

**Environnement médiatique et sous-cultures des écrans:
Le cas des communautés d'apprentissage en-ligne/**

**Media environment and sub-cultures of the screen:
the case of online learning communities**

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This course considers the end-user and encourages you to look at other communities of learning. It is in English to fulfil some of the requirements of international programmes like AIGEME, even in a Francophone environment. The English used is not of high complexity and should be understandable by most of you, with no jargon, which doesn't exclude specific key-concepts. Evaluation is done thanks to two reports: the "media biography" and the observation of an online community of your choice. The course is organized in three sections (of which this is the first):

Section 1: Médias, socio-cognition et co-construction des savoirs: les enjeux et les défis/

Medias, social cognition and the co-construction of knowledge: the stakes and the challenges

Section 2: Apprenants et communautés de pratique et d'interprétation en e-learning/Learners and communities of practice and interpretation in e-learning

Section 3: Perspectives de recherche action en e-learning/Perspectives for action research in e-learning

General Introduction

Assessing the current situation in education and seeing how e-learning can contribute to it implies to consider carefully the appropriation of media as spectacles and services, in distance contexts where distance is not necessarily the problem anymore. Education, if it is taken in a lifelong meaning, and with both formal and informal settings, is one of the long-term solutions. It can include additional actors, both in the ICT sector (producers, broadcasters, creators, ...) and in the scholastic sector (educators, librarians, teachers, parents, ...). The implementation of e-learning is thus connected to stakes that go beyond receiving an academic degree, that imply trying to foster a new view of pedagogy, competences, values and attitudes (and to fight illectronism).

A process of vindication and consensus-building can be found about the meaning of e-learning, especially as an outcome of the World Summit on Information Society (Geneva, 2003-Tunis, 2005) where one of the major outcomes was to propose an action line on e-learning (action line 6), that is monitored by UNESCO. E-learning has also been caught in various European contexts and legal frameworks, with the European commission and its Information Society division where there is an expert group on “the digital agenda”.

E-learning is very fragmented in its practices, methods and actors but there seems to be an agreement on its purpose and its supposed outcome for the learner: to develop critical thinking, to promote creativity and participation, to help construct one’s identity in one’s own culture, to ensure intellectual sustainability throughout one’s life. The combination of these three objectives should lead to empowerment, suggesting both an increased autonomy of the learner and a sense of his/her own rights and responsibilities. This position resonates with the notion of dignity and respect for human rights and values, and suggests the need to make this connection more explicit and valid.

E-learning has to be set in a global perspective, as distance teaching is now part of a web of networks that tries to connect learners across the world. Yet there are many issues that have to be understood in order to do so effectively. Edward T. Hall, in *Beyond Culture*, proposed an analysis of cultures in which he suggested that they could be set on a continuum between “high context” and “low context” situations. “High-context” cultures function through implicit communication: they assume that information is internalized by their members through time and participation in social activities. They tend to rely heavily on schools and communities. “Low context” cultures develop explicit forms of communication: information is externalized in the coded messages that need to be transmitted via performance

and spectacle. They tend to rely heavily on media and individual member's self-representation and expression. "High context" cultures tend to be homogeneous, with low immigration levels, whereas "low context" cultures are heterogeneous, with high immigration levels.

In today's global context, with ever expanding territories and lowered barriers of entrance, Hall's framework needs to be revisited: national cultures are all becoming 'low context', because of enormous immigration flows and also because of intrusive trans-border media and ICTs. The need for explicit forms of communication is being felt as heterogeneous populations, with various historical backgrounds, migrate and immigrate in diasporic online and offline flows. The need for explicitness is especially true for learning contexts where several styles and values are sometimes in conflict. E-learning strategies depend also on high and low cultures within nations, with a combination of school and media, via communities and individuals alike. There is a need to consider our increasing connectivity—an explicitly technical word that means nothing without a human sense of connectedness. E-learning is about connectedness and therefore it is essential to identify some of the major disconnects that may undermine it.

There is a significant disconnect between education and ICTs (including the new communication services). Traditional media (like broadcasting) have been kept out of education, as "low" culture because they represent entertainment, not knowledge. New media are considered more "high" culture because they are international telecommunications platforms, for connexion, for diffusion and for knowledge economies. ICTs may enter in competition with education as the industry provides more and more material for learning and opportunities for tutorials and scholastic activities, to the point that the inductive method, a long-standing pedagogical strategy, is now attached to ICTs, as if learning was technology-bound and not human-bound.

Additionally, the discourse around ICTs carries an ideology that is injunctive, performative, explicit,—in other words, "low context". The use of ICTs is presented as the solution to all educational and societal troubles: they will provide autonomy, socialization, even integration, to all children. But changes are occurring: digital convergence is bringing old and new media together on social network and multimedia platforms; education and media institutions are increasingly interacting, while the home is becoming an alternative locus of leisure, learning and labour. They also both provide valid and valuable options for lifelong learning and for long distance education.

There is a significant disconnect between classic education and e-learning. Traditional education tends to be content-oriented, with a determined strand of learning acquisition attached to it. ICT education tends to be process- and project-oriented, with critical thinking attached to it. Besides, it tends to be done via ICTs, which can introduce confusion with ICT use, whereby utilisation is equated with education. The stigma of highbrow, lowbrow cultural divides can hence be attached to any of the two, according to the country considered.

So, establishing connectedness implies a number of positive actions and the abolition of antiquated binary oppositions to accommodate for today's complexity. Seaming the ridges of the divide supposes a variety of explicit activities, like the creation of a continuum between old and new media, linear and non linear ones, high tech and low tech ones; the adjustment of the cursor between 'high context' and 'low context' cultures, and high-brow and low-brow attitudes and values; the recognition that there can be many literacies, old and new, within an all-encompassing e-learning framework; the fostering of the complementarities between classic education and ICT-driven education, and adjusting incrementally the skills and competences required for both.

****from: Frau-Meigs, Divina. Rapport général pour le Conseil de l'Europe, division droits de l'homme et médias et division éducation, « Media Literacy and Human Rights: Education for Sustainable Democratic Societies », Graz (Autriche), décembre 2007. Consultable en ligne à www.coe.int/human_rights/ (version française et anglaise)****

Section 1

Médias, socio-cognition et co-construction des savoirs: les enjeux et les défis/ Medias, social cognition and the co-construction of knowledge: the stakes and the challenges

Cette section pose les problèmes théoriques et technologiques des environnements médiatiques. Elle met en place une approche socio-cognitive des médias, sur laquelle s'appuie le e-learning. Elle considère les nouvelles conditions d'échanges qui se produisent dans les médias, et en tire les implications pour le e-learning. Elle se fonde sur les besoins cognitifs de la communication (surveiller l'environnement, traiter les données, prendre des décisions et communiquer à distance). Elle propose une nouvelle vue des usages du e-learning et des figures de l'utilisateur, y compris de l'apprenant. Elle se présente en trois chapitres:

Chapitre I. Les définitions cognitives et génératives des médias: entre spectacles et services

Chapitre II. Les nouveaux défis des médias technologiques pour la connaissance

Chapitre III. Les figures de l'utilisateur et du réseau

Les concepts-clés qui sont abordés sont liés à la théorie de la socialisation, au traitement des données, à la résolution des problèmes, à l'interaction homme/machine, à la question de l'identité en-ligne, et aux figures de l'utilisateur qui en résultent.

Elle met en place les concept-clés à acquérir, tant en communication qu'en information pour comprendre le « moment cybérisme » (du Web 2.0) et bien inscrire l'action de l'enseignant et de l'apprenant dans des logiques qui ne sont pas seulement des logiques d'emploi mais aussi de contrôle de soi et de son expérience tout au long de la vie.

Cette section s'achève par la rédaction d'une « biographie médiatique » en auto-observation, (de 1000 à 1500 mots). Elle consiste à considérer avec réflexivité comment les médias ont contribué à développer votre identité, à partir de quels supports et de quels usages. La focalisation principale demeure professionnelle et non personnelle (sauf s'il y a interaction). Elle est à remettre à mi-parcours (semaine 6). Elle se fait en français (sauf exception, à négocier avec l'équipe pédagogique)

Chapter 1

Cognitive and Generative Definitions of ICT-Driven Media: Between Spectacles and Services

This chapter considers ICT-driven media from a theoretical perspective, and tries to place e-learning—itself based on ICT-driven media—in this wider context, for a better understanding of the stakes and the challenges for the learners as they engage with e-learning. Principles of social cognition and media functions are clarified within socialization theory and are considered as building blocks for the whole course (to be used as well in the outcome documents to be produced by the learner).

Historically, ICT-driven media have developed a number of basic cultural and political functions: observation, correlation and transmission. The recent developments of ICTs, connected with ubiquity, simultaneity and distance have brought forth new functions that were latent before and have taken centre-stage since: transaction, distraction and participation (Frau-Meigs, 2007).

Functions are predicated on basic cognitive needs: observation monitors the environment, correlation links various ideas for exchange and debate, transmission ensures the continuity of values in a given community, acting as education. The more recent functions have added value to the global media systems: transaction serves to improve commerce, distraction takes care of increased leisure time and participation allows people to be involved in democratic processes, in social networks and in e-learning communities.

The rapid evolution of ICT-driven media is complexifying this picture, as additional cognitive capacities can be added to this basic matrix of functions: observation can be enhanced by networking facilities for search and distribution of information; correlation can be done via the sampling and remixing of media outputs as well as transmedia navigation; transmission can get extra support from distributed intelligence that aggregates knowledge; transaction gains in the test of dynamic models of real-world processes; distraction is encouraged by alternative identities available via the media; participation benefits from distributed intelligence and negotiation capacities that can take place across communities, for generating alternative ideas and innovative solutions (Frau-Meigs, 2006).

These new functions tend to modify and displace the early uses of media as spectacles, in favour of the new uses of media as services that engage people because of needs that can be itemized and commercialized. This shift, apparent for instance in the last European Union

Audiovisual Media Services Directive (2007), requires the creation of many goods that are tangible and sellable. It doesn't go without tensions in society, as the logic of culture (spectacles) meets the logic of economics (services) and within economics, the culture of gift (spectacles) meets the logic of pay-per-view (services).

It seems difficult today not to see the integrated nature of media activities as a key feature of the current definitions and classifications of the media industry. The uncertainty about definitions and classifications of the media industry enhances the impression that it cannot be ruled or organized, when in fact it is one of the most regulated industries in the world. Media infrastructure services, such as electricity and telephony, are of vital importance to society (for safety management like emergency numbers, health calls, ...). They should remain considered as media, though they are ICT-driven, because other sectors of society are also ICT-driven, to perform other tasks and functions (medicine, engineering, ...). ICTs modify the nature of the communication and information process, as other processes in society, but they need to be considered here only in their relation to media enhancement and enablement.

The need to ground a definition of media and e-learning in actual needs of people, in a people-centred perspective implies to consider the perspective of social cognition. Social cognition is a research trend that can help shed more light on the importance of media in our society, because it shares with communication studies the notion of "representation". It also explicitly connects media to the brain (knowledge) and to the environment (culture).

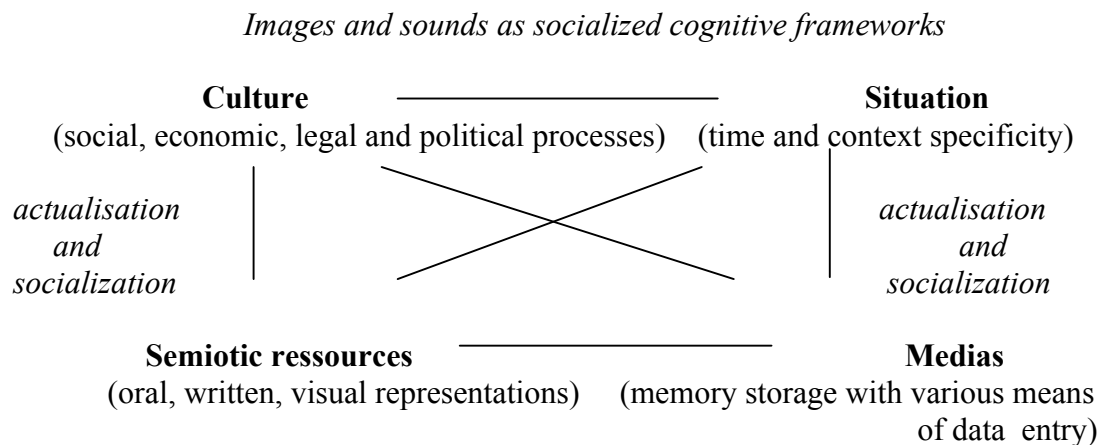
Three main considerations are useful: we understand media and representation (including knowledge) with our interactions with the environment. Cognitive conflict and ethical quandaries are the stimulus for using media and learn from them and with them, and they determine the organization and nature of what is represented, learned and transmitted. Media spectacles and services evolve through social negotiation and through the evaluation of the viability of individual and collective needs and functions (Frau-Meigs, 2011a, 2011b). In this view, media participate in the distribution of intelligence in both individual and collective ways.

I. Towards a Cognitive Generative Approach of Media

Media are cognitive artefacts that ensure cultural transmission of values, beliefs and attitudes. They convey social learning messages, more powerfully than family, church and school altogether. They establish a continuity between our brain and our environment, acting as extensive "prosthesis" that can also be intrusive: they send feelers to the outer world as

well as inside our bodies and our homes. This is how culture ensures that it keeps evolving with the environment and keeps constructing it for our needs and purposes. This co-construction therefore is generative and interactive, systemic, and fills a certain number of functions, that have become more and more cumulative and complex over time.

Figure 1. Cognitive Interactions Between Culture and Media



Images and sounds as socialized cognitive frameworks

Media as cognitive artefacts ensure the communication of culture and transmission of values via a system of representations that mimics our cognitive representations in the brain. They supplement the brain with an external memory base that organizes information and knowledge over time and space in specific situations. Tangible goods, like books, screens, CDs or DVDs that are exchangeable and reproducible, externalize this memory. They make it possible to distribute and share this collective memory in the making. In turn each individual according to his/her personal needs, by proxy, internalizes the representations that are shared vicariously.

This is how the informational and social capital of a culture circulates and is re-generated, as media constitute our socialized cognitive frameworks, where the messages and representations that matter survive, over noise and rumour, to augment our collective intelligence with new matrices for representation of knowledge and its transmission. The importance of representation in the media rests on this capacity to stock the world's memory. The ethics of this memory, what it keeps and what it forgets, is a societal stake with competing narratives, matrices and intentionality's. These are important because they create the users as publics in co-presence, who know that they share the media experience and the

messages they convey. Hence our social networking capacity, that activates the function of correlation in the media and allows us to test the compatibilities between us, the world and our experiences, and enables us to proceed to our constant coding-decoding-recoding of reality as many vitalities to be explored.

This is also why the difference between reality and virtuality is a moot point: all our reality is constructed and virtual. This is also why media will remain differentiated, in spite of digital convergence: the internal voice of the reading experience through the book will not disappear, nor the hearing attention of the ear listening to music on radio. The importance of the book or radio might be displaced as it is now by social networking and the pleasure of interaction and conversation on Internet, but it will not disappear. The digital equivalents of radio, television and book will persist, because they fulfil cognitive needs of the brain in its interaction with culture. Digital technology is less a radical change than a repositioning of our construction of reality as new opportunities for simulation and participation are offered to us.

The power of spectacle has to be repositioned in relation to the allure of service therefore. And this spectacle is an apparatus for strategies and relations of power, as Foucault would say. Norms, values are conveyed through media discourses and scripts that tailor our capacities for use and our competences for action. Knowledge is closely related to power, especially among those who control the production of representations. In our “Information Society” era, the old function of surveillance has not disappeared, but rather found new energies and strategies for observation as people are proffered more media for seeing and, more interestingly to them, — or so it seems—, for being seen.

The media strategies, contents and programmes that engage our attention and produce a lot of interest tend to be those that test power relations, and create cognitive conflict, between old and new knowledge, old and new values. This cognitive conflict in turn generates the need to make ethical decisions, for culture to accommodate or exclude new paradigms. Ethical quandaries often connected to rights of individuals and groups are indeed crucial to determine the organization of media. The current assessment of the Internet as a media in society and the debate around the function of participation is exemplary of the ethical quandaries raised by such a rapid change on society. The media panic around harmful online content is another example of the appraisal of what is represented, learned and transmitted via the networks.

Such a media apparatus then, especially with heterogeneous media devices and modalities, is plastic, not finalized and open-ended, though submitted to normative as well as

subversive uses. The need to adjust to the environment generates a relative tendency to evade the constrictive powers of norms, structures and constraints. The secondary effects of the apparatus can therefore be unexpected and lead to creative uses, as long as they meet an audience and a function. In that sense, there is no end to the “natural” authority of media over us, as our co-dependency and our co-evolution with them increases. This authority needs to be constantly evaluated critically and ethically, as we decode the data around us and evolve in our cultural compacts to adapt to our changing environment.

So the synergies among media are what we see happening with the platforms and other networking tools. But more importantly this allows them to generate narratives that can be followed across media. They still all serve the cognitive needs of surveillance of the environment, information processing and problem solving, which are services per se, but not necessarily to be paid for. There is much more recycling of narratives than meets the eyes in such platforms and media services. It fits the market logic of catalogues and bouquets, and reduces the risk of failure with ill evaluated tastes. The recent re-mastering of the whole Beatles collection or the re-colouring of *Gone with the Wind* fit this recycling pattern. Saving this patrimony (with the Alexandrina library, the Ina preservation project or Google books) allows to transmit it to the new generations, and to call them to memory whenever necessary. The circulation between mass media and mass aggregated media with fan sites for series for example or the tight connection between local and international media (for image data banks for example) cannot be ignored either, especially as transmedia navigation and multitasking increase.

The logic of recycling is generative per se: it maintains old scripts and matrices alive, while allowing the possibility for the emergence of new ones, in a changing environment. This plasticity of media is relevant with the co-dependence between the brain and the outer world, especially as the cognitive prosthesis provides ubiquity and vicariance. Within the framework of globalisation as much as the trend to de-globalisation, it still provides for opportunities of exchanges and for participation.

II. Socialization theory

The logic of recycling in culture is further supported by the dynamics of socialization, that rest on cohort effects and on engaging projects that are built around communities of interpretation and of practice, such as communities of learning. Cohort effects are generational and demographic, associating an individual with his/her age group and the historical situation of place and time of birth. Historical conditions like wars, reforms and

media innovations can pressure such individuals in recognizing themselves as a group, like the Baby boomers of the post-war generation, who have evolved in the Sixties and with all the new post-war media. They are just now retiring and remain very influential in their lifestyles, tastes, beliefs, attitudes and values. They are “natives” of the screen culture and willing “migrants” into the digital settlements, to take up the categories of Marc Prensky (2006).

These cohorts assemble on their like-mindedness, engaging in similar ways with media spectacles, often willing to forget the dimension of service as they favour user-friendliness. They create “communities of interpretation” (Fish, 1980), often away from classical political disputes and party organizations. These cohorts of publics in co-presence bring about mass effects in the reception of media, even when using them on individual and private terms (rumours, panics, tweets, crowd-sourcing, fashions, addictions,...). Socialized cognitive frameworks structure the interpretation process, often ethical norms shared by the pressure of the culture and media consumption habits themselves. The collective affect of such cohorts impacts the way the representations are interpreted and are felt and perceived, which legitimates the perspective of media as spectacles that engage attention and mobilization, because they are part of our sense-making mechanisms, that address our collective intelligence by way of story-telling, memory and scripts, spectacles in other words that associate culture, situation and publics.

These cohorts are not all equal among themselves and the idea of “cultures of control” cannot be discarded online or offline. Belonging to a visible and vocal group can have powerful effects, on tastes, attribution of responsibility, standard setting, surveillance and all sorts of levels of acceptance of behaviours. Some of these cohorts can become controlling, on the hierarchies they establish, the territories they delineate and the modes of circulation between groups and spaces that they normalize. Media audiences do have this capacity to establish themselves into special interest groups, especially on dedicated websites, where phenomena such as “fans”, “jammers”, “hackers”, etc. can emerge very fast with effects on class, race, sex, age, etc. Each user develops thus increasingly his/her “media biography” that constitutes his/her media capital, accumulated with practices, competences, ... (Frau-Meigs, 2011b).

These communities of practice and interpretation are the ones that sort out what matters or not in the media goods and services. In the enormous flow and noise of content proliferation they sort out what is worth engaging with, conversing about. Their social utility emanates from their cognitive capacity to treat data and make decisions from the information thus processed. They organise collective memory, decide what needs to be recycled and what

needs to be cast in the dustbin of culture. They will do so according to some ethical norms, some notions of what is good or bad, worthy and unworthy that are context-specific, as in the case of the community of journalists. They will do it not for paid services but for relational goods that feel free to them. They will do it if they have the felt experience that their participation matters and that it is open-ended and generative.

What has changed is the notion of spectacle itself: from spectacle proffered by others to spectacles about oneself. This modification within spectacles is as profound as the one within services, and it affects mostly the function of participation, with the end-user as the major actor. Confronting the contradictions of participatory cultures is the real challenge of the 21st century, besides issues of access and ownership.

Socialization theory builds on a certain amount of cognitive processes and competences. Socialization appears as a cognitive process of internalization where several pieces of information are recycled, remixed and re-used in the social context and put together into a dynamic repertoire of strategies for appropriate participation in society. The process can be seen as having multiple steps, as a series of specific cognitive assessments and competences that may reinforce attitudes to ethical quandaries and to social values:

- 1) **Engagement** with the media as spectacles and services as they solicit attention and participation.
- 2) **Anticipation** builds expectations and prepares for the transfer of the skills acquired in one media to other media, to increase the feeling of agency and self-control over the situation.
- 3) **Interpretation** is part of the process of appraisal, evaluation of the situation, the agents, the interactions and their consequences. It builds skills for evaluating the reliability of sources and of media content.
- 4) **Reflexivity** is connected to media practices accumulated through time. Recounting these experiences increases self-awareness about the process of media use and consumption.
- 5) **Performance** is encouraged by the media as spectacles, via the representation of other identities, via avatars and pseudos. It provides a better understanding of social roles and expectations about attitudes and values.
- 6) **Co-construction** deals with the capacity of people to use media not only for individual empowerment but also for social accountability and collective responsibility.
- 7) **Revision** is part of socialization as one becomes aware that values and ethical positions need to be reviewed and sometimes revisited, especially in the context of globalization and the pressures it exert on media systems and traditional cultures. It can be endorsed by the different actors at stake, in an empowerment framework where the individual is a participant rather than in a commercial framework where the individual is a consumer ((Frau-Meigs and Meigs, 2010).

Socialization theory then takes into account the cognitive dimension of media as they relate to individual and collective communication. Its key tenets deal with representation, engagement, ethical quandaries, generativity, that need to be kept in mind when defining media (Frau-Meigs and Meigs, 2010). These tenets allow for functional aggregates that permit circulation of interactions within society, hence the specifically mediated functions of observation, correlation, transmission, transaction, distraction and participation. The classic functional approach has to be enriched then to respond well to media situations and practices of today. There is a change in the nature of the media that tests our own capacities for revision...

This major change and probably the most valid distinction from a users' perspective is in the linear vs. non-linear nature of media, as it introduces a difference in the notion of programme on the one hand and in the notion of editorial responsibility on the other hand. Programming in linear media is related to schedules and promises provided by specific genres and productions; programming in non-linear media is related to codes and promises provided by specific formats and platforms. In both cases, an outside agency still mediates with the user, giving him/her more or less the feeling of choice and independence. In the case of editorial responsibility, the locus of control is clearer in linear media, where it tends to stay with the broadcasting or printing entity, than on non-linear media where it can be shared between the provider and the user, with various ranges of independence leading to "grey zones" for content provision and content liability, with issues of effective control and selection.

III. Network effects, experience goods and relational goods

The perspective of socialization and cognition looks for a cultural model that is more sensitive to the eco-system of media as spectacles and services than traditional cultural models based on face-to-face performance and activities (opera, theatre, circus,...). In that light, it considers the importance of relational goods and of experience goods, in combination with the potential of network effects, where financing can come from actors who are not users, on the collaborative basis that the more one thing is used the more it becomes useful and is improved, at a cheaper cost (Frau-Meigs, 2005, 2006; Pasquale, 2006).

Media as spectacles are indeed very close to relational goods, defined by Uhlener as "intangible capital assets that rest on enduring interpersonal relationships and provide both intrinsic and instrumental benefits. They are local public goods that are formed or maintained through non-contractible, co-ordinated actions". They are "distinct and final",

that is to say not necessarily related to the production and exchange of market goods. They take into account time spent on the networks and personal relationships, which includes emotions, involvement and responsiveness. Their value is predicated upon the interaction among people, especially the reciprocity in the pursuit of intimacy and mutual perceptions of understanding and caring.

Media as services are closer to “experience” goods that must be tested before an informed purchase can be made (Caves, 2000). They rest on social learning that creates habits of use and consumption. This is especially true with media contents, like music that needs to be listened to before purchasing a record, video games that need to be tested before buying the console or software applications that need to be tailored for personal use before use. A number of intermediary services before (consumer trials) and after buying (consumer satisfaction) are necessary before the transaction is operated. Experience goods emphasize the importance of the transaction function, whereas relational goods emphasize the participation one. They are not mutually exclusive and can be developed in complementarity with each other.

According to Wagner, network effects occur when “the utility that a user derives from a product increases with the number of other individuals who also use the product. (...) The number of users affects the quality of the product itself”. The evolution of sites like Second Life shows such a tendency as more and more tools are authorized for the users themselves to develop content; the dynamics at work in Wikipedia are another fruitful example, as the users have been pushing for more accuracy and guidelines. The emergence of prizes and awards, the call for proven reference, labelling systems, reputation markers, the feedback from users for improving safety or for suggesting creative sites, all point in this direction. Network goods in media are therefore valorised, such as social network platforms as they can attract people for low costs of basic services and then once they have a good subscriber-base they can make money on specific services...

Complementarity occurs whenever “one good enhances demand for another good” (Pasquale, 2006). This synergy appears, for example, with the whole open source movement, that has generated local economies around FOSS activities, especially for small businesses and for learning institutions. It is also visible with search engines sites and their connections to video and on-line games that have become a complementary product for these sites as well. This synergy builds on another tendency of consumer use and behaviour, the tendency to shop for systems (that combine a medium and the kind of message it can produce, like cameras and film or computers and software) rather than single products.

Complementarity can be enhanced by “network effects” as a result of the representation of the dynamics among actors. They may lead to improve industry standards and expand the user communities for their products. The capacity for cooperation for mutual benefit (and not self-interest or authority) can produce cultural goods and enhance participation beyond its political understanding. But such effects on the supply side of the market, positive as they maybe, should not be left unattended. They should not result in a crude “laissez-faire” social policy but take into account that there are still many open disputes over the access and use of information. The private sector corporations still work under the assumption that regulation will limit their freedom of commercial expression and lead to loss of sales. The idea that a balance between spectacles and services may lead to improve industry standards and expand the user communities for their products is still far from their thinking. Civil society entities may come in to mitigate these short term strategies, as they are more focused on longer-term benefits, more diffuse but likely to produce social and cultural change. Yet, the capacity for cooperation for mutual benefit (and not self-interest) doesn’t alone guarantee the formation of complementary strategies among all actors involved.

This implies indeed to reintroduce the role of culture in economic and political designs. Progressive grassroots associations call for “a facilitating culture” (Harrison and Huntington, 2000) because values shape economic and political progress, controversial as it may seem. Technology can help as it moves from mass culture to individually customized culture, with the potential for each individual to find learning tools and to adjust them to their specific needs, for example, in negotiation with teachers and tutors. Services for customization and personalization will increase their offer, as seen by the evolution of WebCT into Blackboard, as a proprietary platform for instance.

In this perspective, relational goods are intangible assets whose value is predicated upon the interaction among people, especially the reciprocity in the pursuit of intimacy and mutual perceptions of understanding, learning and caring. In that sense, they affect empowerment and wellbeing as they depend less on material concerns, like income, than on subjective ones, like peer-to-peer relations. Economist working on the economic valuation of biodiversity are currently working on developing qualitative indicators for such relational and experience goods. They are creating variables such as “hedonic pricing” and “contingency valuation” in order to intimate that such indicators of wellbeing should be taken into account in trying to ascribe value to intangible benefits (Pasquale, 2006). They both build on individuals’ estimates based on use rather than ownership, and can incorporate indirect dimensions like quality of life, wellbeing, empowerment and even biodiversity enhancement

and cultural diversity. They have the advantage to be applicable to physical and intangible goods alike. They can thus be valid for the evaluation of media spectacles and services and for learning events. They can present a less asymmetrical model to the paid-for services model, valuing the collective management of a shared common good. In fact such a reestablishment of balance doesn't preclude the fact that such exploration will complement if not increase the value of paid services. In the ecology of cyberspace, a person can be a "consuser" (coined from consumer and user) as well as a "spectactor" (coined from spectator and actor).

It is the transformative nature of the use that is the most important to take into consideration, definitely for policy-making and education. Commercial and non-commercial uses are key. Recognition of these rival effects is also necessary as benefits can be different too. Some transformative uses complement the market rather than compete with it. They are important to valuable society activities and interactions. Relational goods and experience goods share a number of cognitive strategies for testing ICT-driven media and verifying that they comply with users' expectations of participation and interaction. Among such strategies, network effects are key as they foster browsing, sampling, reviewing, comparing and intense peer-to-peer on-line chatting. These strategies are congruent with cognitive processes of memory, mental mapping, surveillance of the environment and information-processing; they are also in resonance with self-organization processes, such as plasticity, responsiveness and generativity (as the capacity to keep evolving). They are also congruent with the competences noted in socialization theory, like engagement, reflexivity and revision.

1) **Previewing and browsing** are essential to informed use for digital "natives" and "migrants" alike, as they navigate by trial and error. They allow for anticipation and performance.

2) **Sampling** the sites available, testing them for a given period of time, provides options for feedback and for revision.

3) **Building a "reputation"** for quality is another experience good that comes from comparison and the widely used practice of "favourites" reveals it. This enhances reflexivity.

4) **Ranking and constant reviewing** are also strategies, using flags, labels and lists, that enhance co-construction of knowledge, social accountability and collective responsibility.

5) **Peer-to-peer exchanges** are also part of experience and relational goods as they favour interpretation. Young people especially use them to check the reliability of some action; adults also need network support of their peers to take into account their feelings of uncertainty, complexity and information disparity... (Frau-Meigs, 2007)

Taking into account experience goods and environmental cognition should lead to a more comprehensive outlook on criteria for learning, online and offline. Cognitive notions of

self-organization need to be addressed, such as plasticity, multichanneling, multimodeling, responsiveness, virtuality, evolvability, transmodality, navigation, etc. They hint at the complex dynamics of governance and of education, especially the interplay of virtuality and territoriality, that may eventually shift our perception of where the locus for decision should be in the design of socio-technical systems: knowledge and cognitive conflicts as well as ethical practices could thus be placed very early in the priorities of software and hardware designers and providers.

IV. Implications for e-learning: Cognitive distribution in the new learning environments

E-learning is heavily based on ICT-driven media. Issues of services and spectacles are impacting the way knowledge acquisition and transmission are perceived. Entertainment and play are considered as important dimensions of motivation and memory-retention. Services construct educational environments as free or paid-for, as public or private, as open or locked. The impact on education is clearly that it cannot remain contained to the classroom, that it needs to build on a lot of offers out there, in the media (Wikipedia as much as Youtube), that it has to incorporate e-electronism to prevent illectronism...

Focusing on user-generated content reinforces the need for new media literacies as they pave the way for transmitting knowledge (network effects, hedonic pricing, contingency valuation, ...), connecting them to relational goods. What current research shows is the importance of cognitive distribution in the new learning environments built around ICT-driven media. When applied to education, media can serve both as tools for understanding our interactions with the environment and for engaging with it, via spectacles and services. Learning can be stimulated by cognitive conflict and this conflict around ethics of quandary can serve the spirit of inquiry that motivates learning. In that sense, cognitive conflict and ethics of quandary and inquiry can determine the organization and nature of what is learned in media education. In that sense only can we move from information to actual knowledge, as this one emerges through social negotiation and through the evaluation of individuals and groups that apply it to their situation.

A lot of the new research and pedagogical models that can be applied to media education and to e-learning evolve around such constructivist views, as solving one of the major issues of cognition, problem-solving. Savery and Duffy have described “instructional principles” from such a constructivist approach:

- * Anchor all learning activities to a larger task or problem.*
- * Support the learner in developing ownership for the overall problem or task.*
- * Design an authentic task.*
- * Design the task and the learning environment to reflect the complexity of the environment they should be able to function in at the end of learning.*
- * Give the learner ownership of the process used to develop a solution.*
- * Design the learning environment to support and challenge the learner's thinking.*
- * Encourage testing ideas against alternative views and alternative contexts.*
- * Provide opportunity for and support reflection on both the content learned and the learning process (Savery and Duffy, 1995:32-34).*

New cognitive and intellectual tools can thus be made available to teachers. They help identify the core competences they need, especially in terms of problem-solving, sense-making, critical thinking and knowledge-construction, as well as teaching how to learn and not only what to learn. These competences can be applied across classic curriculum topics and subject areas, but can also take advantage of the unique opportunities provided by media evolving content, associated with community participation and citizenship awareness. They can help teachers engage better with their students and harness the challenges of media culture with their collaborative support. It becomes clearer and clearer that pedagogical stances need to move away from teacher-as-source to teacher-as-resource, from set-texts to mobile-texts and from traditional didactic transmission to a view of knowledge as co-construction of meaning, the students contributing to it as well as the teachers.

A researcher like Aminata Sen reinforces this perspective for development, as his “capability” model is based on “functionings”, i.e. the competences a person needs to achieve his or her goals within local living conditions. The opportunities afforded by media education then encompass their civic agency as well as their employability. Sen insists on the fact that such literacy allows for the conversion of commodities like media into functionings that serve basic needs of poverty and deprivation as much as fundamental needs for freedom and social justice.

The current context of the “Information Society”, with its emphasis on knowledge-management via communication goods and services, holds powerful economic implications for the support of a media literate workforce. Much beyond specialized skills in computing

and programming, it requires a lifelong education to media, with media. It may be attractive to public policy decision-makers as well as the industrial sector, even without an established business model, much like the late 19th century movement to impose public and compulsory education for all children under 16. The long-term viability of the model became obvious with the industrial revolution and the wealth it fostered... This model is now in urgent need of upgrading to maintain its competitive edge. From its original motto of a “free, lay and compulsory” education, it should move to a “public, open and participatory” education via ICT-driven media.

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Chapter 2

New challenges of ICT-driven media

This chapter considers the new challenges posed by ICT-driven media to the learning environment and process and tries to assess how they can affect e-learning. It raises the issue of creative industries, within which e-learning can be framed and considers the perils and promises of such a framework, especially in terms of intellectual property and privatization of identity. These issues have consequences for learners in terms of employability, visibility on the networks and choices in socialization and learning events and outcomes.

ICT-driven media, especially with the issue of Internet governance, have acquired high visibility with the entrance in the millennium. Compared to the utopian years of the early 1990s, the first decade of the XXIst century shows a turn to the reality principle, precipitated partly by the September 11th 2001 terrorist attacks, partly by the World Summit on Information Society (WSIS, Geneva, 2003- Tunis, 2005) and partly by the growing need to “localize the global”. Localizing the global seems to follow some of the precepts of environmental cognition, which holds that:

A thoughtful use of new technologies can help root life in the local engagement of our human core desires. Thus new technologies might really herald an emerging global village, but life will never be rooted in it. It is the wrong scale for primary human associations, and to be lulled by its promise is to fall into the technocratic trap that created much of the 20th century’s dehumanizing technology. Instead if technology is to be aligned with human needs, it will do so by making life resemble a set of nested Russian dolls: multiple scales of life whose core is a reinvented local level, the community of place (Quartz and Sejnowski, 2002: 274).

Some current trends confirm this turn to the reality principle and to the “community of place”, as regulation by nation-states re-enters the stage and frame the evolution of the networks, especially in education and e-learning. There is an increasing overlap between real world decision-makers and Internet decision-makers as the founding fathers of the media give way to more ordinary users and developers. In spite of Lawrence Lessig’s much touted phrase that in cyberspace “code is law” (Lessig, 1999: 6), the notion that technicians should decide of norms without accountability is being challenged by the call for anchorage in national laws, if not international ones.

The debates around governance show that technological integration is not consensual worldwide and that other dimensions of convergence, social and cultural in nature, have

entered the debate. They raise questions about the notion of the “global village” and the risks to the homogeneization of cultures in the “Information Society.” This phrase is more and more criticized for its unified and hegemonic version of globalization; Unesco and civil society actors tend to prefer “Knowledge Societies”, thus denying the effects of convergence, if not convergence per se.

I. Challenges of ICT-driven media

The advent of ICT-driven media services presents a series of challenges to learning processes (as well as broader societal situations):

1) *Broadcastization of Internet*: HDTV and Internet-TV makes it so that the usual harmful content and the usual string of stereotypes and other dignity-damaging contents that are present in the audiovisual media are going to be available online, even more so due to the global nature of the network and speed and immediacy of transmission. Transferring the same legal practices to Internet that exist on audiovisual media and enforcing them is essential and it can be done, as exemplified with the case of protection of children and harmful content.

2) *Blurred media definitions and rising communication goods and services*: media and software are becoming services and locked or tethered appliances, like the ipod, (see Zittrain, 2008). This suggests a mutation of media beyond broadcastization, and even more difficulty in maintaining privacy but also access to valuable information. The notion of public service needs to be recast in light of web 2.0, to promote the dignity process. At least three services can be identified, like infrastructure services (and capacity-building), professional and support services (knowledge-intensive), and conceptual services (design-oriented). They go along with a number of web platforms, whose success is predicated on their capacity to structure users into communities and to offer them goods and services that facilitate their virtual interactions: exchange platforms (like Amazon, e-Bay,... whose objective is to put various agents in contact so that they can proceed to transaction), audience platforms (traditional media sites and: search engines and portals like Google, Yahoo!,...), and exploitation platforms (like Linux or Windows) that aim at providing end-users with access to a variety of software applications. There is a need for mapping these goods and services, especially in relation to the right to cultural diversity and to freedom of expression. There is also a need to ensure that they do not commercialize rights as services based solely on “trust”.

3) *Commercialization of Internet*: it poses a risk to privacy and freedom of expression alike, especially as it goes hand in hand with quasi-monopolies or duopolies in ownership and software and hardware design (Goldsmith and Wu). The current concentration may stifle other forms of expression and design, especially non-proprietary and public domain forms of expression (open access, free software, information commons, ...). It may lead to the abuse of intrusive techniques that impinge on privacy and can produce a freezing effect on expression like the end of confidentiality of e-mail, as it can be sold and marketed (Google and DoubleClick). Tracking techniques, especially those involved around Digital Rights Management or Security enforcement against terrorism, may lead to lifting people's privacy and anonymity as well as their loss of freedom of expression...

4) *The threats to "network neutrality"*: privatization and government security concerns are putting pressure on ISPs and other access providers to create several classes of paying/non-paying consumers. They also tend to restrict the way consumers lawfully use the networks. Network neutrality issues (which extend beyond signal neutrality, like wi-fi for all in cities), are rising and there is no single definition and evaluation of risks about it. It needs to be monitored, as tethered appliances and their related services restrict access to third-party (Rotenberg, 2000; Nunes, 2006). For learning processes, it is important to keep the endpoints opened, and to provide interoperability between systems and programming interfaces, as this allows continuing evolution of the networks, connectivity and portability for services depending on Internet, and enhances the process-oriented dimension of e-learning. The old media "must-carry" rule should be considered also as an option to ensure that valuable content with public value reaches everybody, without discrimination.

5) *Re-territorialisation of Internet*: as well as the capacity to cause damage and real world effects, re-territorialisation of Internet presents the risk of major surveillance of individuals, in the name of the protection of all, public safety and the need to investigate criminals and trespassers, but it is done without any accountability. Network security techniques should be re-enforced, but without letting national police authorities free from all monitoring. Security issues should not erase respect for persons, so the protection of data and metadata becomes an important corollary to protection of persons. This protection is all the more necessary as private data are increasingly being stored in places outside the home (university servers, ISP servers,...). As search across computers becomes technically feasible, the risks to expression and privacy are increasing if not closely monitored. If the services are

commercial, third parties can take the data out of any context intended by the author and this can be detrimental to expression in the sense that it will have a “freezing effect” (people will either self-censor, or select storage items). It also makes it easier for governments or ill-intended third parties to eavesdrop on people... Protection for stored communications should therefore be planned and enforced to allow for legal actions (Rotenberg, 2000; Zittrain, 2008).

6) *Globalization of Internet*: together with re-territorialisation, there is a movement to globalize Internet to ensure coordination and law enforcement, with new law enforcement authorities, that do not necessarily promote rights. Globalization is a commercial movement, a trade movement and WIPO, WTO, etc. are about trade, not human rights or values. There is the need for other international organizations to make these rights recognized by them. The example of the Cultural diversity treaty is to be monitored, especially in the new context of “soft” law that avoids sanctions and favours negotiations in case of disputes. It is important to posit entities like UNESCO as equal to WIPO in such cases, for a balanced view on rights and for the promotion of culture and knowledge. Technological solutions as offered by self-regulation and soft law present the risk of avoiding the public process of taking the case for these issues in the open political arena. Such substantive issues as rights and learning cannot be resolved by technicians only, even if they have to be a party to the early design of the software or media service.

II. The rise of creative industries: promises and perils

E-learning activities and processes are more and more likely to be framed within the notion of “creative industries”, as they deal with self-knowledge and self-expression and as they can be seen as a product whose nature is not very different from other ICT-driven productions (Frau-Meigs, 2008). From the perspective promoted by the private sector, creative industries are yet another extension of media content and services. Richard Caves proposes five criteria for distinguishing creative industries from other industries:

1) The nature of the product, which consists of “experience goods”, in other words those whose value cannot be evaluated like that of a commercial product, since they must be tried before purchase.

2) The nature of the production process: production requires significant up-front work to obtain a prototype that ensures the product’s uniqueness, but on the other hand, reproduction and distribution costs are very low. The return on investment depends on the number of copies sold.

3) The way it is consumed: the prototype is never consumed, and the consumer values the lived experience, not the physical form of the product.

4) Unpredictability: the product's market value is very hard to predict, which creates uncertainty and requires the taking of considerable risks.

5) The relationship to the consumer: since each product is unique and irreplaceable, it is not competing with other products the way traditional consumer goods do. It is primarily concerned with filling individuals' leisure time and competes with other products for time/consumers (Caves, 2000).

In addition to these criteria, the creative industries require a highly qualified workforce with very specialized skills, often with an artistic focus, with a necessary use of ICTs. The economic model is very chaotic at the moment, but follows the film-production model in its 'project-based' focus: a team is brought together for this one project and is dissolved once the product is finished. The workers do piece work, often on a freelance basis, with no prospect for becoming a full staff member. In these knowledge industries, the 'work' value is often strongly associated with the 'knowledge' value (Frau-Meigs, 2008).

Creative industries allow the passage from audiovisual over-the-air media to online ICT-driven media. They don't have a stable economic system yet, because the benefit margins for such a cultural good are thin (they have to reach many customers) and they don't have much predictability. However the opportunities to satisfy demand over time are enormous, because of the storage possibilities and the re-mix and re-use of the prototype. For Chris Anderson, of *Wired* magazine, they announce the end of the tyranny of blockbusters and best sellers and the advent of niche cultures for niche publics, thus deeply modifying the codes of cultural expression (Anderson, 2006). In this new cyber-economy, each can choose the product of choice, available in aggregated microcultures.

Platforms like Facebook, or Second Life aim at providing any user with "ready to mediatize" spaces, where what is sold is not the content but the use of the production tools. The same happens with e-learning platforms like Blackboard and alike. The Web 2.0 seems to distribute the means of production to the masses, but the economic gains are for the few. Pierre Moeglin wonders about the means of paying for creative work of that kind, and notices the emergence of a class of "infomediaries", or information brokers who are among the few to live off this system (Moeglin, 2007). Other analysts refer to sharecropping as each participant gets just enough to keep on producing and survival, whereas the general growth and benefits goes to some large web corporations, that can intervene in the management of the digital crop. The benefits actually seem to arise from advertising and connexion costs, supported by the

sharecropper and his/her customers, rather than from the digital content itself. Google, by creating AdSense, has thus been able to capture a lot of the advertising revenue that circulates on such digital spaces.

II. 1 Intellectual property at the heart of the matter

Creative industries are important to e-learning productions as these productions rely on the creation of personal and collective knowledge and artefacts that are socially and culturally valuable. The issue then is the degree of protection e-learning gets in terms of intellectual property. There are many risks of copying, stealing and reselling productions put on-line. The technological ease of downloading as well as the international cross-border nature of the tools tend to facilitate piracy. The international corporations in the private sector, from Microsoft to Cisco, as well as the United States and free-trade lobbies, are trying to prohibit any system capable of digitizing images and sound that does not include a Digital Rights Management (DRM) recognition device. They pose a threat to those in the learning sector who favour free exchanges between users and creators, which effectively dis-intermediates them.

The international corporations have lobbied WIPO to ensure the IGO has a number of tools for monitoring them, including a Creative Industries division. Situated in the small and medium-sized business sector, this division seeks to quantify statistically the creative industries, in order to measure their economic potential and their value as commercial products and services. While recognizing their importance to cultural diversity as a vector of empowerment and economic enrichment, its goal is to ensure that these industries remain within the realm of intellectual property and do not experiment with other approaches to managing competition or creativity.

Two approaches are therefore in head-on opposition: one built around policing and restrictions, the other negotiated and differentiated. The two sides' stances are thus paradoxically reversed: the free-trade proponents have proven to be hard-line protectionists, clinging to a single solution, while those who favour the open source model are much more willing to promote alternative solutions. The open source proponents do not advocate a free, anything-goes situation, but suggest that authors could be compensated in differentiated ways, and that payment for rights could be less centralized through fixed intermediaries determined to exploit all rights similar to copyright, which is often used as an alibi. They promote alternatives to classic copyright, more in line with how contemporary users and individual Web 2.0 authors use the creative industries.

Philippe Aigrain emphasizes this open perspective, supporting alternative mechanisms such as the “global license” that proposes to make peer-to-peer exchanges legal, in exchange for a fee on broadband Internet subscriptions, which would go directly to fund the creators and authors. Such mechanisms would remove responsibility for determining legitimate use from the control of a handful of multinationals. Individual practices could be measured via network traffic analysis. Such solutions already exist in many contexts (private copy, radio), although in an unfair and limited fashion, since the creators of freely accessible works do not benefit from them and they only apply to activities that do not benefit from the positive impact of online trade. Allowing creative and sharing communities to develop more equitable mechanisms would reflect the new kind of relationship between the public and artists (Aigrain, 2005).

Defending the free-trade view, Jean Tardif and Joëlle Farchy thinks that such mechanisms are impossible to implement, since they would prevent the commercial maturation of the Internet: “All the currently obscure points would still have to be negotiated: the covered content types, appropriate remuneration and how it would be calculated (by broadband subscriptions as suggested in the current proposal, or content, upstream traffic, etc.), methods for distributing payment among rights holders, determining management fees for the system, and compliance with France’s international legal commitments.” (Tardif et al, 2006). This last reference shows clearly that for the free-trade proponents, WIPO trumps UNESCO and intellectual property trumps cultural diversity and open systems.

Free-trade proponents in the private sector are not opposed to the innovations brought about by the Internet, but they see them as supplemental options, acceptable only if they reinforce the classic intellectual property system. Thus P2P (peer-to-peer) is legal only if the sharing software evolves towards a new technological generation more respectful of classic copyright as they manage it. The same applies to sustainable development, for which their watchword is “fair culture”, built on the fair-trade model, which assures consumers that the artists have been paid without too many intermediaries taking a cut. The point is to preserve traditional economic frameworks and protect the power of large corporate groups in negotiations between partners. The “free trade” view of the creative industries can be seen as an attempt to solidify dominant positions and de facto monopolies.

By contrast, promoters of the open source model denounce the risk of systematic fiduciary use of intellectual property with its corollary, speculation in audiovisual goods and services, in a context of co-creation and co-authorship from multiple sources, including certain collectives, anchored in traditional knowledge whose provenance is impossible to

trace. Among other measures, they advocate the open-source model, which, whether through the GNU license, GPL (General Public Licensing) or Creative Commons, is a non-exclusive, non-proprietary way to proceed.

In practice, apprehension of intellectual property is complicated by the coexistence, within the creative industries, of commercial and non-commercial activities, some proprietary and others not, which are necessarily interdependent. The line between intellectual and artistic property is blurry in the specific context of the creative industries, since they fall partly under the heading of art (film, music, design, etc.) and partly under the heading of industry (with applicable patents). In the creative industries, it is very difficult to apply the intellectual property model, in so far as knowledge activities cannot be exclusive rights, since they are not scarce and they can be shared non-exclusively. To protect them through exclusionary procedures would keep them from reaching their potential for collaborative production of knowledge and intelligent cooperation.

On a global governance level, the open-source model of media regulation can compete favourably against the information-provider model. However, there is a real risk of bifurcation between the commercial, proprietary “free-trade” vision of learning and the independent, open “diversity-based” view, as well as the risk of drifting towards trivializing cultural goods and turning them into just another consumer product, under the guise of promoting creativity.

The ever more concentrated ownership of ICT-driven media, and the concentration of copyrights in a small number of companies, is a worrying trend that harms diversity and distributed learning. This is particularly true now that the myth of the Internet as a completely unmediated zone is coming face to face with reality: the principle of Internet reterritorialization and increasing related litigation. Between the extreme of rejecting excessive corporate power and the extreme of rejecting the myth of starving creators doomed not to profit from their work, a middle ground needs to be found for arbitration to begin.

II.2 The risks of distortion by “cognitive capitalism” and privatization of identity

Creative industries are in the process of emerging, especially via social networks and collaborative platforms. They are connected to what is wrongly described as “cognitive capitalism” (Vercellone, 2003), because it is focalised on the production of knowledge and knowledge management. The competitive edge is less based on work value than on knowledge value, and therefore on exploitation of human capital, especially human cognition

and self-knowledge. On the networks, the energies of user-generated content are becoming the engine for development.

The consequences for the various actors are yet unclear. Some researchers posit that the accumulation of computer skills will benefit workers more than corporate employers because they own the means of thinking and knowing (McKercher and Mosco, 2007). Others posit that this is a new stage of transnational capitalism where workers are exploited and stripped of their knowledge, with the added problem that the clear separation between labour sphere and private sphere is broken. Besides, the invasion of leisure time by these kinds of game and design activities is problematic, as it converts “free” time into “exploited” time (Husson, 2003; Bouquillon and Combès, 2007).

This seems to confirm the sharecropping economic model developing on the Internet that has not been carefully monitored yet. It is rampant in some social networking sites that have advertising attached to them. Most of these activities are financed by advertising but nobody knows how it is redistributed among the different actors involved, including the aggregators, players and designers. It is said that Google with AdSense has found a means of calculating the number of clicks, but Google will not pay the small users until it owes them more than a \$100, which can take years in some cases and allows Google in the meantime to divert these sums for other self-growth activities.

Privatization of identity and creativity that can be totally counterproductive for the public good, the digital commons and e-learning communities. It can create modes of selection that are related to the expressive capacities of some against those of others and create new inequalities as not all individuals are capable or willing to expose their intimacy while others enjoy collaborative and relational uses of expression that are not taken into account by exploitation of intimacy. It can use the recent knowledge acquired by neurosciences and theory of the mind for manipulative and intrusive purposes (like neuro-marketing for instance) instead of mind expanding ones (like simulated environments for learning). Creative industries, with their focus on user expression can be captured in the transnational logic of capitalism with grave consequences as to the privatization of self and the enclosure of public expression and shared knowledge, especially if the production tools remain within the hands of a few profit-makers.

The total sum of identity is more than just individualism and consumerism. Several scenarios have to be taken into account around user-aggregated content, social networks in relationship to “creative industries” as identity could become reduce to self-entrepreneurship. Some researchers consider such spaces as forms of exploring “cultural entrepreneurship”

(Lull, 2007), and consider the possibility of designers to create “personal supercultures” (Lull, 2007). Others consider the paradoxical meanings of collectivity at stakes on such platforms and services, and talk of “reciprocal individualization” (Beck, 2003), to describe the new forms of social and cultural transactions that are being tested, whereas others speak of “personal communities” (Wellman, 1999) to describe the new hybrid forms of identity and the Social Affordances of the digital world for Networked Individualism. Others still are sensitive to the national and local anchorage of such practices and talk about “situated acculturation” (Frau-Meigs, 2008), to take into account the asymmetrical power and commercial relations that are at stake, in re-territorialized realities.

III. Generative and socio-cognitive dimensions of media

The view on creative industries provided by the open source proponents has also been supported by UNESCO, in 2006, even though UNESCO prefers to use the generic expression “cultural industries”, which encompasses the other aspects of content. “Creative industries are distinguished from cultural industries...by their emphasis on expression and identity, rather than on marketing, with a particular interest in handicrafts and popular arts, as well as design, with derivative works and applications in publishing, music and film.” This includes a whole series of sectors, mainly in the communication and information fields, such as film, the audiovisual sector, music, publishing, and video games, but also handicrafts, architecture, design, fashion, and more intangible cultural goods, related to antiquities (museums and libraries) and tourism activities (food, folklore, etc.). UNESCO associates the creative industries with the identity-based interpretation of cultural diversity and learning, and adds a local aspect related to the idea of sustainable development, for the above-mentioned sectors. It is founded on a model of mixed, even hybrid, media, which brings together the concepts of “public service” and “open source”, non-proprietary and protected from market forces.

III.1 The information-communication process in generating creativity

Focusing on e-learning puts the users’ viewpoint at the centre of the analysis. perspective. It takes into account the reliance on ICTs, with several criteria related to the information-communication process itself:

- 1) The nature of the communication process: it deals with expression more than with distribution. Facilitating users’ communication meets their expectations in terms of self-expression. The new media generate “expressive cultures” (Allard and Blondeau, 2007) consisting of relational goods, in other words “the intangible assets that are built upon

interpersonal relationships that supply and provide intrinsic, practical advantages. These are local public goods that are formed or maintained by coordinated, non-contractual actions” (Uhlener, 1989). Their value, outside the market, is based on interaction between individuals, especially reciprocity in the pursuit of intimacy and mutual perceptions of understanding and caring. In this sense, they have an impact on empowerment and well-being, and make these less dependent on material matters (income) than on subjective matters (family, peers, ...).

2) The nature of the information: the data that are exchanged focus on the individual and on the individual's own identity within a local culture. The relationship to art is important for users, who develop a certain aesthetic through which they present themselves. In this sense, the creative industries are invasive and inquisitive, based on media conceived as intrusive prosthetics, aiming towards extimacy.

3) The power of cognitive and communicative processes: the practices driving these industries operate through experiments such as mixing and remixing, collage, patchwork, appropriation and sampling, recycling, etc., which are characteristic of Web 2.0 exchanges. They also need a form of customization and localization, to make sense in a given culture.

4) Forecasting tools: these creative industries must take into account values of sustainability and social responsibility, tied to ecological constraints, even if the legitimacy of these concepts remains controversial as regards the concept of weak/strong sustainability. The local environmental attributes that provide well-being and a feeling of an appropriate level of interaction are very important. The creative industries generate culture while incorporating implicit characteristics such as quality of life, well-being and even lifelong learning. They encompass values of citizenship, empowerment and trust.

5) The relationship to the consumer: it is founded less on financial value than on that of barter and exchange, coupled with a value of symbolic construction of reputation and recognition. It also takes into account collaborative and online work as well as the “free” nature of open standards and open-source software. Thus the productions created in this way also have a cultural transmission value that associates them with relational goods, in a specific context in which they generate social and cultural capital (Frau-Meigs, 2008).

These strategies and practices are essential to learning and to cultural diversity, because they allow not only the preservation of cultural heritage, but also the establishment of contemporary creative production and a dynamic projection into the future. Consideration of this “diversity-based” view of cultural industries partially removes them from the market for traditional goods and services and the inherent risk, denounced by Herbert Schiller, that all human activities exist solely as on-demand pay-per-view services.

These processes pave the way for lifelong learning, particularly if it is linked to the development of Web 3.0, which brings together the Semantic Web and intelligence networks to allow information research, the combination of various resources and their decentralized propagation to other nodes in the network. Certain web services are already starting to point the way by connecting intelligent autonomous agents, capable of interacting among themselves, to other web sites and other individuals. These enormous hybrid intelligence systems – combining people and intelligent software, which may include machine translation systems (necessary for true diversity) – will surely allow territorial and virtual communities to self-organize, optimize their transaction costs, and manage collaborative creative teams and diversified knowledge networks with added cognitive value.

III.2. Convergence as an unwelcome cognitive aim and output

These processes show the constant adjustment to scale, context and needs that creative industries require. In a socio-cognitive view, this co-evolution of ICT-driven media and culture can be seen as generative, open-ended, and cross-pollinating. As a hybrid platform for connection and diffusion, Internet offers a polycentric tool that allows the various forms of cultural expression to migrate and cohabit migration in different regions of its cyberspace.

But technical convergence should not be identified and equated to content convergence, as the risks of standardization are important and the dangers of capture by control of entry traffic are real. Even if convergence exists, as a facilitator of exchanges, it doesn't result in a global panacea. Digital convergence may facilitate universal access to contents and their modification by the end users, but the functions of media in society are not likely to be altered: surveillance of the environment, correlation and transmission still remain core values that give media their legitimacy. New functions are emerging to manage the new complexity of multilayered levels of exchanges, like interactivity, participation and data-mining, but they will not eradicate the prior ones.

What history opposes to the “techy” myth of convergence is the piling up of technologies, as the book has not been eradicated by the computer yet and is likely to be re-invented in digital mode. They have a democratic complementarity that allows users to play one against the other: residual technologies are used by minorities that would otherwise not have access to hegemonic mainstream media. The underestimated resilience of radio and its important use among young people or, on a different scale, the emergence of local television channels, are witness to the vitality of all media in various regions of the world. One technology doesn't chase another one, it encases it within a larger range of social uses:

sedimentation is stronger than convergence. This also corresponds to the vested interests of the market and of the industrial logic: working in a perspective of programmed obsolescence, corporations need to maintain a variety of supplies and goods in constant competition.

In other words, the capacity for convergence should be seen in the social acts of people using the multimedia platform provided by the Internet, not in the technology itself. It means considering convergence as practice rather than a technical determinism and fatality. Multimodality is key. It is important to see if learners make a distinction between online and offline activities, and if so, with what purposes and how. It means that technical convergence doesn't really imply cultural convergence, especially when specific interactions are at stake. For instance, radio can be listened to on the Internet but also via the traditional over the air sets. Convergence is then extremely connected to the listeners' situation and their choices. Moving from Internet chat to mobile phone exchanges is another example, as people may want to check the voice and authenticity of the person behind the lines. People tend to set up a variety of accounts for their various activities online, they have different lists, they have favourites, ...

So the idea of convergence doesn't really map the variety of activities possible in online and offline contexts; when it does it is not in a stable way, which sort of defeats the purpose of convergence (the idea that one can have a universal do-it-all, stable tool). Technical change has to be compounded by users' assimilation of new media in their everyday life, not in virtuality only. Both producers and users of the technologies seem to have an interest in doing so, as they reprogram and reconfigure their tools and apply them to everyday life problems.

Of particular concern is the problem of the conservation and access of digital productions, as there is no technology yet that is as effective as paper to store data in a readable way through centuries, independent of the encoding and decoding tools. Multiple forms of intelligence need to be at work via different vehicles, and the dependence on a single one that is still so fragile and unstable doesn't necessarily work in favour of diversity. The current situation of ownership convergence and free trade domination holds the risk of exhausting financial resources and creating bottlenecks while constituting *de facto* monopolies. This hinders the expansion of knowledge and the diversification of both online and offline activities, as well as deterritorialized and reterritorialized uses.

IV. Implications for e-learning

Several elements are important to recall in considering e-learning outcomes in relation to intellectual property, creative industries and production of knowledge. Various scenarios need to be kept active, around user-aggregated content and social networks as they are often the cement of e-learning communities.

In collaborative constructivist views of teaching, the co-construction of knowledge makes it difficult to define a single author or owner of the ideas and of the final production. This poses a problem in terms of intellectual property, that is not an obstacle per se but that requires attention and negotiation at the early stages of the design and at the early stages of the community work, so as not to be a problem later and poison relations in the e-group. There are solutions that are being explored, especially via Creative Commons licenses that allow the end-users to make the choice of how their production can be used and re-used online, in commercial and non-commercial settings.

In terms of creative industries, e-learning can be in the forefront, especially as the cognitivist transactional approach promotes learning based on real-life experience and on performance. Putting knowledge that relates to the humanities and the arts online, like languages or communication events or artistic productions, relates e-learning to creativity and to cultural goods. The nature of the outcomes produced by learners in e-learning, like texts, documents, videos, etc., relates both to experience goods and to relational goods, as people work together and post their productions online. The production process makes it possible for others to use and reuse the production, as distribution is fast, easy and cheap. There are therefore risks in the relationship with the end-users as the change of context or situation can change the nature of the production and as there is a lot of uncertainty at how the production will be perceived by others.

In many ways, e-learning productions, even when done on proprietary platforms like Blackboard, relate to the UNESCO definition of creative industries, and to the open source model. Learners in e-communities are more interested in expression than in distribution. Their value resides on reciprocity and mutual perceptions of understanding and knowledge. The relationship to art and the humanities is important for users, who develop a certain aesthetic through which they present themselves. The practices driving these productions operate through personal experiments such as collage, sampling and remixing. They tend to value the symbolic construction of identity via reputation in the collaborative online work. The teachers and learners are in a way their own personal entrepreneurs, as they explore forms of

culture and learning and make them accessible to others. However they have to take into consideration the context of their learning, that is often collective in e-learning.

Placing e-learning in social cognition and within the framework of creative industries implies a certain amount of awareness on the part of the e-learning course designers, the teachers and learners together. There is a need for collaborative practices to be made explicit and clear, there is a need to identify real-life situations and problems, there is a need to create conditions for effective work in creative communities of inquiry. These issues cannot be solved single-handedly by one person and needs the attention of many. The learning experience needs to be twofold, in a cognitive transactional view: the construction of meaning comes from a personal perspective, this construction needs to be confirmed by the collaborative community of other learners.

The social affordances of the digital world for networked individualism require that asymmetrical conditions of power be carefully monitored and controlled. The responsibilities of the teacher are complex because they have to create the cognitive, cultural and social conditions for learners to feel comfortable with the tasks required of them. This requires both content expertise and social expertise as well as pedagogical know-how. The learners on the other hand have to be able to dialogue with the teacher and express their expectations and their views on the project at hand and the learning outcomes. This balances the notion of responsibility and control in the project-based process.

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Chapter 3

Users and networks

This chapter considers ICT-driven media from the perspective of the end-user, the learner, and tries to place the various figures that have emerged in the use of the networks and how this affects the learners and the process of e-learning. It analyzes the new perspectives on identity formation online and the implications for learning. The various figures of the users are considered so as to focus more specifically on the figure of the e-learner and the way it is framed within social cognition and socialization theory.

The potential of spectacles and services to support identity construction and the development of the person as subject needs to be preserved: people increasingly negotiate their self-understanding via media, especially as media help them manage the tensions between self-description and social ascription, so visible on the social networks woven by teenagers for example.

Identity is a generative process, in evolution. It is context-specific and socially constructed by cognitive frameworks that the media help ascribe, partly to ensure the transmission of values and attitudes that are acceptable in a given society, partly to generate new ones more adapted to the environment. Identity formation has evolved from a relative dependence on social pressure towards a need to express one's subjectivity outside the traditional spheres of family and class. Sense-making of one's self becomes crucial in such a process and depends on reflexivity as much as on expressivity (Giddens, 1994, Kaufmann, 2004). Individuals are involved in personal life projects, sustained through a layered narrative of self-identity. This project is related to self control in a complex environment but also fitting with the requirements of the digital economy.

These two trends are facilitated by social networking media in a magnified way, but all media as spectacles have the potential for expressivity and reflexivity (photography, radio, ...). Media as services are more problematic to identity construction as expressivity and reflexivity may be paid for, and alienated to commercial purposes. The shift toward subjectivity and reflexivity therefore is media-enhanced, allowing for various subject positions and social interactions. They serve the function of distraction, as entertainment needs such self-centred uses of leisure time for its expansion but they also work on the function of transmission and participation in various ways that can serve knowledge-construction.

But this process doesn't come without problems, as the ICT-driven media tend to be "public" without public service obligations, tend to be "global" without international agreements. As the self is more and more exposed to an ever-larger public eye and scrutiny,

there is an increasing need to learn to manage one's online identity. In many regards, e-reputation has become crucial for any user of media, especially as they are perceived as relational goods and experience goods, based on ranking and popularity (the number of comments on one's blog, the number of hits for a favourite video, ...). Be it for personal or professional reasons, the level of awareness as to the stakes connected to online identity, and the consequences on offline reality has to be raised. The lack of such awareness and of policies related to the control of online identity can lead either to paralysis for those who refuse to engage with technologies over which they have no control or to unconscious levity for those who over-engage with such technologies. So issues of regulation, transparency, and specific rights, —like the right to one's self image or the right to erasure of one's traces—, are closely related to identity. They have implications for e-learning that need to be taken into account.

I. Cognitive patterns of use and social relevance: “you are what you type”

When considering man-machine interaction leading to information and communication services, several issues are at stake for online identity as it has incidences on offline identity. Research trends have identified anonymity and virtuality as two main trends enhanced by cyberspace practices, with potential promises but also perils to identity. This is likely to be the case more and more as full virtual worlds develop, where broadband and other innovations have allowed the explosion of virtual selves, avatars or virtual doubles. The cognitive connections between players and their avatars are not yet clear but they will have an impact on both physical and virtual identities. This is even more to be anticipated as developers are trying to increase the seamless experience of their interface designs, especially by mimicking emotions, body gestures and facial expressions.

Research on the benefits of virtual communities still needs to be developed, as a lot of hype circulates around them. There is a tendency to believe that people can present themselves in the networks with a mask and therefore without fear of persecution or discrimination. This lack of fear produces a kind of freedom, especially in the ability for people to explore the roles of gender and sexuality in a manner that can be harmless. An example of this can be seen in Second life where communities welcoming gay and other transgender communities have been established and share their experiences with the larger community without experiencing judgmental criticism or ostracism. As a result a number of primary markers of identity, like gender, age, race, income, etc. are partially subverted online.

This gives anonymity yet another cognitive twist, that can be very problematic for developing trust in e-learning situations.

I.1 Anonymity and its two dimensions in cyberspace: disembedding and disembodiment

“Disembedding” points at the irrelevance of geographical position and immediate locale on the digital social networks it creates a new context for communication that is valued for the interactions it offers, and its wellbeing consequences within the online community thus established (Giddens, 1990). It implies interactivity, which is to say the communication between man and machine, without necessarily seeking interaction, the communication between men via the machine. It promotes a sense of co-presence and simultaneity and has created a whole series of protocols and conventions (netiquette, lists, passwords, ...). Disembedding can be seen as highly positive as it provides empowerment to individuals by liberating them from local parochialism; it creates a new sociability due to elective and selective choices of community; it reinvigorates the democratic freedom of self-organization around personal or collective projects. Yet it can have negative dimensions when it produces processes that “drain offline sociality of its remaining communality (by replacing, disembodying, mediating increasing fragmentation”, according to Don Slater (2004). Disembedding has led to the feeling of a life online that could sustain whole communities, “an ecosystem of subcultures”, as Howard Rheinghold imagined it (1993). The claim of sustainability is now being challenged, because of the offline consequences of such lifestyles and subcultures and because of their increasing re-territorialisation (geo-coding, geo-sourcing, national servers, national search engines, ...).

“Disembodiment” refers to “the feeling that a person’s online identity is apparently separate from their physical presence, a condition associated with two features: textuality and anonymity” (Slater, 2004). “You are what you type” is the kind of motto that shows that identity on the Internet has to be taken at type value, for a lot of the activities practiced, even though the future is going to make more and more space for voice over IP and video conferencing. So conspicuous markers of identity, like sex, gender, race, colour of skin, ethnicity can be discounted and don’t fix the identity of the body online. The other dimension of disembodiment comes from separation from one’s past and locale, as cultural markers of identity like address, name, biography, legal status, education, etc. can also be discounted.

These two features create the possibility of online anonymity with respect to offline identity. It raises issues of traceability, of authenticity and reliability. In the case of minors, it

adds the additional issue of gullibility, as they don't always question who is behind the screen and with what intentions. But for many users, life online allows them to separate themselves from their prior identities and real life relationships. They do so via performance as they have to give life to the new identities they endorse and so authenticity is less important than performance. Performance is about deconstructing identity as it is in real life (body, reason, nature) and endorsing fragmentation, fluidity and mobility. Interactivity is sought over interaction, and this is going to be increasingly so on Web 2.0 media as performance interacts with intelligent objects and social networks. Connectivity is key, even more than connectedness (Frau-Meigs, 2011b).

User-aggregated content and social networks use this double dimension of anonymity to play with identity. Some of these services give the feeling to the users that they are gratuitous and free (the "gift economy"), and some are, but most are costly, where it only on connection time. There is a hidden question here of labour and exploitation as the creative industries, through "dematerialized" and "dis-intermediated" exchanges and flows, can weaken the historical protections that governments and trade unions have gained for workers.

As a result there are a lot of incompatible and paradoxical freedoms being expressed online that have seemingly transcended the contradictory injunctions of life offline, especially the right to any kind of speech and association. Yet, most research on identity online shows that performance doesn't necessarily lead to the much-touted utopian freedoms and subjectivities that Rheingold and others anticipated. Slater (2004) and Springer (1996) have looked at gender issues and found that conventionality is very strong online, and produces in fact "hypergendered performances" and a return to "conventional normativity", where performance is treated as unauthentic.

If anything the lack of constraint on online performances provided an occasion to realize, in fantasy, the most conventional offline gender aspirations... It is precisely because the production of unambiguously sexed and heterosexual bodies is at the centre of social identities (not just sexual, but national, racial and so on) that any problematization of the body will provoke fear and retrenchment. The body is indeed becoming more problematic as the essential ground of identity: it really is becoming more cyborg and merged with technology, revealed as performance, reconstructed through feminism and new sexualities. It is precisely because various new technologies such as the Internet make the body problematic that people exaggerate rather than abandon gender. (Slater, 2004)

Research on ethnicity shows a similar trend to over act out one's awareness of self, an intensification of national identity (Miller and Slater, 2000). There is an intensity of

performance of one's own imagined community that is very visible among nations that have a heavy diaspora, where national dislocation has led to immigration and distance nationalism. What one sees in cyberspace is again how discourse and power relations try to regulate performance. The more the technology will challenge the body and mind, the more society will try to regulate performance and intensify situated identity.

Among the legal and social implications of disembedding and disembodiment are the notions of trust and the notion of truth. Identity reassignments in terms of gender, race, age, can be problematic in relation to crime, especially crime against avatars. What happens when an avatar is raped? What happens if an avatar is killed? The relation of these issues to real world legal frameworks, social constraints and cognitive dissonance due to the unsettling blurring of mind, body and self-divisions needs to be addressed, especially in e-learning situations. Identity construction on the networks still seems to be heavily shaped by others and one's reputation. The need for ICT-education and e-communication skills is going to make a big difference as new hierarchies and power relations come into play that will give a winning edge to those who know how to surf the tough turf of the cyberist world. They hold the capacity to shape one's online perception of identity, always through the shape of one's felt experience in the embodied and embedded real life self.

II. The multiple figures of the user: toward a layered, generative model of identity

There is a need to take into account the old and new figures of the user, as they spell out different ways of being on-line and off-line, with crosscutting dimensions. They are the real multiple identities a full subject can assume today, that point to a variety of publics for media as spectacles and services:

-Consumer: belongs to both online and offline world by now. They don't separate the two worlds in their everyday practices. They enjoy disintermediation that allows cutting costs. They want trust in the transactions.

-Citizen: belongs to both online and offline worlds. Participatory culture of the Internet has fostered more presence and salience of the notion. They also navigate between reality and virtuality. They want trust for political reasons and they want respect for ethical reasons, as they question the ethics of real life politics...

-Player: Internet has established itself as a games playing culture. Not unrelated to fan culture. Conveys the idea that there is no danger and that there is no charge, that life online is free from money and from limitations to freedom of expression. They show little interest for

returns of online activity on offline activity. They are separate from world of work and consumption and politics.

-Designer: social networking sites have established the designer as a new figure, built on the idea that exposing one's self and using one's identity can be a means of interaction and a means of entrepreneurship, via creative industries. Associated with entrepreneurship and with sales of privacy and intimacy. They do expect some fallbacks of their online activities on their real life status. It poses problems of labour linked with sharecropping models, that seem to be the model on Second Life and even YouTube: the means of production are put at your disposal by the industry and you may (or may not) share the results (via advertising strategies like the one experimented by Google with DoubleClick, in 2008).

-"Cyborg": It is a hybrid identity, half cybernetic organism, and half human mind operation. The Web 2.0 and 3.0 will see more and more of these creatures around, in the shape of intelligent objects and interconnected networks. They will be used a bit like robots, and given some human characteristics, more specifically the capacity to express emotions and to elaborate representations. As such, sharing some human features with us though they are entirely online, will pose issues of ethics and raise the question of their status as legal subjects/objects (adapted loosely from Syvertsen, 2004 ; see also Bukatman, 1993; Frau-Meigs, 2011a).

The online fragmentation of these figures of identity is intense, as it is supported by a lot of software applications that each contains a bit of one person's identity. Identification is therefore possible via contact information (email, phone number, instant messaging, IP addresses) that can help localize the person. Authentication certificates can also be delivered, via entities like Certinomis, or services like OpenID or Naimz or even dedicated software like CardSpace. But an online identity is also available via contents generated by users on the networks, via personal blogs, podcasts and videocasts, not to mention platforms for sharing such expressions, like Flickr (photos), YouTube or Dailymotion (videos), not to mention linking tools like del.icio.us. Sales habits allow for a lot of traceability of identity, be it on such platforms as Amazon or paying systems as Paypal or the S'Miles systems of airport companies. People's hobbies are also means of being identified, like travelling sites (TravelPost), game portals (World of Warcraft), virtual universe frequentation (SecondLife, Habbo Hotel) cooking interests (BakeSpace), collaborative tasks (Wikipedia) or dating services (Meetic) as well as all the professional tools, like LinkedIn or portals like WetFeet for jobseekers and employers.

There are even services that address the specific issue of reputation and avatars, as identity issues are spawning a lot of jobs, like identity coaches, identity repairs, etc. Paying services like Technorati, Cymfony or iKarma and ReputationDefender make it possible for individual or companies to follow the activity of their profiles and brands, by evaluating what is being said about them in social media. Online services like SitePal or Gravatar make it possible to create a Globally Recognized Avatar, as an image that follows a person from site to site and helps identify the person's posts on blogs, forums and any sites (Frau-Meigs, 2011b).

These operations of identification and authentication relate to our functional uses of the ICT-driven media, either for observation (contributing to citizen journalism on blogs), correlation (chatting and authenticating), transmission (sending family stories online, posting course work), transaction (buying and selling online), distraction (hobbies) and participation (networking). They have evolved as means to ensure more trust and truth to online exchanges, in the absence of any regulation or ethical tools for ensuring good practices.

To these figures and operations, real life categories of identity and status have to be added, that need special attention as they are the most vulnerable: young people, women, the handicapped and the poor. They can be empowered by these multiple identities at their disposal, but in order to do so, it is important that they are skilled and that they are provided spaces for exploration and simulation that are free from commercial interests. Only one out of the five figures listed above is about consumption. It illustrates the enormous lack of balance in supply and demand that is currently the case on Internet. Only the commercial service side of these figures is exposed and extolled, not the other dimensions... having multiple identities on the Internet at the moment only pushes to more fragmented forms of consumption, including consumption of self (via publicity and exposure of one's intimate life). Paradoxically technological convergence probably fosters the sedimentation process of identity formation, with diverging figures as part of the dynamics.

These layered figures of identity have to be crossed with diverse space configurations of identity, as they represent a whole range going from total exposure to total secrecy. Levels of identity exchanges could be seen as ranging from total intimacy, to privacy, extimacy and total publicity. This implies a user's perception of the range he/she intends to give to the media output. Some users will want to remain at the simple level of amateur expression without diffusion, the highest level of expressivity and reflexivity in fact; others will want to share with a small range of like-minded users, forming an affinity community, self-selected, based on trust and reciprocity of exchanges; others will prefer a large broadcasting of their

output, to the netizens of the world, the ‘at large’ public opinion. This creates several rungs of identity management that have to be explicit so as to make conscious communication and information choices.

In respect to choice, currently it is the default setting that dominates in many offers and practices of the Internet that are identity related. The default setting is the least protective and most consumerist. No real alternatives are offered and they don’t propose a high level of protection. There is a need for more balance between market, private and proprietary offers on the one hand, public service, non-proprietary offers on the other hand. Reconsidering the “terms of agreement” is also key, especially as they may hide undue consent, as is often the case on such platforms as Youtube or Facebook (Frau-Meigs, 2011b).

III. Virtuality as felt experience: the need to identify e-skills and e-competences

Going online doesn’t necessarily imply that people are automatically involved in social networks and in networking processes. There are various strategies people can adopt that are not necessarily determined by the characteristics of the machine. In fact, people tend to circulate much more between online and offline worlds than one thinks. Multimodality and transmedia navigation are key competences that favour control over identity and appropriation.

People seem to value the immersion online as vicarious experience, simulation and participation. Sherry Turkle speaks about the notion of a “moratorium”, a suspension from time and space, to explore issues and things without commitments and risks, and without accountability. It plays on the cognitive issue of vicariance and of learning by simulation and stimulation. In that sense, separating oneself from real life can be a positive strategy and should not have real consequences in real life, especially to one’s identity and traceability. Such environments as games can bring out more e-competences, like play and simulation, as related to problem solving and testing of real-world processes. Performance and engagement encourage the endorsing of alternative identities for self-discovery, with the sampling and remixing of media outputs for better efficiency. Networking facilitates search and distribution of information while negotiation can take place across communities, for alternative processes and generation of innovative solutions (Adapted from Jenkins, 2009).

These human competences can derive even more strength as they are buttressed against the cognitive functions of the media: surveillance (of the environment), correlation (of ideas for exchange and debate), transmission (of values, of knowledge), transaction (to

improve commerce), distraction (to occupy increased leisure time) and participation (to be involved in democratic processes and communities of e-learning).

This points to the fact that the distinction between online and offline reality is essential to mental health and to identity-formation and has to be constructed via media education and the explicit acquisition and use of e-skills and competences (or else issues of attention and addiction, even of “offline dislike” can become prevalent). The instrumental uses of Internet for every day life have to be clearly identified from play and from social networking. Highly reflexive skills are required to distinguish between these different forms of interaction and interactivity and to become adept in distinguishing the online/offline dimensions of their social practices. The meaning of online life has to be framed in its own right and also in its relation to other dimensions of reality offline. The same thing applies to identity. The skilling questions should be: How do users distinguish between online and offline dimensions? When and why do they do it? Connections between different media, relation between media and social context are key, as well as the different levels of political and social loyalties (community, nation, region).

What is important to notice is that there is one unity that doesn't seem to vanish: legal unity and fixity. For commercial and also political uses, identity needs to be defined as a legal subject, with attendant rights and duties. Hence the use of electronic signatures, financial verifications and contracts that actually creates a footprint on cyberspace and allow for traceability. Offline regulatory regimes are still exerting their power and increasingly so as institutions like the market drive this urge. The need for point-to-point payment reduces the multiple options of the individual as made possible for the technology. Identity is legally binding in transactions. What the future holds is probably the creation of the cyborg as a legal subject, as more and more online relationships will be considered as real and legally binding.

The ethical status of such relationships has to be considered carefully (harassment, rape, exploitation...), especially as social networks and personal entrepreneurship expand via creative industries. The felt experience of ethics, as developed in socialization theory, considers the problem of the blurred relationship between relational goods and experience goods, that tends to blunt the level of awareness and alert of most users, be it children or adults. The tendency to feel and believe that Internet is a private space, with the attendant problem that basic precautions for self-protection are not taken, needs to be mitigated with education and the internalization of information into a dynamic repertoire of strategies for ethical conduct. Socialization can sensitize young people and adults to norms more than to risks, and prepares them not to squander their image or their reputation. Specific cognitive

assessments and competences may reinforce positive attitudes to ethics and self-protection, such as anticipation, interpretation, reflexivity, co-construction and revision (Frau-Meigs and Meigs, 2009). The transfer of the skills acquired on one media to another media increases the feeling of agency and self control over the situation, provides the tool for appraisal of risks and increases self-awareness and self expression.

IV. Implications for e-learning: the various profiles of the e-learning user

The uses and practices of the end-users on the networks need to be taken into account when considering the implications for e-learning, because they raise habits and expectations that can be counter-productive if not harnessed properly.

IV.1 Identity and trust

The users today like instant gratification and don't like to wait and push back to see results. They look for self-expression rather than self-control; they tend to accept collaboration more easily than competition; they do not call into question the co-dependency and the co-evolution between man and machine. They accept the technological mediation without un-ease. They have an interest for social relations and interpersonal communication, they are not just consumers but are in search of self-realisation (and maybe self-consumption).

The various profiles of the users apply to them and can be used for education and e-learning: play and serious games are important and accessible today; design and virtual worlds provide new educational experiences; personal websites and eportfolio as well as blogs tend to facilitate the vision of self as cyborg, evolving separately on the networks... This makes it difficult for young people and for learners on line to accept to be traditional recipients of canned-in knowledge.

This raises issues of identity and trust, as the preferred online mode seems to be anonymity. The issue of anonymity is an important one in e-learning. Trust and relational goods tend to be based on exactly the contrary, authenticity, transparency and openness. In e-learning, anonymity practices can be damaging as they increase the feeling of distance and dehumanizes people, thus making it easier to dismiss them or to hurt them (willingly or not). Identification therefore has to be fostered and learners can be encouraged to use either their real name (preferred solution) or a pseudonym (not unlike a password). Pseudonyms can provide some secrecy if needed whereas names are open and keep people accountable. The use of real names provides for a modicum of accountability that encourages beneficial exchanges without discouraging engagement. However pseudonyms can work too, provided

that they be easily shared among peers and colleagues and easily lifted if necessary (Frau-Meigs, 2011b).

On e-learning communities, it may be worth prolonging issues of identity into discussions about basic primary markers of identity such as age, gender, location or ethnicity, not so much for reasons of discrimination but on the contrary to establish one's difference and to show the added-value to the group. This is particularly the case in AIGEME, where the whole francophone world can be represented, thus adding very valuable diverse individuals to the community. But such markers should only be addressed with caution and if the majority of the peers are willing to exchange about them. They should be put in the context of bridging issues of disembodiment and disembedding, to reduce distance and to enhance trust and reliability.

But learners should not forget the legal implications of policies to control identity online, in relation to traceability and also to identity-theft. Specific rights exist, like the right to one's self image or the right to erasure of one's traces that are set in place to protect learners in case their identity is threatened by an anonymous third party that might have broken into the safe area of Blackboard. So learners need to be aware of the diverse space configurations of identity, as they represent a whole range going from total exposure to total secrecy. They have to be aware of the consequences of self-expression as self-exposure and need to negotiate the levels of privacy and publicity. This implies that learners must have a pretty good perception of the range he/she intends to give to the learning output (eportfolio, website, ...). Some learners may want to remain at the simple level of expression without diffusion; others may want to share with a small range of peers, forming an affinity community, with restricted access; others may prefer a large broadcasting of their output, for reputation and visibility.

IV.2 A new figure: the e-learner

The e-learner can then be seen as a new figure emerging from on-line communities of learning. It can be seen as a composite of some of the ones mentioned above, with additional characteristics due to the social cognition perspective and the constructivist transactional approach in e-learning. It implies a cognitive mindset that is predicated on certain ideas that are now increasingly part of a global movement in favour of competence-based knowledge acquisition. This implies to be student-centred and to help the learner develop a personal project with a cognitive scaffolding provided by the teacher and tutors but also with the help of peers and the use of various resources like the courses attended, the readings suggested and

the personal and professional experience already acquired. This puts a lot of emphasis on competences that build a learner's skills, attitudes, behaviours and values.

The cognitive learner profile then shows a spirit of inquiry with multiple dimensions associated to it. The e-learner is :

- 1) **an inquirer**: he/she has a spirit of inquiry, of questioning, of curiosity
- 2) **a knower**: he/she is more knowledgeable than he/she is aware, but has been trained to compartmentalize knowledge in separate experiences in disciplines; the learner needs to establish bridges and connections between the different areas covered over time spent in high school and at university, and life-experiences acquired outside school as well
- 3) **a thinker**: he/she is not expected to come up with a brilliant idea totally from scratch; there is a body of knowledge out there to be used, but that needs to be appropriated in one's own words and with one's intellectual tools (visual, written, organizational,...)
- 4) **a risk-taker**: he/she is not supposed to rely simply on how others have organized knowledge, but on the contrary to make alternative proposals and suggest arguments to bolster them
- 5) **an explorer**: he/she considers the views of others and questions where they come from as well as his/her own. Out of this process, the views eventually presented in papers and other outputs are expected to be balanced and reflective.
- 6) **a communicator**: he/she has a public in mind and tries to make things as clear as possible without simplifying or erasing complexity (lay-out and multimedia formats count). (adapted from Daemon, 2008).

The cognitive and intellectual competences that the e-learner is expected to evince are:

- **Critical thinking** – he/she questions sources, considers bias, assesses the validity of knowledge claims... in short, one thinks about one's thinking, being aware of the process of conducting research and how to learn to learn and learn to search. He/she is able to assess whether or not the sources used are credible and valid or whether they are biased, incomplete or out of date.
- **In-depth analysis and evaluation** – he/she is expected to formulate his/her own opinions and be able to justify them... reporting the facts and making a brief, detached analysis is not enough. The learner is expected to move to the interpretation of the facts, and take educated risks as to the implications can be derived from them.
- **Principled and ethical habits** – he/she is expected to state references (footnotes, sources, bibliographies, ...), in a format that is recognized as an academic standard so that it is useable by others (adapted from Daemon, 2008).

Being aware of one's own identity and of one's implication in creative knowledge industries is therefore crucial to e-learning processes today. This creates several rungs of

identity management that have to be explicit so as to make conscious communication and information choices.

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**Evaluation: “Media biography” (*Biographie médiatique*)
(to be written in French, about a 1000 to 1 500 words)**

Writing a “media biography” (Frau-Meigs 2011b) is an exercise that helps you develop your reflexivity, in a personal and professional way. This prepares your reflection as one of the sources of learning in the course, and as one of the ways to collaborate constructively with others. You can stand back and take stock of the important moments of your past, consider key influences the media have played on you, and analyse the kind of competences they have brought to you. You may include both negative and positive experiences. It will make it easier for you then to perceive how distance can be an added value and a problematic tool... Please remember that you should remain focused on your professional rather than personal relation with media (even though they may be connected). You may want to share some elements of your biographies with your co-learners, and you may want to add it to your e-portfolio.

In your media biography, you may want to consider:

-The repertoire of media you use or have used (linear, non-linear):

Radio, TV, Internet... Twitter, ... mobile phones....

-Your media practices (vos pratiques médiatiques):

Consider your “passive” ones, with linear media, such as viewing, recycling, contrast them with your more “active” ones, with non-linear media, such as sampling, browsing, chatting, building a « reputation », ranking and reviewing, peer-to-peer chatting and social networking.

-Your Learning Progress and processes (votre parcours d’apprenant en utilisant divers médias):

Consider the points in socialization theory, and see if some specific cognitive assessments and competences have been acquired or re-enforced, like Engagement, Anticipation, Interpretation, Reflexivity, Performance, Co-construction and Revision. Consider also the various figures of the learner that might be yours...

-The competences in education as well as communication and information that you have acquired (les compétences et capacités acquises en information-communication et en education)

Take into account your dealings with experience and relational goods and strategies such as previewing and browsing, sampling, reputation building, ranking and reviewing as well as peer to peer exchanges. See how they help you in you cognitive assessments and provide options for feedback and for revision. Consider also the interplay interplay of virtuality and territoriality, that may eventually shift your perception of self and others, of the design of socio-technical systems and human rights and ethics.

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