Moreover, the Court has insisted on the need for an independent supervisory authority as a mechanism for the protection of the rule of law and to prevent the abuse of power, especially in the case of secret surveillance systems (*Klass v. Germany*, *Leander v. Sweden* and *Rotaru v. Romania*). In other cases the Court demanded access to an independent mechanism, where specific sensitive data were at stake or where the case concerned a claim to access to such data (*Gaskin* and *Z. v. Finland*). In *Peck*, in *P.G. and J.H.* and in *Perry* the Court acknowledged the basic idea behind the fundamental principle of purpose limitation in data protection, viz. that personal data cannot be used beyond the normally foreseeable use. In *Amann v. Switzerland* the Court demanded that governmental authorities only collect data that is relevant and based on concrete suspicions. In several cases the Court added that information (about persons) belonging in the public domain may fall within the scope of Article 8, once it is systematically stored (*Rotaru v. Romania*, *P.G. and J.H. v. the United Kingdom*, *Segerstedt-Wiberg v. Sweden*). Finally, in the *Rotaru v. Romania* judgement of 4 May 2000 the Court acknowledged the right to individuals to financial redress for damages based on a breach of Article 8 caused by the data processing activities of public authorities.

6.7 Traditional human rights will protect identity (European Convention)

There is no general personality right or right to identity or to human dignity in the 1950 European Convention on Human Rights. In this state of affairs law courts will turn to privacy. Within the framework of Article 8 (right to privacy), the European Court of Human Rights, has indeed incorporated important aspects of a right to identity. Take for example the *Stjerna v. Finland* Judgment of November 25, 1994 discussed *above*. Citing the case of *Berghartz v. Switzerland*, the Court noted that although the European Convention does not contain any explicit reference to names, an individual's name pertains to his or her private and family life protected by Article 8. This judgement is only the start of a series of judgements that all contribute to the recognition of a right to identity as a tenet of the personal privacy right, next to other more traditional elements of this right such as moral and physical integrity (Tulkens, 2007a). This European identity right protects interests with regard to name, first name, sex, and access to data about one's origins. All these interests contribute or enhance claims to self-developments and personality development. In the *Odièvre v. France* judgement of 13 February 2003 ('accouchement sous X'), the Court states that "birth, and in particular the

circumstances in which a child is born, forms part of a child's, and subsequently the adult's, private life guaranteed by Article 8 of the Convention" (par. 29).

This judgement will be the start of many others, in which the Court will confront identity issues raised by or linked to enhanced technologies of identification, such as DNA testing. In the *Jäggi v. Switzerland* judgement of 13 July 2006, the applicant complains that he was unable to have a DNA analysis carried out on a deceased person in order to ascertain whether the person was his biological father. The Court held by five votes to two that there had been a violation of Article 8 of the European Convention on Human Rights (right to respect for private life) on account of the fact that it had been impossible for the applicant to obtain a DNA analysis of the mortal remains of his putative biological father. The Court considered that the right to an identity, which includes the right to know one's parentage, is an integral part of the notion of private life. In such cases, particularly rigorous scrutiny is called for when weighing up the competing interests (par. 37). Although the applicant, aged 67, has been able to develop his personality even in the absence of certainty as to the identity of his biological father, it must be admitted that an individual's interest in discovering his parentage does not disappear with age, quite the reverse (par. 40). Therefore, the Court noted that the protection of legal certainty alone could not suffice as grounds to deprive the applicant of the right to discover his parentage (par. 43).

A right to identity can also be claimed by the presumed father. In the *Mizzi v. Malta* judgement of 12 January 2006, the Court considered that the fact that the applicant, a well-known businessman, was never allowed to disclaim paternity was not proportionate to the legitimate aims pursued. In 1966, his wife X became pregnant. In March 1967 the applicant and X separated and stopped living together and, on 4 July 1967, X gave birth to a daughter, Y. The applicant was automatically considered to be Y's father under Maltese law and was registered as her natural father Under Maltese law the applicant had never had the possibility of having the results of his daughter's blood test examined by a tribunal. The Court was not convinced that such a radical restriction of the applicant's right to take legal action was "necessary in a democratic society". It found that the potential interest of Y to enjoy the "social reality" of being the daughter of the applicant could not outweigh the latter's legitimate right of having at least one occasion to reject the paternity of a child who, according to scientific evidence that the applicant alleged to have obtained, was not his own. It followed that a fair balance had not been struck between the general interest of the protection of legal certainty of family relationships and the applicant's right to have the legal presumption of his paternity reviewed in the light of the biological evidence. Therefore, the domestic authorities failed to secure to the applicant the respect for his private life, to which he was entitled and there had been a violation of Article 8.[68]

Moving up to the issues of sexual and biological choice, one needs to mention the *Evans v. United Kingdom* judgement of 7 March 2006 concerning the withdrawal of consent of her former partner ('J') to the continued storage of the embryos or use of them by the wife after a separation. The Court saw no violation of Article 8 but it did recognise for the first time an explicit liberty-right to have or not to have children.[69] In the appeal judgement of 10 April 2007 the Grand Chamber confirmed the judgement. The Grand Chamber noted that Ms.

[68] Similar stands were taken by the Court in Paulik v. Slovacia (10 October 2006) and Tavlic v. Turqui (9 November 2006).

[69] "The Court agrees, since "private life", which is a broad term, encompassing, inter alia, aspects of an individual's physical and social identity including the right to personal autonomy, personal development and to establish and develop relationships with other human beings and the outside world (Pretty, § 61), incorporates the right to respect for both the decisions to become and not to become a parent" (par. 57).

Evans did not complain that she was in any way prevented from becoming a mother in a social, legal, or even physical sense, since there was no rule of domestic law or practice to stop her from adopting a child or even giving birth to a child originally created in vitro from donated gametes. (Her complaint was, more precisely, that U.K. legislation prevented her from using the embryos she and J created together, and thus, given her particular circumstances, from ever having a child to whom she was genetically related).

Central in the reasoning of the Court in *Evans* is its reliance of the notion of personal autonomy first recognized in the 2002 *Pretty v. United Kingdom* judgement. Before the Court the question was put whether the right to private life encapsulated a right to die with assistance for persons paralysed and suffering from a degenerative and incurable illness. Pretty alleged that the refusal of the Director of Public Prosecutions to grant an immunity from prosecution to her husband if he assisted her in committing suicide and the prohibition in domestic law on assisting suicide infringed her rights under Articles 2, 3, 8, 9 and 14 of the Convention. The right was not recognized, but par. 61 of the Judgement contains a relevant and broad recognition of an identity right based on the principle of personal autonomy:

> As the Court has had previous occasion to remark, the concept of "private life" is a broad term not susceptible to exhaustive definition. It covers the physical and psychological integrity of a person (X. and Y. v. the Netherlands judgment of 26 March 1985, Series A no. 91, p. 11, § 22). It can sometimes embrace aspects of an individual's physical and social identity (Mikulic v. Croatia, no. 53176/99 [Sect. 1], judgment of 7 February 2002, § 53). Elements such as, for example, gender identification, name and sexual orientation and sexual life fall within the personal sphere protected by Article 8 (see e.g. the B. v. France judgment of 25 March 1992, Series A no. 232-C, § 63; the Burghartz v. Switzerland judgment of 22 February 1994, Series A no. 280-B, § 24; the Dudgeon v. the United Kingdom judgment of 22 October 1991, Series A no. 45, § 41, and the Laskey, Jaggard and Brown v. the United Kingdom judgment of 19 February 1997, *Reports* 1997-1, § 36). Article 8 also protects a right to personal development, and the right to establish and develop relationships with other human beings and the outside world (see, for example, Burghartz v. Switzerland, Commission's report, *op. cit*., § 47; Friedl v. Austria, Series A no. 305-B, Commission's report, § 45). Though no previous case has established as such any right to self-determination as being contained in Article 8 of the Convention, the Court considers that the notion of personal autonomy is an important principle underlying the interpretation of its guarantees.

We do not think that conceptually all is clear in the case law of the European Court. In *Pretty* autonomy is considered a 'principle' and physical and social identity are issues of which 'aspects' are sometimes protected by the right to private life. In their joint dissenting opinion to *Odièvre v. France* judges Wildhaber, Bratza, Bonello, Loucaides, Cabral Barreto, Tulkens and Pellonpää consider autonomy and identity to be 'rights': "We are firmly of the opinion that the *right to an identity*, which is an essential condition of the right to autonomy (see *Pretty v. the United Kingdom*, no. 2346/02, § 61, ECHR 2002-III) and development (see *Bensaid v. the United Kingdom*, no. 44599/98, § 47, ECHR 2001-I), is within the inner core of the right to respect for one's private life" (par. 11 of the Opinion).

Hence persons have a right to autonomy and (personal) development, rights that cannot exist without the recognition of a right to identity. Paragraph 29 of the *Odièvre v. France* judgement nicely illustrate our point about the sloppy conceptual analysis that seems to have no other rationale then to show how tightly identity, development and autonomy are connected. In this paragraph identity and development are first presented as two separate rights. Subsequently however the same paragraph seems to suggest that identity is a 'matter of relevance' to development.[70]

[70] "The Court reiterates in that connection that "Article 8 protects a right to identity and personal

With the recognition of rights to autonomy and personal development, it becomes apparently much easier to have sexual identities recognized (Grigolo, 2003). In *Bensaid* the Court holds that "that elements such as gender identification, name and sexual orientation and sexual life are important elements of the personal sphere protected by Article 8" (par. 47)

Interesting is the case of *K.A. and A.D. v. Belgium* concerning people engaging in sadomasochistic practices. The conviction of these persons by the Belgian authorities was upheld by the Court in its judgement of 17 February 2005, not because they had engaged in sadomasochistic acts as such, but because they dit this while drunk and with great risk for the women involved. The judgement can be read as a standard text on sexual freedom. Notwithstanding some conservative objections (Fabre-Magnan, 2005), it is an example of wise and sober legal reasoning. The Court derived the right to engage in sexual relations from the right of autonomy over one's own body. This right forms an integral part of the notion of personal autonomy, which could be construed in the sense of the right to make choices about one's own body. It follows that the criminal law could not in principle be applied in the case of consensual sexual practices, which were a matter of individual free will. Accordingly, there had to be "particularly serious reasons" for an interference by the public authorities in matters of sexuality to be justified for the purposes of Article 8 § 2 of the Convention (par. 84).

In case *Smirnova v. Russia* a complaint was raised about the withholding of an identity card ('internal passport') by the Russian police. Yelena Smirnova's national identity card was taken away from her when she was arrested on 26 August 1995. Domestic law provided that the identity card had to be returned when an individual was released from detention on demand. This did not happen. The card was withheld until 6 October 1999. From December 1997 on several firms refused to employ Smirnova because she did not have an internal passport; she was refused free medical treatment and notarial deeds because of not having her internal passport. For the same reason, the Moscow Telephone Company had refused to install a telephone line in her home. The registration of her marriage was refused and when stopped by a police patrol for an identity check, she had been taken to a police station and had had to pay an administrative fine, because she had been unable to produce the passport. In its judgment of 24 July 2003 the Court underlined the direct relationship between the official duty to identify as a citizen and the right to private life. The Court noted that the interference with Smirnova's private life was peculiar in that it allegedly flowed not from an instantaneous act, but from a number of everyday inconveniences taken in their entirety (par. 96). The Court found it established that in everyday life Russian citizens often had to prove their identity, even when performing certain mundane tasks. Moreover, the internal passport was required for more crucial needs such as finding employment and obtaining medical care. There had therefore been a continuing interference with Smirnova's private life. Since the Government had not shown that the failure to return it on Smirnova's release had any basis in law, the Court found a violation of Article 8 of the Convention.

The overall image of this survey of the European case-law is that of a well-protected right to identity aspects such as gender identification, name and sexual orientation and sexual life. The broad recognition of data protection issues as covered by Article 8 equally contributes to

---

development, and the right to establish and develop relationships with other human beings and the outside world. ... The preservation of mental stability is in that context an indispensable precondition to effective enjoyment of the right to respect for private life" (see Bensaid v. the United Kingdom, no. 44599/98, § 47, ECHR 2001-I). Matters of relevance to personal development include details of a person's identity as a human being and the vital interest protected by the Convention in obtaining information necessary to discover the truth concerning important aspects of one's personal identity, such as the identity of one's parents (see Mikulić v. Croatia, no. 53176/99, §§ 54 and 64, ECHR 2002-I)" (par. 29 of the Odièvre v. France judgement).

the strength of the European human rights machinery. In their already mentioned joint dissenting opinion to *Odièvre v. France* judges Wildhaber, Bratza, Bonello, Loucaides, Cabral Barreto, Tulkens and Pellonpää go as far as to consider the right to identity as a core aspect of one's private life:

> Thus, certain aspects of the right to private life are peripheral to that right, whereas others form part of its inner core. We are firmly of the opinion that the *right to an identity*, which is an essential condition of the right to autonomy (see *Pretty v. the United Kingdom*, no. 2346/02, § 61, ECHR 2002-III) and development (see *Bensaid v. the United Kingdom*, no. 44599/98, § 47, ECHR 2001-I), is within the inner core of the right to respect for one's private life. Accordingly, the fairest scrutiny was called for when weighing up the competing interests (para. 11 of the Opinion).

6.8 Will privacy do?

In an article published in 2002 Stan Karas discusses modern use of consumer databases and developments towards exhaustive consumer profiles (Karas, 2002). Although there are many theoretical shortcomings in the contemporary privacy discourse, popular understanding of these issues in terms of privacy is correct, Karas holds, since privacy needs to be understood as control over information that is expressive of one's identity. Privacy, protecting information about difference, is the proper rationale behind demands for protection of information concerning our identities, for example our consumer identity.

The foregoing shows that many identity issues can be brought under the scope of the privacy right in the European Convention. At a more global level this approach is not wholly satisfactory, since not all constitutions recognize an explicit right to privacy comparable with Article 8 ECHR. Moreover privacy may not be the ideal partner for those that are in favour of protecting (better) identity. Indeed, privacy and security concerns are often framed in terms of fraud and abuse; privacy is formulated as a negative right, whereas identity has also to do with positive freedom (Hildebrandt, 2008a). Of course there is the expanding case law of the European Court of Human Rights concerning the positive obligations under the European Convention (Mowbray, 2004). In the area of Article 8 ECHR these positive obligations require many different forms of action by member states, ranging from the protection of persons from sexual abuse, the official recognition of transsexuals and of choice of names, access to official information, establishing paternity to facilitating the traditional lifestyle of minorities (Mowbray, 2004). Again it is not entirely clear whether all identity aspects are protected by these positive obligations. Equally, there is in general no parallel to this development towards recognition of positive human rights obligations outside Europe.[71]

At a more fundamental level we see a problem resulting from the perception that privacy has a plain political dimension. Privacy is understood by many as a liberal right and is challenged on this basis. Intimately tied to the idea of personal freedom, privacy is a pivotal legal instrument created in Western legal systems for the sake of individuals to challenge actions by others that affect them in an undesirable way. Combined with the idea of the rule of law (as opposed to the idea of the rule of God or the rule of the Family) it feeds the liberal principled stance that the individual is (rather should) be free from environmental pressure while constructing his identity. Although very few liberal thinkers deny actual dependencies of the individual,[72] this principled stand is heavily criticised by communitarian inspired voices stressing the need to understand the building and functioning of the individual within a larger

[71] The case for a positive concept of negative freedom is made by many authors. For an overview of literature, see (Sen, 1987: 57).

[72] See for a critical examination of the debate on liberal individualism and the false sense of unity given to liberal thought: (Bird, 2007).

context of cultural and other values that exist at a certain moment in time and at a certain point in time. In this perspective liberalism is criticised because of its inability to understand the dynamics of recognition.[73] Rights such as privacy are targeted upon specifically (Etzioni, 1999; Van den Hoven, 2000 & 2001; Nock, 2000). Like property rights, it is perceived by many as a liberal value, standing in the way of realising the good of the community or the public good.[74] This critical view on privacy explains, for instance, why Amitai Etzioni in *The Limits of Privacy* in almost all the case studies that the book contains, -sex offenders; HIV testing; medical records; ID cards; encrypted communications, etc.-, concludes that privacy ought to yield because upholding it would impact negatively on public health and safety.

Calling the privacy right in might stand in the way of effective protection of identity. Past experiences regarding the recognition of anonymity might illustrate my point. The proper role of anonymity and its position in Western law is not very clear. Only recently it has been picked up as a research theme. The importance of anonymity has been highlighted in a number of workshops and studies carried out in recent years (De Hert and Gutwirth, 2003). There is a strong tendency in European literature to consider anonymity as an asset of a broader privacy right. However, once anonymity is labelled a privacy issue, then a lot of issues are lost in the discussion, e.g. the freedom of expression-related issues regarding anonymity. Issues are not only lost, but the old bias against privacy is then mobilised to the detriment of the anonymity issues at stake. I foresee a similar fate for the discussion regarding identity.

6.9 Might other rights tackle identity issues unrelated to privacy?

Hence, privacy may not be the strongest perspective on problems regarding identity. Some therefore turn to data protection as a distinct, more effective and neutral perspective on contemporary issues raised by new technology (Van den Hoven, 2000 & 2001).[75] Although there are strong arguments in favour of distinguishing between privacy and data protection (De Hert and Gutwirth, 2005), this does not seem to be the right approach. There is simply too much at stake with identity in contemporary society (Halperin, 2006). Many existing identity issues are not related to privacy and not directly to the Internet of things. There is, for instance, an identity issue when homosexuals seek anonymous contact with others fearing that overtly homosexual contacts might be harming their professional prospects. Is this a privacy issue? A liberty issue? A freedom of movement issue? What to think about family names? We see hardly any privacy issue in the debate around the choice of family names, for instance at the moment of marriage.[76] There is nothing more public than a family name and it is therefore hard to equal claims for more flexibility in having one's name changed with privacy claims. Another identity issue that has broader implications is the issue of sexual identity and choice.[77] Again we see more in these issues than just privacy issues. The illustrations do not stop here. Consider also the following identity-related issues and debates.

- Recognition of a right to oblivion ('droit à l'oubli'), i.e., a right to have erased from memory certain facts (Pousson, 2002b: 385). The tension between the right to oblivion

[73] On 'identity disregard' see (Sen 2006: 32-39).
[74] About the individualistic, even egocentric principle underlying the privacy rights: (Pousson, 2002a: 539).
[75] See on the issue of anonymity and data protection: (Pousson, 2002b: 385-394).
[76] See on the differences in legal regimes of the European Member States: (Pousson-Petit, 2002: 762 and following); (Lemouland, 2002).
[77] About the conceptual mutations with regard to gender, female and masculine sexual identity, and hetero and homosexual identity, Pousson-Petit, 2002 and some concern about ultra subjectivist and individualist claims. See equally Lemouland (2002: 669).

and the right to remembrance ('droit à la mémoire') is of course very clear in the Internet of things, where actors are unwilling to delete data after certain periods, even though data protection principles requires them to preserve data for no longer than is required for the purpose for which data is stored (Warner, 2005). The recognition of such a right would without doubt be a powerful instrument against developments towards a society modelled after Kafka's *The Trial* where nothing is forgotten. The debate about the existence and scope of a right to oblivion predates the Internet of things. Lemmens insists on the difference between this right (under construction) and the right to privacy (Lemmens, 2002). Most of the time conflicts concern public facts (for instance, persons involved as victims or witnesses in crime) that are not protected by privacy rights.

- Biomedical implants (Warwick, 2002; see also Chapter 5, above).
- Ethno-screening: governments are increasingly turning (back) to ethnic sorting of people to allocate help and benefits, but also to affect them negatively (use of profiles in police work) (Prins, 2006; Pousson, 2002b). Companies are discovering ethnical marketing (Prins, 2006).
- Enhanced testing of newborns and ethno-screening with the purpose of avoiding health-risks (Krimsky and Shorett, 2005; Prins, 2007). Medical ethno-screening and use of health profiles triggers the debate about the right to know and not to know. Undoubtedly the availability of knowledge concerning future health problems and life expectations will influence our perception of our identity. Crucial with regard to this is the potential interest in this type of information for immediate third persons (e.g. family members of an individual) and distant third persons (e.g. governments, insurance companies, etc.) (Prins, 2007).
- Conception outside the body (Krimsky and Shorett, 2005) and about giving birth anonymously (Wenner, 2002; Achille, 2002; Michaux, 2005).
- Human enhancement, for instance towards extreme life prolongation (Krimsky and Shorett, 2005).[78]
- Statelesness (Van Waas, 2008) and dual nationality (Kuitenbrouwer, 2004; Pennarun, 2002: 520 and following).
- Right to cultural identity (*below*).

What strikes us when overseeing these issues is the complexity of the balancing that they demand. One simple balancing act will seldom do and the outcome of the balancing act will change over time.[79] Some of these issues arise from individuals claiming more freedom to make their own life choices. Apparently these claims meet with a growing success. In a seemingly ever expanding manner legal instruments are recognised that allow individual to influence aspects of their identity: break the chains of filiations, modifying names, drop nationalities and transform sex (Pousson, 2002a: 529). These claims are not wholly unproblematic. Some therefore insist on the need for careful consideration when balancing and the need to understand the danger of destabilising legal identity (civil identity) (Christians, 2002: 67-69) or identity in general. Quite often reference is made to Charles Taylor's treatment of the struggle for recognition in Chapter 5 of *The Malaise of Modernity*. We already touched upon bits of Taylor's analysis above. In *The Malaise of Modernity* Taylor holds that total subjectivism, doing away with criteria of difference, renders impossible the construction of personal identity. Being able to recognize differences and self-choice, requires a shared horizon of meaning and values. It is through social confrontation and legal

[78] See on issues of successive selves, successive different persons inhabiting the same body (Harris, 2007).

[79] In the nineties dual nationality was seen as a positive instrument for integration by the Dutch government, whereas today it is seen as an obstacle for integration: (Jessurun d'Oliveira, 2004).

confrontation that the elements of what constitutes criteria for identity become discernable (Taylor, 1991: 91).

Not all identity issues can be brought back to the position of the modern individual claiming more personal choice. In these other areas the balancing problems remain as delicate. Take for instance the issue of recognition of cultural identities and minoritarian identities ('identités minoritaires') in international human rights law (Otis, 2002). The recognition of rights for indigenous people might be an important instrument to safeguard cultural diversity of mankind. The protection of cultural identity has been included in several instruments such as Article 30 of the 1990 International Convention on the Rights of the Child and Article 25 and 27 of the International Covenant on Civil and Political Rights.[80] However beneficial these provisions might be for the benefit of our idem identity, the question whether a separate right to cultural identity needs to be adopted remains highly controversial. Some convincingly argue that such a development towards a separate right to cultural identity is neither desirable nor necessary. It is not desirable because translating the vague and general concept of cultural identity into a right would risk abuse or suppression of individual rights and freedoms within a cultural context (Donders, 2002). It is also not necessary because existing cultural rights in the broad sense already offer possibilities to protect cultural identity (Donders, 2002).

Consider also the issue of double nationality. Governments do not like it for all sorts of "sorting" reasons but quite often the people that have it take great pride in it. The old legal framework is therefore the object of debate. The Council of Europe's Convention on the Reduction of Cases of Multiple Nationality (Council of Europe 1963) is part of the body of international law whose purpose is to minimize conflicts of laws among states arising from differing nationality laws. In consideration of increasing numbers of permanent resident aliens and increasing numbers of mixed marriages, a new protocol has been adopted that gives parties to the convention the option to permit dual nationality in certain cases (Council of Europe 1993). Several European states have ended their prohibition of dual nationality for those who naturalize and the advocacy of allowing dual nationality in other European states is not expected to stop, since dual nationality, however cumbersome for states, offers many advantages for the individual, not in the least on the affective side (Jessurun d'Oliveira, 2004; Donner, 2004; Martin and Hailbronner, 2003; Koslowski, 1995).[81]

I join Corien Prins when she states that we witness many new developments that can have an impact on our understanding of identity and call for new balancing of interests (Prins, 2007). One can try, Prins writes, to link this balancing to established rights and concepts such as privacy, liberty, autonomy and discrimination, but 'my feeling is that we just do not get there', unless we recognise a explicit right to identity as an aspect of the human dignity right in the EU Charter of Fundamental Rights (Prins, 2007).

6.10 Characteristics of the right to identity under construction

When considering the elaboration of a new right to identity several considerations have to be taken into account. Such a right should be distinguished clearly from the classical or first generation (shielding) human rights, such as privacy. Upholding identity is not only an issue

[80] Article 27 of the International Covenant on Civil and Political Rights provides that, in those States in which ethnic, religious or linguistic minorities exist, persons belonging to these minorities shall not be denied the right, in community with the other members of their group, to enjoy their own culture, to profess and practise their own religion, or to use their own language.

[81] Belgium is planning to withdraw from the Council of Europe's 1963 Convention, at least from Chapter I of the Convention, in order to allow dual nationality for those Belgians that acquire another nationality on a voluntary basis. See already Article 386, 1° and 2° of the Law containing miscellaneous provisions published in the Moniteur Belge, 28 September 2006.

of shielding persons against intrusions by governments and other actors, but also an issue of making identity formation possible. A formulation of an identity right as a first generation human right would not pay enough respect to the positive nature of the relationship between ipse and idem identity. Above we observed that identity needs to be understood in dynamic terms, necessitating a mix of negative and positive freedom to reconstruct one's identity in the course of time (Hildebrandt, 2008a. This double tension of personal identity (mêmeté-ipseité) should therefore not be ignored, as is the case in much legal literature (Christians, 2002: 66). Mordini and Ottolini rightly stress the positive aspects of 'official' or civil identity (parts of idem identity) by referring to a UNICEF study (2000) calculating that 50 million babies (41% of births worldwide) were not registered and thus without any identity document. They equally single out that countries such as Pakistan, Bangladesh and Nepal have not yet made mandatory child registration at birth (Mordini and Ottolini, 2007 with ref.).[82] Of course specific human rights are already in place coping with this problem,[83] but the point we are making is of a more general nature and does not only consider children. Civil identity is essential to all to ensure respect for fundamental rights (Massimo & Capprino,2009). Human rights are unthinkable without "identifiable people". "One can be entitled with rights only if he has an identity. No political, civil and social right can be enforced on anonymous crowds. Even the right to anonymity can be enforced only if one has an identity to hide" (Mordini and Ottolini, 2007: 52).

We agree with Mordini and Ottolini about the importance of civil identity, but we like to broaden up the argument to cover the entire idea of idem identity of which civil identity is only a part. With Taylor, Nys and others (*above*) we have argued that one needs the outside world to build up his or her personality. The self is in need of the objectification that stems from comparative categorisation. For a person to have a meaningful life he should engage in projects that he autonomously endorses, but which are objectively valuable. Hence, the legal recognition of identity as a right should encompass both ipse and idem identity, negative and positive freedom and concepts of rights, individual and social components.

Can and should such a separate right be further developed within the framework of international human rights law? Undoubtedly such recognition would be consistent with the human rights perspective defended by Amartya Sen and Martha Nussbaum in their mutual and respective work. People cannot function without an identity. To have an identity is like living, breathing, having a healthy life, to be able to feel and think. These capabilities are minimal requirements for social justice and human rights (Sen, 1987; Nussbaum, 2001 & 2007). The recognition of identity as a human capability that deserves our concern seemingly paves the way for a straightforward recognition of identity as a right protected by international human rights law.

Legally speaking, and at a more technical level, it is possible to conceive such a right as an asset of the right to human dignity recognized in Article 1 of the 2000 EU Charter of Fundamental Rights (Prins, 2007).[84] A second option is to use as a model Article 8(1) of the

---

[82] See on children without name or official identity: (Mirabail, 2002); (Paruta and Pousson, 2002); (Abomo, 2002); (Laroche-Gisserot, 2002).

[83] The right to have a nationality for a child, from his birth, is enshrined in several international human rights instruments (Pennarun, 2002: 512 and following), such as article 24 of the International Covenant on Civil and Political Rights, article 7 and 8 of the 1990 International Convention on the Rights of the Child, article 15 of the Universal Declaration of Human Rights and article 4 of the 1997 European Convention on Nationality. These instruments recognize both a right not to be deprived of the nationality and a right not to be deprived of the right to change your nationality (See for a treatment of both rights (Pennarun, 2002: 512-518)).

[84] See on the dignity of personal identity as one out four major meanings of dignity, the research

1990 United Nations Convention on the Rights of the Child: *States Parties undertake to respect the right of the child to preserve his or her identity, including nationality, name and family relations as recognized by law without unlawful interference*. This unique provision is not present in any other international (or regional) human rights treaty. The Convention does not define identity and limits itself to a non-exhaustive list of elements of the child's identity. But these listed elements are already protected by other articles of the Convention. More generally, one can say that protection for elements such as name and family is already provided for by many provisions of international human rights law (Doek, 2006: 11). The right to be registered immediately after birth is contained in Article 7 and 24 of the Convention. One can also refer to Article 16 of the Convention concerning the right of everyone to recognition as a person before law. Hence, the question arises what the other elements of a child's identity could be?[85] Doek suggests that one needs to think about the right to be informed about biological origins (Doek, 2006: 11-13). One can however challenge the necessity to resolve this issue through the recognition of a general right to identity. Is this the appropriate way to achieve the subtle balancing that is needed in each specific issue regarding identity? Above we discussed briefly the need to recognize a specific right to cultural identity and the view of some that a development towards a separate right to cultural identity is neither necessary (existing cultural rights already offer possibilities to protect cultural identity) nor desirable because translating a vague and general concept into a right would risk abuse or suppression of individual rights and freedoms within a cultural context. The same observation can be made about a general right to identity to develop within the current international human rights framework. Where will such a right bring us?

The recognition of a legal right to identity might have undesirable consequences in an era full of clamour for recognition and respect of collective identities such as race, ethnicity, nationality, religion, gender and sexuality. Contemporary anthropology challenges the concept of a "normal" identity in opposition to dissociated, complex identity, which has been - and often still is - seen as something pathological. People are not only different to one another, but they are also different within themselves. They are the object of incessant variations. They have dissociated identities built upon internal contradictions and opposing forces. The person exists but is not unified and it would therefore be very problematic to encapsulate him or her in fixed screenplays that do not take into account this fluid and complex dialectic (Boumard, Lapassade and Lobrot, 2006).

The creation of a new specific right to identity might strengthen sensibilities that are already overstretched in many regards (Balibar and Wallerstein, 1991). Take for instance Huntington's famous clash of civilisation perspective. Although far from being entirely wrong,[86] it focuses our attention on the retreat in many parts of the world into cultural

---

project 'Dignity and Older Europeans' coordinated by Win Tad (Departement of Geriatric Medicine, Cardiff University, Cardiff, UK) discussed in (Van Steendam, 2006: 773).

[85] A second question pertains to the limiting qualification 'as recognized by law' in Article 8(1). It is not fully clear whether this clause should be linked to 'identity' or (only) to family relations'. In the former case this would exclude important psychological or ipse identity elements that are nevertheless worthy of protection.

[86] In his book *The Clash of Civilisations*, Huntington claims that after the Cold War politics are dominated by conflicts between civilizations and cultures. These powers will trump the integrating forces of globalization and make people define their loyalties no longer on ideological grounds but on ties of religion, ethnicity and shared history. Politicised religion everywhere in the world and American neo-conservatism are indicative for many that Huntington's clash of civilizations hypothesis has been proven right by events. The broad rise in religious energies and identity, particularly notable in the Muslim world, affects most legal systems. Maroccan law on naming and nationality does not allow 'non-Maroccan' first names and refuses to grant nationality to people with such names. This

stereotypes, identity politics and politicised religion and seemingly obstructs our understanding of other, probably more fundamental, dynamics such as economic globalisation and the Internet that open up new channels of connectedness beyond these, more primitive communities to which people retreat in times of trouble or crisis (Fukuyama, 2007).[87]

Equally there is the argument for personal freedom. Without rejecting the value of collective identities, there should not be a mistake about their potential to constrain individual freedom and the ability to make an individual life, and to what extent they enable our individuality (Appiah, 1994 & 2005; Gutwirth, 1995; Sen, 2006). A boundary is crossed, Appiah observes, when I am asked, as a black homosexual living in the States, to organise my life around race or sexual preferences. Between politics of recognition and politics of coercion there is no clear bifurcation (Appiah, 1994: 160). Amy Gutmann recognises these risks but her approach is more nuanced since identity groups aid as well as impede democratic justice and the freedom of their members. Identity groups are not good or bad in themselves, but should be evaluated according to what they publicly pursue and express, granted that they might never be elevated above basic individual rights and that their group identity is neither comprehensive nor immune from identification (Gutmann, 2003).

Whenever the recognition of a general right to identity in law would contribute to such a perspective and heighten the tensions between personal and collective identities, such as those shaped by religion, gender, ethnicity, race, and sexuality, there is reason to oppose it (Gutwirth, 2009). It would then bring us far away from the ideas behind Nussbaum's capability approach. Identity is a human capability. It is all about what people can do and can be. It is a liberty asset in the sense that it allows people to be capable. What needs to be guaranteed is that people are capable to function as humans. There is no necessity to guarantee that people function in a certain way. If that is a consequence of the recognition in law of a right to identity, I would suggest not pursuing this path and to look for other instruments to protect the human person in the Internet of things.

However there is no reason to go that far. Identities do not only emerge from life choices, such as marriage, employment, a hobby, but also (or mainly) from the experience of being raised by particular parents; from belonging to a particular family, religion, or social class. There is nothing wrong in asserting this and to note that most people take these "anchored identities" seriously, although some of us might seak more cosmopolitan or professional identities (Selznick, 2000). So let us take identity serious, without privileging unnecessarily some of its elements. Authors like Gutmann and Ingram have convincingly argued that identity politics are an unavoidable feature of liberal democracy. In democratic politics, identity groups are particularly important because numbers count, and stigmatised or negatively stereotyped individuals acting alone are relatively powerless to effect change (Gutmann, 2003). But identity politics are more than just a question of strategy; it is a tenet of modern life. Our humanity, Ingram notes, has become lost in the jungle of identity politics and each of us is positioned with respect to numerous points of view reflecting numerous group and individual identifications (Ingram, 2004). Free people have multiple and alterable identities, and except under conditions of tyranny, (most) group identities are best conceived

---

limits considerably the choice of names for mixed Belgium couples: if they want to have their children to enjoy the benefits of dual nationality (Maroccan and Belgian), they will have to register their children with Maroccan names in Belgium (Van Den Broeck, 2007). The identity consequences are evident.

[87] Compare Wendy Hamblet's position on the U.S. invasion of Iraq: "Rather, the rhetoric of "clashes of civilizations" and conflicting "identity politics" may offer a convenient smokescreen to mask the stark fact of the continuing capitalist plunder of the world" (Hamblet, 2005). See on Huntington's clash of civilisation perspective as a dangerous self-fulfilling prophecy: (Balibar, 2006).

as multiple and fluid, since they do not comprehensively determine the identities of individuals (Gutmann, 2003). Mouffe (2000) needs only a few pages to solve 'the question of identity': we need to break with the category of the subject as a rational transparent entity able to convey a homogeneous meaning on the total field of her conduct by being the source of her actions. "The history of the subject is the history of her identifications and there is no concealed identity to be rescued beyond the latter. Because there is a lack of identity, the subject will always attempt to fill out its constitutive lack by means of identification" (Mouffe, 2000: 147). Identity politics are here to stay and 'populist parties' will not refrain from putting it on the agenda, so accommodate it and do something with it if you want to create political change in a democracy depending on majority voting. [88]

In light of the foregoing, several options exist with regard to a specific right to identity. A broader understanding of the concept of identity does not imply necessarily that one should avoid it or go beyond it. One can recognize it at the level of ethics, for instance by recognizing it in the Unesco's *Code of Ethics for the Information Society* that is now in a preparatory phase.[89] More specifically, unambiguous legal rights could be added on top of that when it turns out that existing rights such as privacy are insufficient. Concrete proposals for such rights in the area of the Internet of things are discussed by Poullet and Dinant (2006), whereas proposals regarding genetic developments are nicely presented under the banner of a 'Genetic Bill of Rights' by Krimsky and Shorett (2005).

Another option is to go one step further and draft a specific legal right to identity with a general stretch. We have attempted to draft one above (our opening quote) and we pray that the inclusion of both ipse and idem identity may serve as constant reminder of the complexity of identity.[90]

---

[88] "By limiting themselves to calls for reason, moderation and consensus, many democratic parties are showing their lack of understanding of the functioning of political logic. They do not understand the need to counter their adversaries by mobilizing affects and passions in a progressive direction. What they do not realize is that a democratic politics needs to have a real purchase on people's desires and fantasies and that, instead of opposing interests to sentiments and reason to passions, it should offer principles of identification which represent a real challenge to the ones promoted by the right. This is not to say that reason and rational argument should disappear from politics but that their role must be re-thought. instance, the sterile opposition between rhetoric logic must be discarded in favour of a conception of argumentation that takes into account the nature of hegemonic articulatory practices" (Mouffe, 2000: 148).

[89] See www.unesco.org/webworld/en/ethics-humanrights-informationsociety. See also: http://portal.unesco.org/ci/en/files/24935/11841676611Code_of_Ethics.pdf/Code+of+Ethics.pdf.

[90] Compare with Yofi (2009). This author, out of a similar concern for individual freedom, rejects current legal thinking based on identity and proposes an alternative theoretical framework, more capable of capturing the vulnerability and complexity of appearance as part of the universal human experience, by focussing on the notion of personhood. This approach, the author holds, can transform the legal discourse from considering identity in the abstract to accommodating the experiences, voices, and interactions of concrete, embodied individuals, who may not always be able to articulate a rational justification for their appearance, but are still certain of its central role in their personhood.

7 Conclusion

In this concluding chapter, rather than reproducing this report's contents in the form of a summary (for that, we refer to the Executive Summary, above), we will take up one of the challenges formulated at the end of FIDIS deliverable 7.14a, concerning the issue of how to assess whether a technology is likely to be helpful in creating practices of freedom. We refer to the list of points taken from Foucault's analysis of power relations (Foucault, 1982: 223-224). The analysis undertaken will necessarily be brief in order to highlight what is pertinent about the impact of profiling for *idem* and *ipse* identity. For this reason we focus on the system of differentiations generated by the profiling practices discussed in the chapters above and briefly discuss how these differentiations may impact the construction of one's *ipse* identity. We recall Bateson's (1972) famous proposition that we need to figure out 'the difference that makes a difference'.

Trust-enhancing tools for profiling

In the chapter on the development of 'Trust-enhancing tools for profiling', the basic differentiations are those between **trustworthiness** and fraudulence. This concerns both the trustworthiness of the consumer as calculated by profiling software (e.g. in the case of credit scoring) and the trustworthiness of the way in which a service provider uses profiling technologies for customer screening. What should concern us here is how the mutual trust that is the basis for sound relationships between an organisation and its clients or constituents is influenced by the fact that the organisation uses sophisticated computer-mediated techniques to establish the trustworthiness of the client/constituent, while end users have few means to counterprofile how they are being assessed.

The concepts of *idem* and *ipse* clarify that being profiled as an untrustworthy client, though merely an identification of sameness (clients like you have turned out to be untrustworthy), the profile will actually impact a person's *ipse*-identity. In as far as a person recognises the categorisation, she may start profiling herself as untrustworthy and be less serious about paying her debts in time. In as far as a person does not recognise the profile, she may resist being profiled as such and stop trusting the organisation that used the profile or make an extra effort to display the characteristics of a trustworthy client. However, in as far as she does not have knowledge of why she was profiled as potentially fraudulent, she may not know how to improve her reputation, leaving her with a sense of self (*ipse*-identity) that is incongruent with the categorisation (*idem*-identity) attributed by to her by the environment.

Idem and ipse in the context of the Social Web

In the chapter on 'Idem and ipse in the context of the Social Web' we see that online identities are continuously being rearticulated in the flux of a dynamic social environment, producing a novel type of differentiation around the concept of **online reputation**. In this case it seems that end users have many ways to create, sustain and nourish the reputation of their online identities, though they may not be able to ward off the negative impact of how others 'profile' them on their reputation. This may in fact also concern their offline reputation. The profiling that produces the difference between a good and bad reputation is partly a matter of ordinary human profiling, without the use of data mining techniques. However, organisations using automated profiling, e.g. justice authorities, employers, real-estate agents, or insurance companies, may use data mining in the Social Web to target potential suspects, employees, or consumers with a high earning capacity or serious health problems.

Developing one's virtual identity by mixing, integrating, rejecting and playing around with a

variety of *idem*-identities in different social networks creates a sense of freedom. It seems to generate a continuous dynamic reconstruction of one's projected *ipse*-identity, providing ample opportunities to look back at one's self as one has presented 'it' in diverse online environments. Though many users may not yet be aware of how their online *idem*-identity could impact their reputation also in offline environments, most users have at least a basic capability of anticipating how they will be profiled by their peers. However, once commercial enterprises or government authorities decide to use the information leaked on these sites to initiate targeted servicing, or to collect and analyse online behaviours, reputation may become much more vulnerable. Since reputation is an integral element of the construction of a person's *ipse*-identity, this could actually disempower users instead of providing them with novel freedom.

Identities in virtual worlds

One of the issues explored in the chapter on 'Identities in virtual worlds' is how these novel worlds generate **digital cultures** that entail both digitised existing cultural objects and novel, digitally created cultural objects. It seems that virtual worlds produce a global content that is instantly interpreted within a rich diversity of local settings that may however be local in a non-geographic sense. A local interpretation of global content may also refer to the digital context of a specific game in which specific interpretive communities develop a 'local' digital culture, even if it is globally accessible. The differentiations produced in this process concern a set of emerging characteristics: interactivity and personalisation, interconnectivity, complexity, merging of oral and written communication (chatting), speed (of information exchange), intangibility, convergence, unpredictability and multitasking. Together they seem to create the novel differentiation of instant dynamic local interpretation of global content.

Avatars co-create novel digital cultures across geographical borders. Since a person can employ several different avatars, with different *idem*-identities (gender, dress, occupation, physical appearance, character) that may also differ from *idem*-identities incorporated in a person's offline existence, the usage of avatars creates new positive freedom to reconstruct one's *ipse*-identity. Playing around with avatars in different digital cultures actually promotes developing a multi-cultural *ipse*-identity, creating playgrounds to experience difference from a first-person perspective. Like in the case of virtual identities in the Social Web, there is no need to be naïve about the positive freedom generated by virtual worlds. As we have seen in the case of Second Life, businesses and government services will provide incentives for profiling and targeted servicing, which will again impact the construction of one's online identity. This – in itself – is not a problem, but the invisibility of the whole process will entail vulnerabilities, because self-construction can be manipulated if one is not aware of the inferred *idem*-identities on the basis of which one is targeted.

Implants and cyborgs

The chapter on 'Implants and cyborgs' presents the account of an actual cyborg of his experiences as a cyborg. It seems as if the 'ex-human' – or should we say 'posthuman'? – cyborg experiences a novel relationship with the environment that communicates with his implant. In a way, the environment becomes a part of the cyborg, just like Merleau-Ponty's (1962:143) famous example of the woman with a feather on her hat who elegantly bends her head so as to avoid colliding with the door. Just like Merleau-Ponty's woman experiences the feather as an extension of her own body, Warwick seems to experience a new intuitive power over his environment, resulting in a dramatic sense of loss when the implant is removed. Thus one could argue that the novel differentiation produced by the profiling techniques employed to infer Warwick's habits and preferences, concerns a novel differentiation between **self and environment**. Part of the proactive environment seems to become part of the self.

This chapter clearly expresses a novel sense of self, even a novel constitution of self, triggered by a novel technological development (human implants that are interconnected with the external environment). Instead of speculating theoretically about how this affects a human person, the author describes the enormous sense of empowerment generated by the tacit communications between his implant and his office and an artificial hand. It seems obvious that widespread usage of such technologies would create unprecedented potential for manipulation: by 'feeding' specific neurological information into a person's central nervous system, she may develop forms of behaviour over which she has no control whatsoever and experience a sense of self deliberately imputed by whoever controls the input. The novel differentiation between self and environment may enlarge one's repertoire in *idem*-identities, and may even enlarge one's sense of self, but it may also efface the boundaries of the self and dissolve the whole idea of self-constitution.

A right to identity to face the Internet of Things

The last chapter proposes 'A right to identity to face the Internet of Things'. The chapter analyses the relationship between identity and freedom in the era of ambient profiling. It emphasises that classical identifications produce the difference between **citizen and non-citizen** (based on the registration of name, gender and filiations), while the novel identifications afforded by profiling technologies enable a multiplicity of identifications that serve a multiplicity of purposes (from the ID number as a unique identifier to all kinds of categorisation, which allow for all kinds of (price and other forms of) discrimination, including customisation and personalisation). One could say that the chapter suggests that profiling is an engine of novel differentiations, requiring us to investigate to what extent the classical differentiation between citizen and non-citizen still 'works'. The chapter then suggests that the right to identity in the sense of both *idem* en *ipse* is the precondition for the exercise of any other right. It thereby suggests that a more profound difference than that between citizen and non-citizen is at stake, being that between those with and those without an identity that gives them standing in a court of law. The mere fact of being uniquely or categorically identified by profiling software reinforces the need for a right to an identity that allows one to contest the accuracy or the fairness of how one is being identified.

There is one *caveat* to a right to identity. It must never imply that one is actually congruent with this attributed identity. A right to identity should guarantee standing in law, but never overrule the inherently dynamic reconstruction of a person's *ipse* identity. This would impair a person's right to both positive and negative freedom, confusing the *legal persona* with the person of flesh and blood it empowers and protects (Gutwirth, 2009). A right to identity should protect correlatable humans from being petrified as correlated data sets; it should provide a person with the possibility to contest the application of such correlated data sets in a court of law (Hildebrandt, 2008b).

This report has delivered an extensive exploration of the different aspects of human (and cyborg) identity that make the use of sophisticated identification and profiling technologies such an important issue. We hope it will contribute to the awareness that first- and third-person perspectives on identity must not be conflated, and how important it is to acknowledge their mutual entanglement in profiling practices.

References

Books and articles

Achille A. (2002) 'L'identité de la personne physique et la notion d'accouchement sous X en Guyane', in Pousson-Petit J. (ed.) *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant, pp. 811-824.

Abomo M.-L. (2002) 'L'inadaptation du système de l'état civil dans les pays d'Afriques noire', in , Pousson-Petit J. (ed.) *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant, pp. 269-282.

Alkassar and Husseiki R. (eds.) (2008) 'Study on the Impact of Trusted Computing on Identity and Identity Management', FIDIS Deliverable 3.9. Available at: http://www.fidis.net/resources/deliverables/hightechid/#c2208

Anderson C. (2004) 'The Long Tail WIRED'. Available at: http://www.wired.com/wired/archive/12.10/tail.html

Appiah K.A. (1994) 'Identity, Authenticity, Survival: Multicultural Societies and Social Reproduction', in Gutmann A. (ed.) *Multiculturalism*, New Jersey, Princeton University Press, pp. 149-164

Appiah K.A. (2005) *The Ethics of Identity*, New Jersey, Princeton University Press

Balibar E. and Wallerstein I. (eds.) (1991) *Race, Nation, Class: Ambigous Identities*, London, Verso

Balibar E. (2006) 'Le retour de la race', *Mouvements.* Available at: http://www.mouvements.info/spip.php?article45

Bartle R.A. (2003) *Designing Virtual Worlds*. Indianapolis, New Riders

Bateson, G. (1972). *Steps to an Ecology of Mind*. New York, Ballantine

BBC News (2008) 'Nasa investigates virtual space'. Available at: http://news.bbc.co.uk/2/hi/technology/7195718.stm

BBC News (2002) 'Video games 'stimulate learning''. Available at: http://news.bbc.co.uk/1/hi/education/1879019.stm

Beer D. and Burrows R. (2007) 'Sociology and, of and in Web 2.0: Some initial considerations', *Sociological Research Online,* Vol. 12, No. 5. Available at: http://www.socresonline.org.uk/12/5/17.html

Bernoff J. and Li C. (2008) 'Harnessing the Power of the Oh-So-Social Web', *MIT Sloan Management Review*, Vol. 49, No. 3

Bird C. (2007) *The Myth of Liberal Individualism*, Cambridge, Cambridge U.P.

Bonk C.J. and Dennen V.P. (2005) Massive Multiplayer Online Gaming: A Research Framework for Military Training and Education. Office of the Under Secretary of Defense (Personnel and Readiness) Readiness and Training Directorate Advanced Distributed Learning (ADL) Initiative Washington, DC

Boumard P., Lapassade G. and Lobrot M. (2006) *Le mythe de l'identité. Apologie de la dissociation,* Paris, Economica-Anthropos

Brouwer E. (2007) *Digital Borders and Real Rights*, Nijmegen, Wolf Legal Pu

Castronova E. (2003) 'On Virtual Economies', *Game Studies,* Vol. 3, No. 2. Available at: http://www.gamestudies.org/0302/castronova/

Castronova E. (2005a) 'Real Products in Imaginary Worlds', in *Harvard Business Review*, May 2005, pp. 20-22

Castronova E. (2005b) 'Synthetic Economies and the Social Question'. Working Paper Series. Available at: http://ssrn.com/abstract=782826

Castronova E. (2006a) 'A Cost-Benefit Analysis of Real-Money Trade in the Products of Synthetic Economies', *Info*, Vol. 8, No. 6

Castronova E. (2006b) *Synthetic Worlds: The Business and Culture of Online Games,* University Of Chicago Press; New edition

Chen K.-T., et al. (2006) 'Game traffic analysis: An MMORPG perspective', *Computer Networks* Vol. 50, No. 16, pp 3002-3023

Chi E.H. (2008) 'The social web: Research and opportunities', *Computer* , Vol. 41, No. 9, pp. 88-91

Childress M., Braswell R. (2006) 'Using Massively Multiplayer Online Role Playing Games for Online Learning', *Distance Education,* Vol. 27, No. 2, pp. 187-196

Christians L.L. (2002) 'Dimensions philosophiques et religieuses des approches juridiques de l'identité', in Pousson-Petit J. (ed.), *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant, pp. 63-92

Custers B. (2009) 'Profiling in Financial Institutions', FIDIS Deliverable 7.16. Available at: http://www.fidis.net/resources/deliverables/ (to appear)

Deal D. (2007) 'Gamer Culture: A Brief History of Community and Digital Games'. Available at: http://www.journalism.wisc.edu/~mjchen/spring2007/david/doom.htm

de Freitas S., Griffiths M. (2007) 'Online gaming as an educational tool in learning and training', *British Journal of Educational Technology*, Vol. 38, No. 3, pp. 535-537

De Hert P. and Gutwirth S. (2003) 'Making sense of privacy and data protection. A prospective overview in the light of the future of identity, location based services and the virtual residence', Institute for Prospective Technological Studies - Joint Research Centre, *Security and Privacy for the Citizen in the Post-September 11 Digital Age. A prospective overview*, Report to the European Parliament Committee on Citizens' Freedoms and Rights, Justice and Home Affairs (LIBE), IPTS-

Technical Report Series, EUR 20823 EN, pp. 111-162.
De Hert P. and Gutwirth S. (2006) 'Privacy, data protection and law enforcement. Opacity of the individual and transparency of power' in Claes E., Duff A., Gutwirth S. (eds.) *Privacy and the criminal law*, Antwerp/Oxford, Intersentia, pp. 61-104
Delwiche A. (2006) 'Massively multiplayer online games (MMOs) in the new media classroom', *Technology & Society*, Vol. 9, No. 3, pp.160-172.
Demick B. (2005) 'South Korean deaths heighten fears of online-gaming obsessions', 2005. augusztus 30. Available at: http://www.freenewmexican.com/news/31885.html
De Sola Pool I. (1984) *Technologies of Freedom*, Cambridge, Harvard UP
d'Oliveira Jessurun H.U. (2004) 'Alweer plannen om de afstandseis bij naturalisatie uit te breiden. Een commentaar', *Nederlands Juristenblad*, Vol. 79, No. 43, pp. 2232-2238
Doek J. (2006) 'Article 8: The Right to Preservation of Identity and Article 9: The Right not to Be Separated from His or Her Parents', in Alen A. et al (eds.) *A Commentary on the United Nations Conventions on the Rights of the Child*, Leiden, Martinus Nijhoff Publishers, 31p
Donders Y. (2002) *Towards a Right to Cultural Identity,* Antwerp-Oxford, Intersentia
Donner R. (2004) 'Rights and Duties of Dual Nationals: Evolution and Prospects', *International and Comparative Law Quarterly*, Vol. 53, No. 4, pp. 1041-1045
Ellison, N., Heino, R.. and Gibbs, J. (2006) 'Managing impressions online: Self-presentation processes in the online dating environment', *Journal of Computer-Mediated Communication*, 11 (2).
Ellul J. (1963) 'Sur l'artificalité du droit et le droit d'exception', *Arch. Phil.dr.*, pp. 20-28
Epstein R. (2007) 'The Truth About Online Dating', *Scientific American Mind*, February 2007
European Commission (2006) *From RFID to the Internet of Things; Pervasive networked systems.* (DG Information Society and Media). Available at: ftp://ftp.cordis.europa.eu/pub/ist/docs/ka4/au_conf670306_buckley_en.pdf
Etzioni A. (1999) *The Limits of Privacy*, New York, Basic Books
Fabre-Magnan M. (2005) 'Le sadisme n'est pas un droit de l'homme', *Recueil Dalloz*, No. 43, pp. 2976-2981.
Fairfield J. (2005) 'Virtual Property', Indiana Legal Studies Research Paper No. 35, *Boston University Law Review*, Vol. 85, p. 1047ff.
Farrell H. (2006) 'Trust, Distrust, and Power', in Hardin R. (ed.) *Distrust*, New York. Available at: http://www.henryfarrell.net/distrust.pdf
Farrell H., Knight J. (2003) 'Trust, Institutions and Institutional Change: Industrial Districts and the Social Capital Hypothesis', *Politics & Society,* Vol. 31, pp. 537-566
Frissen P. (2002) *De Staat*, Amsterdam, Uitgeverij de Balie
Frissen V. and Van Lieshout M. (2003) *Tussen dwang en drang: OOV, ICT en de ontgrenzing van gedrag*, Delft, TNO (download with Google from www.minbzk.nl)
Fukuyama F. (2007) 'The King and I', *The American Interest*. Available at: www.the-american-interest.com
Foucault M. (1982) 'The Subject and Power', in Dreyfus H., Rabinow P. and Foucault M. (eds.) *Beyond structuralism and hermeneutics,* Chicago, Chicago University Press, pp. 208-226
Galarneau L., Zibit M. (2006) 'Online Games for 21st Century Skills'. Available at: http://lisa.socialstudygames.com/Galarneau_Zibit_OnlineGames.pdf
Gallagher S. (2000) 'Ways of knowing the self and the other. Introduction to the special issue on Ipseity and Alterity', *Arobase: Journal des lettres et sciences humaines,* Vol. 4, No. 3, pp. 1-24. Also in Gallagher S. and Watson S. (eds.) (2004) *Ipseity and Alterity: Interdisciplinary Approaches to Intersubjectivity.* Rouen: Presses Universitaires de Rouen.
Di Gennaro C. and Dutton W.H. (2007) 'Reconfiguring Friendships: Social relationships and the Internet', *Information, Communication & Society*, Vol. 10, No. 5, pp. 591ff.
Gervassis N. J. (2004) 'In Search of the Value of Online Electronic Personae: Commercial MMORPGs and the Terms of Participation in Virtual Communities', *3 Journal of Information, Law and Technology.* Available at: http://www2.warwick.ac.uk/fac/soc/law/elj/jilt/2004_3/gervassis/
Green M.C. (2007) 'Trust and on-line social interaction', in Joinson A. et al. (Eds.) *Oxford Handbook of Internet Psychology,* Oxford, Oxford University Press, pp.43-52
Greg L. (2008) 'Virtual Law Bibliography'. Available at: http://terranova.blogs.com/terra_nova/2008/03/virtual-law-b-1.html
Grigolo M. (2003) 'Sexualities and the ECHR: Introducing the Universal Sexual Legal Subject', *Eur J Int Law*, Vol. 14, pp. 1023-1044
Grimmelmann J. (2004) 'Virtual Worlds as Comparative Law', 47 *New York Law School Law Review* 147. Available at: http://www.ifets.info/journals/9_3/14.pdf
Gruber T. (2008) 'Collective Knowledge Systems: Where the Social Web meets the Semantic Web', *Web Semantics: Science, Services and Agents on the World Wide Web*, Vol. 6, No. 1. (February 2008), pp. 4-13
Gutmann A. (2003) *Identity in Democracy*, New Jersey, Princeton University Press.
Gutwirth S. (2009) 'Beyond Identity', *IDIS - Identity in the information society,* Vol. 1, No. 1. Available at: http://works.bepress.com/serge_gutwirth/15
Gutwirth S. (1995) 'Het harlekijnspak en het vale ezelsvel. Individuele vrijheden in de greep van het

recht op zelfbeschikking van volken, het nationalisme en andere aanspraken op een collectieve identiteit', in Sybesma N. and Van Bellingen J. (eds.) *Naar een nieuwe interpretatie van het recht op zelfbeschikking?*, Brussels, VUBPress, pp. 53-88

Haenni R. (2009) 'Trust in the Light of Virtual Persons', in Rannenberg K., Royer D. and Deuker A. (eds) *The Future of Identity in the Information Society*, Springer, pp. 97-117 (to appear).

Halperin R. (2006) 'Identity as an Emerging Field of Study. Areas of research and the cross-disciplinary challenge', *Datenschutz und Datensicherheit (DuD)*, Vol. 30, No. 9, pp. 533-537

Hamblet W. (2005) 'Review of D. Ingram's *Rights, Democracy, and Fulfilment in the Era of Identity Politics'*, *Metaspychology*, Vol. 9, No. 29, 2p. Available at: http://risas.org/books/books.php?type=de&id=2733

Hansen and Alkassar (2008) (eds.) 'Study on protocols with respect to identity and identification – an insight on network protocols and privacy-aware communication', FIDIS deliverable 3.8. Available at: http://www.fidis.net/resources/deliverables/

Harris J. (2007) *Enhancing Evolution. The Ethical Case for Making Better People*, Princeton, Princeton University Press

Hately S. (1999) 'The Disappearance of James Dallas Egbert III (Part I-II)'. Available at: http://ptgptb.org/0006/egbert.html

Hildebrandt M. (ed.) (2009) 'Behavioural Biometric Profiling and Transparency Enhancing Tools', FIDIS Deliverable 7.12. Available at: http://www.fidis.net/resources/deliverables/

Hildebrandt M. and Gutwirth S. (eds.) (2008) Profiling the European Citizen. Cross-disciplinary perspectives. Dordrecht, Springer

Hildebrandt M. (2008a) 'Profiling and the Identity of the European citizen' in Hildebrandt M. and Gutwirth S. (eds.) *Profiling the European Citizen. Cross-disciplinary perspectives*, Dordrecht, Springer, Chapter 15

Hildebrandt M. (2008b) 'Profiles and Correlatable humans', in Stehr N. (ed.) *Knowledge and the Law. Can Knowledge be Made Just?,* New Brunswick N.J., Transaction.

Hildebrandt M., Koops B-J. and De Vries K. (eds.) (2008) 'Where Idem-Identity meets Ipse-Identity. Conceptual Explorations', FIDIS Deliverable D7.14a. Available at: http://www.fidis.net/resources/deliverables/

Hildebrandt M. and Koops B.-J. (eds.) (2007) 'The concept of Ambient Law', FIDIS Deliverable D7.9. Available at: http://www.fidis.net/resources/deliverables/

Hildebrandt M. and Backhouse J. (eds.) (2005) 'Inventory of profiling practices', FIDIS Deliverable D7.2. Available at: http://www.fidis.net/resources/deliverables/

Huntington S. (1996) *The Clash of Civilizations and the Remaking of World Order*, New York, Simon and Schuster

IBM (2007a) 'IBM and Linden Lab Launch Collaboration to Further Advance the 3D Internet'. Available at: http://www-03.ibm.com/press/us/en/pressrelease/22428.wss

IBM (2007b) 'IBM and Sun Charting Virtual World Business Territory'. Available at: http://freshtakes.typepad.com/sl_communicators/2007/05/ibm_and_sun_cha.html

IBM (2007c) 'IBM Virtual World Defies Laws of Physics'. Available at: http://www.pcworld.com/businesscenter/article/140756/ibm_virtual_world_defies_laws_of_physics.html

IBM (1998) 'IBM rules govern workers in virtual worlds'. Available at: http://www.msnbc.msn.com/id/19982107/

Ingram D. (2004) *Rights, Democracy, and Fulfilment in the Era of Identity Politics: Principled Compromises in a Compromised World*, Maryland, Rowman & Littlefield Pu

Jaquet-Chiffelle D.O. and Buitelaar H. (eds.) (2009) 'Trust and Identification in the Light of Virtual Persons', FIDIS Deliverable D17.4. Available at: http://www.fidis.net/resources/deliverables/ (to appear).

Jenkins P.S. (2004) 'The Virtual World as a Company Town - Freedom of Speech in Massively Multiple Online Role Playing Games', *Journal of Internet Law*, Vol. 8, No. 1. Available at: http://ssrn.com/abstract=565181

Jesper J. (2005) *Half-Real: Video Games between Real Rules and Fictional Worlds*, Cambridge, The MIT Press

Kamp M. et al. (2008) 'Profiling of customers and consumers- customer loyalty programs and scoring practices', in Hildebrandt M., Gutwirth S. (eds.), *Profiling the European citizen. Cross-disciplinary perspectives,* Dordrecht, Springer, chapter 11

Karas St. (2002) 'Privacy, Identity, Databases: Toward a New Conception of the Consumer Privacy Discourse', *American University Law Review*, December 2002. Available at: http://ssrn.com/abstract=340140 or DOI: 10.2139/ssrn.340140

Kelly R.V. (2004) *Massively Multiplayer Online Role-Playing Games: The People, the Addiction and the Playing Experience*, Jefferson, North Carolina, McFarland & Company

Koslowski R. (1995) 'Dual Nationality in Germany, Changing European Norms and International Relations'. Available at: http://aei.pitt.edu/6953/01/koslowski_rey.pdf

Koslowski R. (2003) 'Challenges of International Cooperation in a World of Increasing Dual Nationality' in Martin D. and Hailbronner K. (eds.) *Rights and Duties of Dual Nationals: Evolution and Prospects*, Kluwer Law Publishers, The Hague, pp. 160-180

Krimsky Sh. and Shorett P. (eds.) (2005) *Rights and Liberties in the Biotech Age: Why We Need a Genetic Bill of Rights*, Maryland, Rowman &

Littlefield Pu
Kuitenbrouwer F. (2004) 'Intrekken paspoort is moeilijk', *NRC Handelsblad*, 29 November 2004
Laroche-Gisserot Fl. (2002) 'L'identité des personnes physiques en Afrique subsharaienne francophone', in Pousson-Petit J. (ed.) , *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant pp. 255-268
Lastowka F. G. and Hunter D. (2008) 'The Laws of the Virtual Worlds', California Law Review. Available at SSRN: http://ssrn.com/abstract=402860
Lastowka F. G. and Hunter D. (2004) 'Virtual Crimes', 49 *New York Law School Law Review* 293 (Institute for Information Law and Policy Symposium). Available at: http://www.nyls.edu/pdfs/v49n1p293-316.pdf
Latour B. (2007) 'Beware, your imagination leaves digital traces', A piece for the Times Higher Literary Supplement 6th of April 2007. Available at: http://www.bruno-latour.fr/
Lehdonvirta V. (2005) 'Real-Money Trade of Virtual Assets: Ten Different User Perceptions', *Proceedings of Digital Art and Culture*, IT University of Copenhagen, 1-3 December
Lemmens K. (2002) 'Sic transit gloria mundi. Om vergeten en vergaan in het recht', in Parmentier S. (ed.) *Jaarboek 2000-2001 van het ICM*, Antwerp, Maklu, pp. 45-70
Lemouland J.J. (2002) 'Le choix du prénom et du nom en droit français', in Pousson-Petit J. (ed.), *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant pp. 631-670
Levitt S. D. and Dubner S. J. (2005) *Freakonomics: A Rogue Economist Explores the Hidden Side of Everything*, New York, HarperCollins Publishers
Lewicki R. J. and Tomlinson E.C. (2003) 'Trust and Trust Building'. Available at: http://www.beyondintractability.org/essay/trust_building/
MacInnes I., Park Y. and Whang Sang-Min (2004) 'Virtual World Governance: Digital Item Trade and its Consequences in Korea'. Telecommunications Policy Research Conference, 2004, Arlington, VA. Available at: http://web.si.umich.edu/tprc/papers/2004/382/ppr%20Korea%2008%20TPRC%20final%20revised.pdf
Malone T. W. and Laubacher R. J. (1998) 'The Dawn of the E-Lance Economy', *Harvard Business Review*, September - October 1998, Cambridge, Harvard Business School Publishing
Marsh S. and Dibben M. R. (2005) 'Trust, Untrust, Distrust and Mistrust - An Exploration of the Dark(er) Side', *iTrust 2005, Lecture Notes in Computer Science,* Vol. 3477, Berlin Springer, pp. 17-33
Marsh S., Meech J. F. and Dabbour A. (2000) 'Putting Trust into e-Commerce - One Page at a Time', *Proceedings of the Fourth International Conference on Autonomous Agents, Barcelona, Spain, June 3-7, 2000*, pp. 73-80. Available at: http://iit-iti.nrc-cnrc.gc.ca/publications/nrc-43666_e.html
Martin D. and Hailbronner K. (eds.) (2003) *Rights and Duties of Dual Nationals: Evolution and Prospects*, The Hague, Kluwer Law Publishers
Massimo L. and Capprino D. (2009) 'Children's Identity and Security', in Mordini E. & Green M. (eds.) *Identity, Security and Democracy*, Amsterdam, IOS Press, pp. 27-36
McDonald T. L. (2001) 'Lineage: The Korean Factor', *Computer Gaming World*, No. 203, p. 132
McFarlane A., Sparrowhawk A. and Heald Teem Y. (2007) 'Report on the educational use of games'. Available at: http://www.teem.org.uk/publications/teem_gamesined_full.pdf
Mesch G.S. and Talmud I. (2007) 'e-Relationships – the blurring and reconfiguration of offline and online social boundaries', *Information, Communication & Society*, Vol. 10, No. 5, pp. 585 - 589
Merleau-Ponty M. (1962) *Phenomenology of Perception*. C. Smith (translator). Routledge & Kegan Paul
Michaux S. (2005) 'L'accouchement sous X au regard de la Convention européenne des droits de l'homme et la Convention de l'ONU relative aux droits de l'enfant', *Rev. Dr. Fam*, pp. 321-346
Mikroyannidis A. (2007) 'Toward a social semantic web', *Computer*, Vol. 40, No. 11, pp. 113-115
Mirabail S. (2002) 'Absence d'état civil' in Pousson-Petit J. (ed.), *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant, pp. 297-302
Moore R., Ducheneaut N. and Nickell E. (2007) 'Doing Virtually Nothing: Awareness and Accountability in Massively Multiplayer Online Worlds', *Computer Supported Cooperative Work*: *The Journal of Collaborative Computing,* May, Vol. 16, No. 3, pp. 265-305
Mordini E. and Ottolini C. (2007) 'Body identification, biometrics and medicine: ethical and social considerations', *Ann Ist Super Sanità*, Vol. 43, No. 1, pp. 51-60
Mouffe C. (2000) 'Politics and Passions: the Stakes of Democracy', *Ethical Perspectives*, Vol. 7, No. 2-3, pp.146-150
Mowbray A.L. (2004) *The development of positive obligations under the European Convention on Human Rights by the European Court of Human Rights*, Oxford, Hart Publisher
Nardi B., Whittaker S. and Schwarz H. (2000) 'It's Not What You Know, It's Who You Know: Work in the Information Age', *First Monday*, May, 2000. Available at: http://www.firstmonday.org/issues/issue5_5/nardi/
Neyrand G. (2002) 'Identification sociale, personalisation et processus identitaires', in Pousson-Petit J. (ed.), *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant, pp. 93-112
Nissenbaum H. (2001) 'Securing Trust Online: Wisdom or Oxymoron', *Boston Universtity Law*

Review, Vol. 81, pp. 101-131. Available at: http://www.nyu.edu/projects/nissenbaum/papers/securingtrust.pdf
Nock S. (2000) 'Privacy and Living Arrangements. More privacy invites more intrusion', *The Responsive Community,* Vol.10, No. 2, pp. 51-56
Nussbaum M. (2001) *Upheavals of Thought: The Intelligence of Emotions*, Cambridge, Cambridge University Press
Nussbaum M. (2007) *Compassion and Capabilities*, Cambridge, Cambridge University Press
Nys Th. (2007) 'De zin van ons bestaan. Bedenkingen omtrent autonomie, erkenning en liberalisme', *Ethiek en Maatschappij*, Vol. 8, No. 1, pp. 39-57 (with English abstract)
Oliveira S. R. M., Zaïane O. R. (2004) 'Towards Standardization in Privacy-Preserving Data Mining'. Available at: http://www.cs.ualberta.ca/%7Ezaiane/postscript/dm-ssp04.pdf
Orosz Z., Ákos R. (2001) 'Játék az élet. A „massively multiplayer" játékok kialakulása és gazdaságtana' ['Life Is a Game. The Development and Economics of Massively Multiplayer Games'], *Kutatási Jelentés* [*Research Report*] Vol. 25
Otis Gh. (2002) 'La reference identitaire dans la protection internationale des peoples autochtones', in Pousson-Petit J. (ed.), *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant, pp. 849-859
O'Reilly T. (2005) 'What Is Web 2.0 Design Patterns and Business Models for the Next Generation of Software', 09/30/2005. Available at: http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html
Paruta E. and Pousson A. (2002) 'La problématique des personnes sans état civil en Guyane française', in Pousson-Petit J. (ed.), *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant, pp. 283-296
Pennarun S. (2002) 'La nationalité, droit objectif ou droit subjectif?', in Pousson-Petit J. (ed.), *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant, pp. 499–528
Pettersson J.S., Meints M. (eds.) (2009) 'Study on Usability of IMS', FIDIS Deliverable 3.13. Available at: http://www.fidis.net/resources/deliverables/
Poullet Y. and Dinant M. (2006) 'The Internet and private life in Europe: Risks and aspirations', in Kenyon A.T. and Richardson M. (eds.), *New Dimensions in Privacy Law: International and Comparative Perspectives*, Cambridge, Cambridge University Press, pp. 60-90
Pousson A. (2002a) 'Domicile et identité', in Pousson-Petit J. (ed.), *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant, pp. 529-564
Pousson D. (2002b), 'L'identification identiques'', in Pousson-Petit J. (ed.) , *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant pp. 371-428
Pousson-Petit J. (ed.) (2002) *L'identité de la personne humaine. Etude de droit français et de droit comparé,* Brussels, Bruylant
Pousson-Petit J. (2002) 'Le droit à l'identité sexuée et sexuelle dans les droits européens', in Pousson-Petit J. (ed.), *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant, pp. 719-772
Prins J.E.J. (2007) 'Een recht op identiteit', *Nederlandsch juristenblad*, Vol. 82, No.14, p. 849
Prins J.E.J. (2006) 'Etno-selectie', *Nederlandsch juristenblad,* Vol. 81, No. 8, p. 411
Reynolds R. (2002) 'Playing a "Good" Game: A Philosophical Approach to Understanding the Morality of Games'. Available at: http://www.igda.org/articles/rreynolds_ethics.php
Ricoeur P. (1992) *Oneself as another*, London, University Of Chicago Press
Ricoeur P. (2001) 'Autonomie et vulnérabilité', *Le Juste 2*, Paris, Esprit, pp. 85-107
Ricoeur P. (2005) *The Course of recognition*, Cambridge, Harvard University Press
Rouvroy A. (2008) 'Privacy, Data Protection, and the Unprecedented Challenges of Ambient Inteligence', *Studies in Ethics, Law, and Technology*. Available at: http://works.bepress.com/antoinette_rouvroy/2/
Sartor, G. (2006) 'Privacy, Reputation, and Trust: Some Implications for Data Protection', in *iTrust 2006, Lecture Notes in Computer Science* Vol. 3986, Berlin, Springer, pp. 354-366. Also available as EUI Law Working Paper No. 2006/04 at: http://ssrn.com/abstract=891123
Selznick P. (2000) 'Reflections on Responsibility: More than Just Following Rules', *The Responsive Community*, Vol. 10, No. 2, pp. 57-61
Sen A. (1987) *On Ethics & Economics*, Oxford, Blackwell
Sen A. (2006) *Identity & Violence The Illusion Of Destiny*, London, Penguin Books
Simón A. (1987) 'Emotional stability pertaining to the game of Dungeons & Dragons', *Psychology in the Schools,* Vol. 24, No. 4, pp. 329 - 332
Solove D. J. (2002) 'Access and Aggregation: Public Records, Privacy and the Constitution', *Minnesota Law Review*, Vol. 86, No. 6, 2002, pp. 1137-1209
Solove D.J. (2004) *The Digital Person. Technology and Privacy in the Information Age*, New York, New York University Press
Stackpole M.A. (1990) 'The Pulling Report'. Available at: http://www.rpgstudies.net/stackpole/pulling_report.html
Stol W. Ph. (2007) 'Informatie voor politiewerk: basisprincipes', in Fijnaut C.J.C.F., et al. (eds.) *Politie. Studies over haar werking en organisatie,* Deventer, Kluwer, 2nd edition, Chapter 15, pp. 381-398
Taylor Ch. (1991) *The Malaise of Modernity*, Toronto, House of Anansi. (Republished as: *The Ethics of Authenticity*, Cambridge MA, Harvard University Press)

Taylor Ch. (1989) *Sources of the Self. The Making of Modern Identity*, Cambridge MA, Harvard University Press
Taylor T.L. (2006) *Play Between Worlds: Exploring Online Game Culture,* Cambridge MA, The MIT Press
Terdiman D. (2007) 'Google tools to power virtual worlds', *ZDNet News* 09/10/2007. Available at: http://news.zdnet.com/2100-9595_22-169114.html
Thibaut J. W. and Kelley, H. H. (1959) *The social psychology of groups*, New York, Wiley
Tulkens F. (2007a) *La Convention européenne des droits de l'homme comme un instrument vivant. Les développements récents de la jurisprudence de la Cour européenne des droits de l'homme*, Inaugural lecture "VUB Chair" (VUB Leerstoel) 2006-2007, not published
Tulkens F. (2007b), 'Les conflits entre droits fondamentaux'. Available at: http://www.ies.be/vubleerstoel
Tung L., et al. (2001) 'An Empirical Investigation of Virtual Communities and Trust', *Proceedings of the 22nd International Conference on Information Systems*, 2001, pp. 307-320
Ulivieri F., (2005) '*Trust across Disciplines'-map*. Available at: http://www.istc.cnr.it/T3/map/
Unabhängiges Landeszentrum für Datenschutz Schleswig-Holstein (ULD) (2003) *Kundenbindungssysteme und Datenschutz,* Berlin. Available at: https://www.datenschutzzentrum.de/wirtschaft/Kundenbindungssysteme.pdf
Unabhängiges Landeszentrum für Datenschutz Schleswig-Holstein (ULD) (2005) *Scoringsysteme zur Beurteilung der Kreditwürdigkeit,* Berlin. Available at: http://www.bmelv.de/cln_045/nn_760530/SharedDocs/downloads/02-Verbraucherschutz/Markt/scoring,templateId=raw,property=publicationFile.pdf/scoring.pdf
Van Den Broeck B. (2007) 'Waarom Samira niet Jolientje mag heten. Buitenlands namenrecht beknot vrije naamkeuze in België', *De Juristenkrant*, No. 152, p. 3
Van den Hoven M.J. (2000) 'Privacy and health information: the need for a fine-grained account', *International Journal for Quality in Health Care*, Vol. 12, No. 1, pp. 5-6
Van den Hoven M.J. (2001) 'The Internet and the Varieties of Moral Wrongdoing', in Spinello and Tavani (eds.) *Readings in Cyberethics*, Sudbury, Bartlett & Jones, pp. 430-443
Van Der Ploeg I. (2009), 'Machine-Readable Bodies, Biometrics, Informatization and Surveillance', in Mordini E. & Green M. (eds.) *Identity, Security and Democracy*, Amsterdam, IOS Press, pp. 85-94
Van Gelder L. (1991) The strange case of the electronic lover, in Dunlop C. and Kling R. (eds.) *Computerization and controversy: Value conflicts and social choices*, New York, Boston Academic Press, pp. 364-375
Van Steendam G. et al. (2006) 'Report: The Case of Reproductive Cloning, Germline Gene Therapy and Human Dignity', *Science and Engineering Ethics*, Vol. 12, No. 4, pp. 731-793
Van Waas L.(2008) *Nationality Matters. Statelessness under International Law*, Antwerp, Intersentia
Ward M. (2004) 'Has text-porn finally made computers 'human'?' *BBC News*, Friday, 20 February, 2004. Available at: http://news.bbc.co.uk/1/hi/magazine/3503465.stm
Warner J. (2005) 'The Right to Oblivion: Data Retention from Canada to Europe in Three Backward Steps', *University of Ottawa Law & Technology Journal*, Vol. 2, pp. 75-104
Warwick K. (2002) 'Identity and privacy issues raised by biomedical implants', *The IPTS report*, September, No. 67, pp. 29-33
Wenner E. (2002) 'Allemagne: le droit aux origins face à l'émergence de l'anonymat (à propos des casier à bébé)', in Pousson-Petit J. (ed.), *L'identité de la personne humaine. Etude de droit français et de droit comparé*, Brussels, Bruylant, pp. 797-810
Woodcock B.S. (2004) 'An Analysis of MMOG Subscription Growth', MMOGCHART.COM 12.0. 29 November 2004. 1 January 2005. Available at: http://www.mmogchart.com
Wu S. (2007) 'Virtual Goods: The next big business model'. Available at: http://www.techcrunch.com/2007/06/20/virtual-goods-the-next-big-business-model/
Yee N. (2006) 'The Demographics, Motivations, and Derived Experiences of Users of Massively Multi-User Online Graphical Environments', *Teleoperators & Virtual Environments*, Vol. 15, No. 3, pp. 309-329
Yofi T. (2009) 'Adjudicating Appearance: From Identity to Personhood' (February 7, 2009). Tel Aviv University Law Faculty Papers. Working Paper 99. Available at: .http://law.bepress.com/taulwps/fp/art99
Yoon, U. (2005) 'A Quest for the Legal Identity of MMORPGs - From a Computer Game, Back to a Play Association', *Journal of Game Industry & Cultur*e, Vol. 10. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=905748

European case-law

European Court of Human Rights, *Klass v. Germany*, Application no. 5029/71, 6 September 1978
European Court of Human Rights, *Leander v. Sweden*, Application no. 9248/81, 26 March 1987
European Court of Human Rights, *Z. v Finland*, Application no. 22009/93, 25 February 1997
European Court of Human Rights, *Pretty v. United Kingdom*, Application no.2346/02, 29 April 2002
European Court of Human Rights, *Bensaid v. the United Kingdom*, Application no. 44599/98, 6 February 2001
European Court of Human Rights, *Evans v. the United Kingdom*, Application no. 6339/05, 7 March 2006

European Court of Human Rights (Grand Chamber), *Evans v. the United Kingdom*, Application no. 6339/05, 10 April 2007
European Court of Human Rights, *K.A. & A.D. v. Belgium*, Applications nos. 42758/98 and 45558/99, 17 February 2005
European Court of Human Rights, *Smirnova v. Russia*, Applications nos. 46133/99 and 48183/99, 24 July 2003
European Court of Human Rights, *Odièvre v. France,* Application no. 42326/98, 13 February 2003
European Court of Human Rights, *Rotaru v. Romania*, Application no. 28341/95, 4 May 2000.
European Court of Human Rights, *Gaskin v. the United Kingdom*, Application no. 10454/83, 7 July 1989
European Court of Human Rights, *Segerstedt-Wiberg and others v. Sweden*, Application no. 62332/00, 6 June 2006.
European Court of Human Rights, *Perry v. the United Kingdom*, Application no. 63737/00, 17 July 2003
European Court of Human Rights, *Christine Goodwin v. the United Kingdom*, Application no. 28957/95, 11 July 2002
European Court of Human Rights, *Peck v. the United Kingdom*, Application no. 44647/98, 28 January 2003.
European Court of Human Rights, *P.G. and J.H. v. the United Kingdom*, Application no. 44787/98, 25 September 2001.
European Court of Human Rights, *Amann v. Switzerland*, Application no. 27798/95, 16 February 2000.
European Court of Human Rights, *Stjerna v. Finland*, Application number no. 00018131/91, 25 November 1994
European Court of Human Rights*, Mizzi v. Malta,* Application number no. 26111/02*,* 12 January 2006.
European Court of Human Rights*, Jäggi v. Switzerland,* Application number no. 58757/00*,* 13 July 2006.
European Court of Human Rights, *Paulik v. Slovacia,* Application number no. 10699/05, 10 October 2006.
European Court of Human Rights, *Tavli v. Turkey*, Application number no. 11449/02, 9 November 2006.

Internet sources

A közösségi hálózatok a cégek életében [Social networks in the life of companies] http://hvg.hu/Tudomany/20080228_kozossegi_halozat_szoftver_kollaboracio/page1.aspx
Blake Snow: GigaOM Top 10 Most Popular MMOs http://gigaom.com/2007/06/13/top-ten-most-popular-mmos/
BlueGrass:Virtual Worlds for Business http://domino.watson.ibm.com/cambridge/research.nsf/99751d8eb5a20c1f852568db004efc90/1b1ea54cac0c8af1852573d1005dbd0c?OpenDocument
Daedalus Project webpage http://www.nickyee.com/daedalus/
Gamer Culture: A brief history of community and digital games http://www.journalism.wisc.edu/~mjchen/spring2007/david/index.htm
IBM Virtual World Guidelines. Available at: http://domino.research.ibm.com/comm/research_projects.nsf/pages/virtualworlds.IBMVirtualWorldGuidelines.html
Link between online gaming and violence killed off http://www.developmag.com/press-releases/36104/Link-between-online-gaming-and-violence-killed-off
Online games: a golden goose for Vietnam? http://english.vietnamnet.vn/service/printiversion.vnn?article_id=724428
M2Press WIRE (2006) 'How Did Games Become Such a Mass Market Phenomenon in Korea?', 07/12/2006
MMORPG.com http://www.mmorpg.com/
Munk V., Megint ölt a számítógépes játék [A PC game has killed again]. Available at: http://index.hu/tech/szoftver/gamehal1122/?print
Nick Yee http://www.nickyee.com/daedalus/index.xml,
Real business in a virtual world http://www.ibm.com/virtualworlds/businesscenter
Serious Games At TPLD: Propelling An Emerging Market Into The Mainstream http://elianealhadeff.blogspot.com/2007_01_01_archive.html
Students may be banned from online games during school hours http://english.vietnamnet.vn/service/printversion.vnn?article_id=723842
Terra Nova http://terranova.blogs.com/terra_nova/
The Future Of Serious Games. Available at: http://blog.futurelab.net/2008/01/the_future_of_serious_games.html
Virágzik a virtuális tárgyak kereskedelme a való világban [The Trade of Virtual Objects Is Flourishing in the Real World] http://hvg.hu/print/20051027virtual.aspx
Virtual worlds come to life at IBM. Available at: http://domino.watson.ibm.com/comm/pr.nsf/pages/news.20070416_virtualworlds.html
Watch out Second Life, China launches virtual universe with seven million souls http://www.guardian.co.uk/world/2007/jun/02/china.web20
Yoicks! It's another virtual world http://www.theage.com.au/news/biztech/yoicks-its-another-virtual-world/2007/02/26/1172338546871.html?page=fullpage#contentSwap1