Prof. Hans Geser
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Universität Zürich
Soziologisches Institut

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A very real Virtual Society
Some macrosociological reflections on "Second Life"

Hans Geser

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Abstract
Contrasting with various "virtual communities", Second Life is a genuine "virtual society" with the potential to provide a universal framework of interoperability between unlimited masses of individual as well as collective actors. By mirroring (end even amplifying) the acentrism and individualism of contemporary society, it is characterized by precarious member motivation, conservative conventionalism, a strong focus on money, a tendency toward class formation and a conspicuous deficit in politics and the public sphere. On the other hand, it contrasts with "First Life" by offering malleable artifacts and situated environments which are likely to transform deeply the way people surf and interact on the Net.

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Prof. Dr. Hans Geser   Soziologisches Institut   h@geser.net
                             Andreasstrasse 15   www.geser.net
                             8050 Zurich (Schweiz)

> *"...for the moment, the debate about and the hype surrounding SL is keeping alive the idea that we might design and inhabit our own worlds and construct our own culture. That's something worth defending." (Henry Jenkins 2007).*

1. Introduction

In the course of historical evolution, man has created increasingly artificial environments where nature has been replaced by the products of conscious human work and intervention.

Since several thousand years, *cities* are places where inhabitants are surrounded by cultural artefacts, while "nature" is reduced to a residual status: e. g. to weeds between pavings, rain or snow flakes dropping on streets or physical human bodies behind styled clothing and cosmetic manipulations. The closed *shopping mall* has been described as a "totalitarian" environment in the sense that even the weather and other situational factors have come under complete human control. Recently, *plastic surgery* has dramatically widened the means for adapting the even the anatomy of human beings to conventional norms and fashionable cultural styles.

Under this very comprehensive and long-term perspective, the Virtual Worlds based on computer-supported communication systems represents just another, even more radical level of artificiality: in the sense that human actors as well their environments are *fully* the product of intentional activities: without any "natural" determination by non-manipulable physical, biological or psychological factors.

One of the most important characteristic of computer-supported communication systems is their capacity to create artificial "common heres" outside physical space: by setting the communications of two or more people into a shared environmental frame. When several people visit the same website, it makes sense to say that they are all "at the same place", even when they don't know about each other. It is adequate to say that they are in the same "chat room", even when the only thing they perceive are their pooled messages sent from different geographical homes. Additionally, all these virtual "places" are part of the same universe (defined by common software protocols, servers and clients), and each of them can be reached from every other web location (e. g. by following hyperlinks). Therefore, it also makes sense to use the concept of "Cyberspace" for giving a name the encompassing whole within which all theses "sites" occupy a position - even if the concept of "space" is a rather poor metaphor because there are no defined distances between different places, and because the transition between them implies no "travelling" (in the sense of passing a course with intermediary points; Geser 2002).

For understanding fully such spatial metaphors, it is essential to compare online communication with phone calls, mailed letters or other conventional channels of transmission. In all these other cases, there is no idea that any "common here" is created somewhere in-between the interacting partners. Instead, the communication process can be sufficiently grasped as an unmediated exchange of messages, while the participants remain fully at the geographical place where their physical body is located.

While the potential of "virtual worlds" is still embryonic in cases of websites or chat rooms, it is realized to the fullest in contemporary "Metaverses" where users can inhabit a simulated environment of virtual landscapes, cities, streets and houses and represent themselves by means of three-dimensional graphical representations (usually called "avatars").[1]

Contemporary "Metaverses" like *Second Life* are the joint product of two preceding developments that have taken place in the last decades.

First, there was a "bottom up" emergence of text-based multi-user domains or multi-user dungeons (MUDS), coming up in the later 1980ies. Such systems allowed participants to

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[1] Wikipedia: "Virtual world" http://en.wikipedia.org/wiki/Virtual_world (April 10th 2007).

design their identities as well as their environment (furniture. rooms, houses etc.), and to execute various actions by typing corresponding commands. Of course, these developments have been "elitist": not only because media use presupposes basic faculties of writing and reading, but because they privilege more educated strata who have a good command over language and who relate to themselves and to their environment in more intellectual and conceptual terms. In addition, such user-based endeavours had to remain low in reach and complexity because text based descriptions were cumbersome, inter-user connections had low bandwidth and intensive usage was restricted as a result of expensive time-dependent connection fees.

Secondly, there were radically different "top down" developments in the 1990ies that gave rise to Massive Multi-user Online Role Playing games (MMORPGs) based on Graphical user Interfaces (GUI's). These games were initiated, structured and maintained by rather potent firms that had sufficient resources for developing the system architecture and the game itself, providing the large amount of storage and server capacity and managing the millions of subscribers and ten-thousands of concurrent users. Games like "Meridian 59"[2], "Ultima Online"[3] and - more recently - "World of Warcraft"[4] have become thriving economic endeavours (Wei 2006) because the graphical interface made the platform accessible to anybody - even to kids and youngsters with rather low reading or writing skills.

In sharp contrast to the MUDS, the autonomy of users is minimal because it is the providing firm itself that defines the plot and the purposes of the play, the playing characters, the problems they had to solve and the tools a available for application, the goals they could reach and the awards they could win, and the whole environment within which they had to perform.

"As MUDs evolved into MMORPG, it could be construed that the "invention of functions and meanings" did eventually fade in vibrancy as the reins of production moved from the ordinary user to the commercial world. In the initial world of MMORPGs, the ordinary user had transformed into a consumer." (Wei 2006).

On the other hand, all these games were also "empowering" insofar as they gave their users many tools at hand for choosing their own courses of action: e. g. by designing their own houses, by coalescing into "guilds" or other collectivities, or by pooling their savings for procuring ships, palaces or other expansive virtual items. Especially non-combat MMORPGs (like "A Tale in the desert"[5]) have relied very extensively on such user-created content.

"Second Life" is a born hybrid because it makes use of most modern technology for combining the capacities of decentralized user-guided content provision with the potentials of a large-scale commercial organization. The paradigm of such a combination has been foreshadowed in Neil Stephensons novel "Snow Crash" (1992), where the "Metaverse" was depicted as a successor of the current Internet: a fully immersive and comprehensive virtual world in which individuals can be present by autonomously chosen virtual representations (avatars).

By following explicitly this seminal idea, Linden Labs has decided to be promoter of an evolving virtual universe where all content is provided (and even privately owned) by the users, while the role of the firm shrinks to technical and administrative functions: maintaining and constantly updating the very comprehensive hardware equipment, the sophisticated software provisions and all the organizational activities arising from an ongoing evolutionary process whose speed and direction cannot be determined, predicted or kept within any predefined limits. However, SL resembles conventional "Massively Multiplayer

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[2] http://en.wikipedia.org/wiki/Meridian_59
[3] http://en.wikipedia.org/wiki/Ultima_Online
[4] http://en.wikipedia.org/wiki/World_of_Warcraft
[5] http://en.wikipedia.org/wiki/A_Tale_In_The_Desert

Online Games" (MMOG's) at least insofar as it imposes the metaphor of space. In a rather specific geographic understanding of this term, SL provides continents and islands with plains, hillsides, woods and beaches where land can be bought and sold and where houses, neighbourhoods and even cities can be erected.

Although Second Life is often subsumed under the MMOG category, the term "game" is inadequate because it refers to a system of competitive goal-directed players behaving within a context of strict predefined rules. In Second Life, by contrast, no specific rules are given and no goals have to be reached, so that users are free to determine their own aims and norms of social interaction. In fact, Second Life is a "world of opportunities" by opening up a wide range of behavioural options and by providing an inventory of tools that can be instrumentalized for any self-defined - and therefore unpredictable and changing - purposes.

"It is simply an environment. It's not too far off to see Second Life like a software version of those eco-sphere self-contained aquariums, complete with water and plants and small sea creatures." (Scola 2006).

As even the "natural environment", has to be artificially produced, there are many professions in SL that have no parallel in Real Life: e. g. landscapers or pet manufacturers.

In the case of conventional MMOG's, the load on servers and transmission capacities is rather low because most of the graphical components are stable and usually stored locally on the hard disk of every single user. By contrast, SL needs very large server capacity and bandwidth because all patterns are stored and administrated centrally and have to be transmitted to every user in "Real Time" by streaming video (Carr 2007).

"Even with a fast Internet connection, however, the display of the world around you at login, or upon arrival at a new location, can be reminiscent of accessing a Web page with heavy graphics using a slow dial-up modem. That is, the volume of data to be downloaded, decoded and displayed often leads to an annoying delay Second Life users call "lag." If you materialize in a nightclub, you watch the tables, bar, barstools and other customers pop into existence one by one around you, sometimes painted a ghostly gray because the bit-mapped textures that should decorate them haven't yet arrived. So, the trade-off of streaming all content over the Internet, with the vagaries of network congestion and packet loss, is that the Second Life experience is nowhere as slick as that of World of Warcraft, let alone a PlayStation 3 game." (Carr 2007)

In February 2007, Linden Labs had installed 2000 Linux Servers dedicated to simulation activities and database support, and it was active in installing additional 120 servers every week (Lamont 2007). Thus, it is unrealistic to assume that SL may become a universal platform where millions of users log in whenever they surf on the Net. Up to the present (March 2007), the number of simultaneous visitors has never been higher than 33 000, and even modest increases in the user base create the need for considerable enlargement on the hardware level.

Given these high resource demands, it is not surprising that few other large-scale Metaverse projects have arisen besides Second Life. A much smaller European parallel ("Entropiauniverse"[6]) has been established by a Swedish Software company (MindARK) which comprises about 50 000 users who engage mainly in economic (particularly banking) activities, and in east Asia, SL is challenged by Cyworld[7] which has been subscribed by almost 25% of the South Korean population.

Despite such technological restrictions, it is reasonable to expect that Metaverses like SL are likely to be highly successful because they fulfil such widespread needs. For instance,

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[6] http://www.entropiauniverse.com
[7] http://www.Cyworld.com

they may translate abstract web search activities into virtual shopping tours full of sensual and social experiences.

By developing Metaverses, the Internet may soon leave behind its text-focused, "literary" phase and join the broader developments that can be seen in most other media since decades: the trend from abstract words to sensually appealing pictures and sounds.

"Research has shown that the generation of Millennials (those born after 1980) overwhelmingly believe in the ability of technology to enrich their lives. Most of the Millennials report no difference between friendships developed in the real world vs. friendships developed online, and most use the Internet to maintain their social network and plan social activities. Curiously, when asked what items they would want to have if they had to be left on a deserted island, very few Millennials chose books. The number of books read for pleasure by Millennials is also quite low (less than two a year). It would appear that the Millennials are a generation shaped by interactive, social, non-textual experiences. Virtual worlds are exactly these types of experiences. (Bray/Konsynski 2006:27).

In a more intuitive than analytic way, Second Life is considered widely as something radically different from all previous constructions of virtual worlds. For instance, Warren Ellis speculates that SL may represents *"the most radical shift yet in the way communities are formed online, and possibly also the germ of the next great operating system."*[8]

Similar to the PC in the 1980ies and the Internet in the 1990ies, SL inspires a fascination which is not based on specific purposes or goals, but on the breathtaking broad spectrum of possible future uses. Thus, most participants of SL have no clear opinions about what they want to do and to achieve: they just bring their openness to "get involved" in various unpredictably ways, to make use of the powerful tools offered to them for shaping their avatar or creating their own environment, and for engaging into interpersonal contacts for instrumental or socio-emotional reasons.

2. "Second Life" as a virtual society: some sociological antecedents, correlates and consequences

2.1 On the (still underdeveloped) concept of "virtual society"

Since the end of the 19th century up to these present times, analytical thinking in sociology is heavily shaped by a conceptual bipolarity that has been differently named by various authors: community vs. society (Ferdinand Toennies), mechanical vs. organical solidarity (Emile Durkheim), traditional vs. rational authority (Weber), particularism vs. universalism (Talcott Parsons) or segmental vs. functional differentiation (Niklas Luhmann).

Following the most synthetic conceptualization of Toennies, ideal-type "communities" are rather small, stable and homogeneous collectivities that base their integration on shared cultural traditions, beliefs and values, on collectivistic solidarity and diffuse affective identification, on high investments in socialization and social control, and on selective membership recruitment and a sharp segregation (sometimes even manifest enmity) vis-à-vis coexisting collectivities of the same kind. Correlatively, ideal-type "societies" are encompassing, dynamic and heterogeneous social systems integrated by purposeful, affectually neutral and specific cooperation and exchange relationships between self-interested actors that are mutually dependent by labour division and functional complementarities and interacting on the basis of highly inclusive cognitive orientations and universalistic norms (Toennies 1887).

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[8] cited in Reuters 2006.

As we all know, the Internet has given rise to a widely spread paradoxical tendency to analyze the new online collectivities in terms of "virtual communities" (e. g. Rheingold 1993; Hagel/Armstrong 1997), despite the obvious fact that many defining characteristics of conventional communities (like traditional stability, collectivistic identification or mechanisms of intensive social control) were conspicuously lacking. A Google word count (conducted at April 23th, 2007) gives 1 220 000 hits for "virtual community", while the polar term "virtual society") lags hopelessly behind with only 108 000 counts. Apart from the psychological need to identify something highly familiar in a new technical environment, there may also more serious epistemological reasons why the community focus was preferred. First of all, communities are better amenable to empirical research, because they are multiple and small, while "virtual society" refers to macrosociological levels where theoretical thinking (and speculative predictions) predominate because no comparative (or even experimental) methods can be applied. Secondly, "communities" were more likely to emerge under early Internet conditions were usage was still restricted to rather small and homogeneous population segments (especially younger English speaking males with higher education), and where restricted technological capacities (in terms of hardware facilities, software application and channel bandwidth) provided only the basis for smaller collectivities with rather simple activities and social structures.

While the Massive Multiplayer Games opened the way for very large masses of active participants, they still created "communities" insofar as all members were united by common narratives, purposes and norms. "Second Life", however, is innovative in the sense that it has left behind even these last reminiscences of communalistic organization, by offering just a platform for an infinite manifold of functionally specific activities defined and motivated by an unlimited and uncontrollable number and variety individual and corporate users.

Everybody active in Second Life uses the same protocols and software scripts, so that everything created in part of a single universe insofar as it is "interoperable" with everything else. At least, everything existing is related in terms of spatial propinquity and distance, and by "exclusiveness" in the sense that no two houses or trees can be at exactly the same place. More than that, all avatars are "interoperable" insofar as they can perceive each other and engage into mutual communication, and even objects can be constructed so that they react to each other: in contrast to the physical world where communication is more or less reserved to human beings.

By facilitating code sharing, SL can be a medium of universal virtual integration, e.g. in the educational sphere where many applications have hitherto been produced isolated from each other:

"Second Life provides an environment that enhances sharing through interoperability. In real life, many educators have built wonderful tools and programs, but these are often not compatible with one another. If you build something in Second Life you can merge it with other things built in Second Life. This makes cumulativity possible, something that has often failed to emerge in educational communities in real life." (Kemp/Livingstone 2007).

In many ways, SL amplifies some deficits attributed to modern societies to the extreme: the absence of any cultural center and value consensus, the complete lack of mythology and history on the one hand and future goals and developmental perspectives on the other; the tendency to be a "rational and efficient" society" by marginalizing deviant and handicapped individuals as well as disturbing events like sickness and death.

"Second Life has no narrative. It has no soul. It is an unruly chaos without any mythology…without a real story that I can wrap myself around in. With all of its residents…and all that they've built…it feels very empty and leaves me feeling cold and detached. While there are no "rules" and the world is largely capable of anything the users wish it to be or do…it is that lack of structure that makes me not care. It simply isn't enough to buy a piece of virtual land and put something on it. Without story, without mythology, without a living and progressing narrative…without goals and dreams…what's the point?" (Graham 2007).

As SL is just a platform, it is not the mission of its creators (Linden Labs) to provide any meanings, plans and purposes for its evolution. Instead, such contents have to be provided below this societal macrolevel by meso- and microsociological "cultural elites". SL is just the medium, not the content. This lack of content implies that the cohesion of SL is not based on any common values and goals, but on completely neutralized content-free media of social communication. In more concrete terms, SL is organized around two opposite poles: On the macrolevel, integration is based on money: the universal medium of economic exchange, and on the microlevel, integration is constituted by "sociality" ("Geselligkeit") as a generalized medium of interpersonal verbal exchange: devoid of any teleological purposes or goals.

The societal character of SL is also manifested in the fact that it is an extremely polyvalent platform that seems to be attractive for individuals as well as for social collectivities, institutions and enterprises. Since its inception, it is backed by eBay co-founder Pierre Omidyar and Amazon pioneer Jeffrey Bezos**,** and major global corporations like Dell, MTV, IBM, Sun Microsystems or Reuters were soon eager to get involved: e. g. by organizing second life press conferences or leasing an island of their own. (Darling 2007). A pioneering role is certainly played by IBM where 3000 employees have already adopted an active avatar (in Jan 2007), and whose CEO (Palmisano) is convinced that 3d world like SL are *"the next phase of the Internet's revolution"*[9] At the moment (March 2007), about 230 IBM employees (on six islands) are fully working within the framework of Second Life[10] and will certainly heavily determine its future development.

It is astonishing to see so many most reputable firms rush into SL in such an early stage of its evolution, and without any clear ideas whether and in what way such investments will yield any return in the near or more distant future. It seems that the Internet has been a "traumatizing" experience by teaching them that the future is so unpredictable that you sometimes should also engage in projects which don't seem to make any sense at the moment - a highly problematic attitude from which SL momentarily draws profit without having to deliver any tangible results. Of course, all corporations together could well be able to make SL a "self-fulfilling prophecy": by investing so much in its development that it becomes a gigantic reference platform (like EBay or Wikipedia) that nobody can ignore (Carr 2007).

2.2 Selective and irregular patterns of participation

As newcomers face a highly diverse and intransparent environment, they all have to go through a stage of disorientation and gradual learning. They all need time to get a certain synopsis of the world they are in as well as at least some knowledge about the toolbox they can use for shaping their avatar, moving around, associating with groups, participating in events, gaining and spending money, create and modify objects, interact and cooperative with others etc. Many new entrants complain about long phases of disorientation, boredom and pointless moving around, and many of them quit active membership soon, so that the discrepancy between formally inscribed and de facto active users has become astronomically high (Shirky 2006).
As in-world mass media and other orientation tools are still very underdeveloped, much knowledge is transmitted on informal channels: by more sophisticated users who make their experience and their device available to newcomers. While much of such helping is made by kindly minded volunteers, it is also provided by "professionals" who draw their Linden Dollar income from such activities (especially for designing objects "efficiently" so

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[9] quoted from Kirkpatrick 2007.
[10] seeTebbutt 2007.

that they don't need long download time; Carr 2007). Like in Real Life, we may guess that the need for such interpersonal helping will decrease when more tools for self-orientation and self-learning will become available.

In more structured MMORGP's with high density of social interaction (like World of Warcraft) it can be observed that visitors show rather stable rates of participation when they are tightly integrated into the online community (e. g. by becoming active members of guilds; Ducheneaut 2006). Even participants with insecure subjective motivations become regular users because they are subject to the pressures of social expectations, normative role duties and collective social controls. Second Life, per contrast, is an individualistic world where such social attachments cannot develop to similar degrees. Consequently, participation patterns tend to remain unstable, because they are perpetually determined by subjective considerations of personal utility or fun. As a consequence, SL is (and certainly will remain) characterized by deep divisions between small, regularly active minorities and a very large number of sporadic, unpredictable users (Shirky 2006).

While highly structured game worlds like WoW are readily accessible for people without special talents or social skills, SL exerts its main attraction on rather qualified and talented people who are able to behave in autonomous ways and to take advantage of the creative opportunities offered in this extremely empowering new virtual sphere. A disproportionate percentage of all SL participants come from IT professions on the one hand and creative cultural professions on the other. (de Nood/Attema 2006: 4). These two categories provide the highest shares of "producers" who leave durable traces by constructing objects or organize events (de Nood/Attema 2006: 28). In addition, SL seems particularly inviting for corporate actors, because they by far the most capacities and resources to create structures according to their values and interests by professional means.

While multi-user games attract a predominantly younger male population because they feature competitive games and violent warfare, large percentages of SL users are women, especially with higher educational degrees (de Nood/Attema 2006: 5). Evidently, females feel attracted by the opportunities to engage in creative and constructive endeavours and in gratifying interpersonal relations. Unsurprisingly, there is considerable empirical evidence that SL serves mainly to widen the life experience of individuals who have already a rich "First Life", not as a compensating device for marginal loners:

"The group that spends a lot of time in Second Life is not only economically but also socially privileged. There is a strong correlation between well-being and success in Second Life and well-being and success in real life. The number of friends one has in the real world correlates strongly with the number of friends one has in Second Life. In this sense, the hypothesis that "the rich get richer" is supported in Second Life. They who are talented and successful socially and economically in the physical world belong to the group in the virtual world which feels most content." (de Nood/Attema 2006:5).

However, at least a small minority uses SL for compensating deficits in their RealLife existence.

"There is, however, a small group which feels less comfortable in the real world but has discovered fantastic social possibilities in Second Life. This is true for some retirees, unemployed, housewives who are bound to the house by certain circumstances, those who are ill or physically challenged." (de Nood/Attema 2006:5)

Empirically, such compensative effects are seen in the regularity that individuals with very few friends tend to feel happier in life when they are heavy SL users (de Nood/Attema 2006: 32). Evidently, "Second Life" is fundamentally dependent on a constant flow of high quality unpaid work.

"Residents spend a quarter of the time they're logged in, a total of nearly 23,000 hours a day, creating things that become part of the world, available to everyone else. It would take a paid 4,100-person software team to do all that, says Linden Lab. Assuming those pro-

grammers make about $100,000 a year, that would be $410 million worth of free work over a year." (Hof 2006).

It is estimated that in early 2006, users have spent about a quarter of their visiting time for creating new objects (Bzdega 2006).

Successful Open Source Communities like Linux of Wikipedia show a fascinating capacity to attract thousands of volunteers who make highly valuable contributions without pay: contributions for which they naturally would certainly normal monetary reimbursement under any RealWorld conditions.

There may be two reasons for this:

1) Considering the very extensive field of recruitment, the statistical "law of large numbers"[11] implies that among millions of potential participants worldwide, it is more likely to find some rare birds who draw intrinsic satisfaction from even very tedious tasks than in any smaller and more localized labour markets.

2) The Internet seems to provide a symbolic frame within which even highly demanding activities are interpreted as "play" - not as laborious efforts for securing one's material subsistence (Bray/Konsynski 2006; Business Week 2006a; 2006b).

Thus, the attractiveness of Second Life for corporations is also fuelled by the perspective of reducing labour costs by translating molesting tasks into funny interactive experiences that are readily fulfilled without material compensation, or by amplifying extrinsically rewarded performances by adding components of intrinsic satisfaction (Bray/Konsynski 2006).

Like in the case of Linux or Wikipedia, the lack of pay is not compensated by immaterial personal rewards like esteem or reputation, because creators have no opportunity to propagate their authorship and achieving immortal fame by setting name tags on their productions. Therefore, satisfactions have to drawn from other sources: e. g. from the satisfaction to realize one's talents, or from the perspective of contributing to a public locality or scenery that will be enjoyed by many other visitors in the future.

While such low social density worlds may be attractive for highly inner-directed individuals, they may be avoided by extraverted people looking for structured roles and dense social integration. Thus, MMPORG's like World of Warcraft are much more efficient to provide opportunities for stable association and for gaining a prestige status based on consensual social evaluations (Ducheneaut et. al. 2006). In such games, intangible rewards like personal prestige or social belongingness are of paramount importance, while in SL; the emphasis is on money because it is most compatible with maximizing individual freedom. The importance of money is also an indicator for the extrinsic orientation of many SL-Users. As they have little to gain in terms of community, they tend toward an instrumental attitude: using SL just to accumulate Linden Dollars in order to exchange them rather soon into real bucks.

2.3 No scarcities and easy exit options: two conditions for high individualism and low levels of organization

The attractiveness of SL may stem partially from its support for highly individualistic, self-referential activities which are not compromised by any altruistic or collectivistic considerations.

In the Real World, we can vividly observe a trend toward ever tighter rules and social controls emerging from the need to maintain order within ever growing populations of densely coexisting human beings and for coping with the negative outcomes of their activities (e. g. resource depletions, littering or climatic change).

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[11] http://en.wikipedia.org/wiki/Law_of_large_numbers

In Second Life, there is less need for such collective regulations because much lower levels of interaction density are maintained and almost no macro effects of microlevel behavior have to be taken into account.

1) As teleportation is always a ready option, avatars have not to adapt to each other in situations of friction of conflict. Instead, they can easily evade any uneasy situation by simply changing location.

2) There is always enough new territory available for new residents to build and expand their settlements. Thus, no problems associated with overcrowding, congestion or urbanization can arise. Visiting SL usually means: walking round in almost empty territories with very low risks of colliding with others or disturbing them in their activities.

3) Second "life" runs smoothly without straining common resources that may become scarce (e. g. clean water, crude oil, fertile land or fresh air). Consequently, no norms regulating their distribution and usage have to be enacted.

4) Certainly, there are macro effects emerging unintentionally from the sum of all user activities. For instance, there are network congestions when too many avatars congregate in the same location, or macroeconomic disequilibria may arise because of imbalances between money demand and money supply. But these problems are regulated by Linden Labs as an exogenous agency, so that they don't become in-world issues that have to be solved by quarrels, negotiations and agreements among SL residents.

As a consequence, SL is a highly individualistic world where everybody can follow his own goals and activities in a rather libertarian fashion: a nostalgic dream of the early America without governmental authority and/or traditional communalistic controls. Thus, SL offers a "sanctuary" for old libertarian values in a similar way as World of Warcraft is a retreat for even more ancient behaviour patterns based on hunting, war-fighting, guild-fraternity and shamanic practices. More than that: it tends to be a narcissistic society where most visitors are highly absorbed by rather self-referential activities: e. g. by shaping and beautifying their avatar.

Looking at the evolution of human societies, we can learn that tighter social collectivities characterized by intensive social control could only rise in "caged" environments where individuals were not able to go away (Carneiro 1970). Thus, hunters and gatherers had no need to develop political authorities or mechanisms of conflict resolution because whenever dissensus arose, tensions could be easily be "solved" by simple emigration. Local authority systems emerged in the Neolithic when people began to live in stable settlements from which they could not escape because they have made high personal investments (in house building, gardening, soil tilling etc). And extensive state authorities arose when larger populations where caged in tightly circumscribed environments (e. g. in ancient Egypt where fertile Nile land was surrounded by uninhabitable dry desert regions and the sea (Carneiro 1970; Ross 1988).

On microsocial levels, we see likewise that tight social influence on people occurs only when they are "locked" in a common spatial environment. Thus, school classes are efficient socialization agents because pupils are forced to expose themselves to the processes of teacher-guided communication, and participants of negotiating or deliberating committees will feel pressured to change their standings because they have no choice but to listen to arguments of the other members.

Seen under this perspective, Second Life is not disposed to develop efficient mechanisms of influence and control, because whenever dissensus or conflicts arise, "exit options" are readily available: by turning to the flying mode, trading one estate for another or by teleporting oneself to a different place. The more participants are able to solve their problems by simple migration, the less they will feel a need to solve them by raising their voice, by active fighting or efforts of adaptation. This may explain why the political and legal aspects of Second Life have hitherto been left on a rather embryonic level.

Conditions may change when existing continents and islands will become more densely populated, when more and more participants have a strong stake in their location (e. g. because they have made considerable investments in sophisticated homes), and when "repressive" communities or institutions emerge which restrict the mobility of their members. As de Nood/Attema have demonstrated in their empirical survey, more experienced users are even less prone than beginners to vote for an increase of regulations and law enforcement - at least when they have not been molested (de Nood/Attema 2006: 7). This indicates that up to the present, technical software-guided controls seem to be sufficient to keep the system running without considerable frictions or conflicts.

Nevertheless, SL may also become increasingly subject to the "tragedy of the commons" (Hardin 1968) to the degree that masses of independent micro-actions translate into highly negative macro-effects: e. g. ugly landscapes and architectonic sprawl (Bray/Kosynski 2006: 24).

2.4 Sense of embodiment and "virtual presence"

The successful history of the telephone illustrates that bilateral communication can easily be enacted without any visual cues. Because when I talk just to you, I can always check rapidly whether you hear and understand what I am saying, and give you a feedback so that you are also certain *that* (and in *what way*) the conversation proceeds.

Whenever a *third* person C is (or is thought to be) co-present, the situation of the two talkers (A and B) is more complicated, volatile and uncertain. Is C watching the conversation or absorbed by other activities? Is C even giving signs that he wants to intervene in the ongoing conversation (e. g. by coming nearer and looking attentively at the present speaker); or does the signal indicate that he wants to take distance or even leave the location? Similarly, I would like to know whether my partner B is making preparations to get involved with C: e.g. by turning his body and face toward him, away from me....

When a *fourth* actor D is at the location, things get even more complicated. Maybe C as well as D are "lurking" the talk between A and B by keeping a small distance, maybe they are involved in a separate bilateral conversation - or maybe they express indifference by keeping physically distant. I may myself feel urged to draw in C or D (or both) in order to win somebody who supports my arguments against B, or I want to influence B for preventing that he coalesces with C or D (or both together).

This sketchy hypothetical analysis shows that when there are three or more co-present members, social processes become more dependent on visual cues. This is caused by the elementary regularity that at each moment, only one person can talk ("keep the floor"), so that the social integration of the others has to be secured by visual means (e. g. by watching gestures and mutual gazes; Argyle/Dean 1965; Kendon 1967).

Visual perceptions become even more crucial when social collectivities are "open": so that participants can come and go. In the case of cocktail parties, for instance, I may be quite absorbed by looking around who is present and disposable for contact, and I may gaze at somebody for signalling that I'm hearing what is he is saying and want to draw him into a conversation - while at the same time communicating to my present partner that I want to leave. The need for such visual perceptions is unquestionably highest in public gatherings where the composition of collocal participants is constantly changing in unpredictable ways. On such occasions, I have to make full use of vision as a means to grasp very rapidly a rather complex social situation: so that I can decide rationally about my optimal physical location, about the choice of my interaction partners and about the tactical moves in my communicative behaviour. These are the conditions where oral or text based communications are completely insufficient because they don't give me information about the larger setting within which my current communication occurs, and no information about who is eavesdropping and who else is available as an alternative partner.

Virtual gatherings with avatars are a partial solution to these needs, because I can at least ascertain who else is currently present - and may also get gestural hints expressing individual intentions and reactions and social distance or involvement.

Unlike chat or Email technologies, SL provides individuals with a sense of being at a particular place and group members with a sense of "being together" here and now. Thus the SL environment helps
"to make a distance-education experience feel like a more substantial, more connected experience so that the students would have someplace where they could come and actually get to interact directly with each other and with the instructors." (Cohen 2006).

Such feelings of "immersion" emerge from the visual perception of an artefact environment where one can move around ad libitum, and from experiencing the presence of other individuals in the form of avatars. According to Dickey, this immersive experience is highly crucial in educative application because of its potential for *"facilitating collaborations, community and experiential learning." (Dickey 2005).*

More than most other applications of the WWW, Second Life competes with RealLife in providing experiences of "authenticity" by participating in events, social encounters and interpersonal conversation that take place exactly now in a situated environment. For instance, online shops like Amazon may soon provide "virtual bookshops" that provide a live experience even more thrilling than by visiting one of the rare RL stores. Visitors in such shops may not only be free to browse the shelves and open any books for reading and looking at pictures, but also to turn to reviews, to talk with other participants about their reading experience, and to participate in events where they can meet authors, translators, editing managers and the like.
Generally, we may expect that online enterprises use SL in order to transform dry mouse-and-click buying activities into thrilling shopping experiences that can easily compete with those offered in conventional market places, stores or malls.

In the future, we may also see the emergence of social collectivities which combine offline and online forms of "togetherness" in order to take advantage of spatial density of the one hand and cross-cutting transspatial interaction on the other.
Formal organizations seem particularly predisposed for such dual structures. They typically maintain a structure differentiated into divisions, functional subunits, branches or subsidiaries that tend to be located in different offices, buildings or even (in the case of regional agencies) in distant geographical places. These spatial segregations are an obstacle whenever an organization wants to create cross-cutting structures as they are advocated by models of "matrix organizations". Such needs arise when organizations initiate projects for solving new kinds of tasks which are relevant for several subunits when it tries to aggregate knowledge that is widely distributed in different organizational departments. Virtual Metaverses verses like SL may be functional here for creating such cross-cutting organizational structures in which individuals or subunits from various locations can be freely combined (Galbraith 1971; Banks 2006).

2.5 High affinity for conventionalities, fashions and formalized institutions and procedures

Second Life is maximizing individual freedom by providing entrants with an immense range of alternative behavioural options. Beginning with the choice of the avatar and its different bodily features, there are innumerable alternatives to chose localities, to create new or use existing objects, and to socialize with others.
Given that most current participants are "newbies" with a rather modest time resources for consulting manuals and accumulating experience, it is evident that they readily adopt al-

ready established patterns offered to them by various organizational and institutional suppliers: by visiting services organized by the churches, enrolling in lessons offered by famous universities, or by buying T-shirts of the most famous brands. Thus, Second Life is an excellent illustration for Emile Durkheims and Arnold Gehlens contention that human beings need the guidance offered by social institutions and conventions in order not to remain disoriented (or "anomic") in face of a highly complex world.

Of course, this intrinsic need for structuring is a major reason why established RealWorld institutions enterprises of all sorts find amazingly good conditions for user their reputation to attract masses of people and for marketing their standardized products and services.

For the same reasons, most activities in Second Life are mimicking institutionally regulated procedures of the RealWorld: adopting a job, buying land, set up a business, visiting performances and museums etc etc. Unsurprisingly, conventional standards like the difference between formal and casual clothing is fully imported into SL. This is exemplified by the CEO of IBM, Samuel Palmisano, who *"has two characters, a casual one and a business one with his signature eyeglasses and a dark suit." (Bzdega 2006).*

Finally, the same conservatism can be found in the elementary forms of inter-avatar communications where deeply anchored, habitualized forms of face-to-face interaction are automatically reproduced. Given the basic anonymity of the inter-avatar relationships, it is to be expected that interactions are thoroughly based on conventionalities and ritual as they govern our offline interactions in public places. For instance, it has recently been found that
- male-male dyads keep a larger bodily distance than female-female dyads;
- male-male dyads maintain less eye contact than female-female dyads;
- reduction in spatial distance is compensated by gaze avoidance (as predicted by the Equilibrium Theory proposed by Argyle and Dean 1965; see also Yee et. al 1965).

Insofar as people behave similarly within Second Life as offline, SL may well be used as labs where socio-psychological scientific experiments may be carried through with much higher control over the independent variables and much less costs and ethical constraints than in any RealWorld settings. Thus, UCL researchers have recently repeated the old Milgram experiment by persuading participants to apply "painful electroshocks" to a seemingly sensitive avatar (Slater 2006). The authors reach the general conclusion that individuals show a highly persistent and reliable tendency to react to virtual avatars similarly as to real persons. As a consequence, they see extensive opportunities for transferring much scientific experimentation (particularly when ethical concerns are considerable) into the immersive virtual spheres:

"The main conclusion of our study is that humans tend to respond realistically at subjective, physiological, and behavioural levels in interaction with virtual characters notwithstanding their cognitive certainty that they are not real. It could even be said that many showed care for the well-being of the virtual Learner. Our results ...show that virtual environments can provide an alternative methodology for pursuing laboratory-based experimental research even in this type of extreme social situation." (Slater et. al. 2006).

The paradoxical leaning toward conservatism in virtual worlds also explains why most of them are anachronistic worlds that revive patterns that have become rare or even defunct in Real Life, but have still remained lively in heroic sagas, fairy tales and other deeply anchored levels of popular culture. In many online games, for instance, users have to adopt roles of feudal warriors, fight against dragons, or commit themselves to guilds with high standards of honour. In others, they have to participate in preindustrial worlds of farming and handicraft production, constructing and sailing primitive ships, fighting highly personalized wars against aboriginal tribes or being the first to inhabit pristine, virgin areas of land.

SL is certainly less anachronistic, but is no exception to the general rule that virtual worlds try to satisfy rather old needs that can be less and less satisfied in modern urbanized socie-

ties. For instance, users living their unspectacular "First Life" in rented high-rise apartments may become eager to become owners of impressive SL real estates, and masses of office employees turn to SL for engaging in handicrafts activities or for pioneering in the conquest of a "new frontier" where they are the first to cultivate gardens, to erect houses or to plant trees. In addition, there are areas of nostalgic historic reconstruction like "Caledon"[12] where architecture and clothing conform with 19th century victorian styles.

Apart from flying and teleporting options, SL offers a rather low-tech environment in which people are much more likely to engage in primary chat relations, sexual behaviour or personalized economic exchanges than to turn on a TV, to use a cell phone or to come into contact with highly sophisticated industrial equipment. In accordance with this low tech orientation, we find that educational institutions are particularly prone to use the new platform, because it offers them a new way to practice what they always did: enact learning processes in the medium of primary interpersonal communication. Similarly, the SL economy is dominated by branches that have a very old history in the Real World: the real estate business or textile industry - not to mention blunt gambling and prostitution.

2.6 Virtual artefacts as a new hybrid intermediary between material and immaterial culture

While online texts differ not much from conventional offline writings, virtual artefacts have an unprecedented hybrid structure, so that they constitute a new intermediate layer between "material" and "immaterial" culture.

On the one hand, they certainly resemble RealLife objects in their appearance. For instance, we find furniture, houses and whole real estates that can be bought and sold, as well as art works, gardens, museums and many other creations. On the other hand, all these objects are "virtual" in the sense that they are not physical objects characterized by unique properties and exposed to gradual aging and decay, but software creations that retain their identical qualities during time and that can be modified, copied, transported and replaced without limitations.

In legal terms, one could maintain that they occupy an imprecisely defined middle position between the world of material objects that can be bought and sold and the sphere of immaterial properties that have to protected by licensing or copyright restrictions. As a consequence, owners of virtual objects enjoy more degrees of freedom than owners of physical things. They may mimic the latter by freezing their creations so that they cannot be copied or modified, but they may also decide to give up any property rights: enabling others to modify or copy such objects at their will (Hayes 2006: 157).

Linden laboratories declares that SL objects remain (legally) in the possession of their creators, and Ebay has accepted this notion by allowing them to be traded on its platform like commodities of a physical nature. On the other hand, it is evident that such objects retain a status of contingency that has no parallel in the physical world: because their existence fully depends on the operational continuity of the SL platform, and more than that: it can be ended any time by Linden lab when the decision made is made to expel its present owner (e. g. for any kind of misbehaviour according to the company's own provisions).[13]

In the history of human culture, virtual artefacts can be considered as a major innovation insofar as they combine the hard resistance of physical objects with the smooth adaptability of subjective "menti-facts" and informal social communications.

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[12] http://slurl.com/secondlife/Caledon/128/128/0

[13] The fragility of exclusive property rights was vividly manifested in November 2006, when pernicious software program ("copybot") came up which allowed to produce identical copies from any virtual items.

In the physical world, artefacts tend to be stubborn material structures that cannot be readily adapted to the changing social gatherings and events for which they provide the environmental surroundings. For instance, today's churches may be too spacious for the shrinking number of participants at Sunday services; and city parks may be crowded with memorials of ancient statesmen and war heroes who are no longer remembered by anybody who passes by.

Within virtual worlds like SL, artefacts are so "malleable" that they can evolve in tight correlation with the social life to which they provide the frame. For instance, school classes may be able to create not only their class room, but the whole schoolhouse and its surroundings according to their present needs (e. g. by planting a botanical garden when biological courses are held; or establishing a museum for supporting cultural history courses). Thus, Erving Goffman's observation that the variety of sceneries is much lower than the variety of social occasions (so that dissonant matches are the normal case) may no longer be true (see Goffman 1959). Instead, we may see the emergence of a socio-cultural structures that are more tightly integrated than in the offline world: because social processes are stabilized and reinforced by corresponding artefact structures (and the other way round).

For instance, there may be virtual concert houses where the external architecture as well as the interior changes in accordance with the time period of the music that is performed: a 17th century edifice when a Monteverdi opera is played; a nineteenth century hall when Brahms or Liszt are on programme. Evidently, such correspondences can be used to realize higher levels of "immersion": e. g. in an ancient historical epoch or a distant geographical location).

Given the permanent modifiability of virtual artefacts, we may hypothesize that in SL, a larger share of all activities is continuously invested in their production, maintenance and modification than in the RealWorld, where the mere physical inertia of given objects inhibits change.

In addition, malleable virtual objects provide excellent opportunities for producing and testing a large variety of prototypes, so that the development of new physical products can be rationalized and accelerated.

"The Second Life environment is perfect for that kind of "rough prototyping," says Terry Beauvoir, an architect who runs the Creative Research Lab at Montana State University. As he discovered while teaching a class in collaborative technologies for architects, the Second Life building tools were a good way to play at building a structure together. "We found we couldn't get the accuracy and tolerance real architects need to conduct their work," he says, but it was still a good way to brainstorm ideas for a building at the stage when it's not necessary to have a complete architectural specification for that building." (Carr 2007).

Therefore, Second Life may well become a catalyst in cultural innovation: especially in fields like architecture where innovation is strongly inhibited by the huge cost, time and energy consumed by every single construction.

Of course, virtual objects derive also much flexibility from the fact that they are devoid of any extrinsic functionality. In the RealWorld, most artefacts have an instrumental function related to the physical and biological dimensions of our human condition. Thus, clothes are necessary for warming the body, houses are useful for keeping out rain and winds, and cars are indispensable for getting from here to different other places. In SL, all this is no longer salient, because no adverse weather conditions have to be met, and teleporting makes all means of transportations dispensable. As they have not to fulfil any instrumental functions, their design and usage can theoretically be completely guided by symbolic considerations: e. g. for expressing a specific personal identity, the commitment to a reigning fashion or the belongingness to a social collectivity.

Nevertheless, it can easily be ascertained that most artefacts are stubbornly reproduced: just because we have become so strongly accustomed to them in our daily way of life.

Thus, every institution that opens an SL dependency starts with structures and norms that imitate those in the offline world- even when they are plainly pointless because they devoid of any functional importance.

This is vividly seen in the case of museums which import restrictive regulations that are of no functional use:

"Although anyone could expect from SL to be a truly revolutionary tool to overcome the current struggles of art museums in RL, the truth is that most museums are surprisingly imitating the worst part of reality, such as the restrictions imposed to visitors in museums regarding the care and conservation of the pieces. "Do not touch" labels, bureaucratic or-ganizational systems, copyrights, admissions, etc.; are posted in the same style of any RL museum. Why, again, so many restrictions?"[14]

Much time seems to be needed to get rid of these First Life limitations, and to advance to completely new types of institutions that take fully advantages of the unfamiliar new free-doms of virtual life.

The future development of SL may well be influenced by its capacities to create richer and more complex interfaces between human agents and environmental artefacts. For in-stance, SL provides far better possibilities than RL to create "intelligent objects": e. g. ap-pliances that react in functional ways when being touched or robots that give meaningful answers to specific questions (Kemp/Livingstone 2007). Evidently, such appliances can be used for many purposes: for teaching as well as for providing help, reinforcing behavioural habits or exerting social control. Thus, SL is particularly functional in the realm of practical education: e. g. by learning how to fly a plane or how to manipulate a telescope. In con-trast, it is much less useful to train theoretical knowledge because insofar, storage and re-trieval possibilities for larger texts are on a minimal level (Kemp/Livingstone 2007).

2.7 Second Life as a Platonic, ahistorical world

The Real World is intrinsically "historical" because most changes occur in a incremental irreversible fashion. Human individuals as well as trees, weather cyclones , buildings, cit-ies, organizations or cultures perform trajectories of irreversible path-dependent changes in a way that the state they are in at specific moment is highly determined by the states they were in some moments, years (or even centuries) ago. The reasons lie in the intrinsic iner-tia of physical structures, the time-directed growth and aging patterns of biological organ-isms and the historical developments of socio-cultural systems: e. g. in the impossibility of rebuilding an entire city ever few years at the same place without leaving any traces of the past. These irreversibilities reduce the "evolutionary potential" of all evolving systems: they all "age" by accumulating structures that exert resistance against further fundamental change (e. g. Sahlins 1968).

Surviving physical artefacts (in the form of old books, ancient paintings, decayed castles, excavated coins etc.) provides materials out of which history can be reconstructed. By be-coming "historical", human societies acquire a fundamental capacity for self-distancing and self-reflection because of their ability to assess and evaluate change by comparing con-temporary with older conditions. In addition, history is a basis for "collective identity" by providing memories and symbols that can be used by the participants to cultivate their col-lective belongingness as well as their common distance to other groups.

While written culture (and printing technology in particular) has contributed to a massive expansion of historical documents (and thus: historical knowledge), the new electronic technologies undermine these advances insofar as they substitute written paper by less

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[14] "Wish list for Art Museums in Second Life". Published by lamusediffuse on February 04, 2007 at 11:05 PM in e-artcasting. Sociable technologies in Art Museums.
http://e-artcasting.blogspot.com/2007/02/wish-list-for-art-museums-in-second_04.html

durable media or transmission and storage. Thus, it may be more difficult to write the history of the late 20th century than that of the 19th century because many essential communications (even on highest political levels) have been phone calls that left no traces. And there may never be a comprehensive historical documentation of the evolving World Wide Web because older websites tend to disappear complete by simple deletion, without archived copies being made and continuously maintained.

Similarly, Second Life represents an intrinsically ahistorical world because everything that has been built up can be wiped out anytime by delete buttons without leaving any traces. As all avatars and objects are fully constituted by software, they are not exposed to any processes of exhaustion, aging, obsolescence and decay characteristic for all beings in the physical world. They remain eternally in exactly the same form as they have been created, and are subjected only to discrete intentional modifications, not to spontaneous, continuously proceeding evolutionary change. As there are no growing plants or aging avatars, there will also never be decayed urban quarters or romantic ruins of ancient castles, and in the future, no nostalgic return to early pioneering SL eras can ever be expected because no nondeleted "romantic" remnants of these early stages may survive.

Of course, this indestructibility can also become a conservative factor inhibiting innovation, because there is need to replace old objects by new ones just because they have weared out. As a consequence, there is more need for "artificial obsolescence" to generate dynamic change. For instance, SL apparel industries can only flourish when new avatar garments are constantly sold because older ones have run out of fashion, and construction specialists will be kept busy when changes in architectural styles motivate many owners to modify or even rebuild their houses. At a time where the negative ecological effects of excessive RealWorld consumption become increasingly visible, Second Life may become a late Eldorado for Vance Packards "Waste Makers" (Vance Packard 1960) who want people to replace old by new, more fashionable products every few months - because such replacements do not generate any costs for production on the one hand and waste disposal on the other.

Virtual objects objects are also "Platonic" in the sense that they have no existence as unique individuals, because they are just specimens of a template (which could be called their "idea"). Thus, a multitude of identical objects can easily be generated by just copying the software code that completely defines all their traits. Consequently, there are no intrinsically scarce objects that may give rise to fears of destructions or struggles about property claims and distribution. Houses, tools, plants, animals and the avatars themselves share the characteristic of being reproducible infinitely without degradation and without any nontrivial costs. Therefore, all scarcity has to be artificially produced by regulating copying, storage and access. Thus, a highly differentiated system of access and usage rights can be implemented which contrasts with the simple "private" vs. "public" dichotomy still dominant in the First-Life legal systems.

"The creator can mark an item as "no copy," which means that no copies of it can be made by others, "no mod," which means that others may not modify the item's characteristics, and "no trans," which means that the current owner may not give it to another. In addition, these rights can be set for future owners. That is, an item that is copyable and transferable might become non-transferable once it has been transferred. For example, A may create some item and give it to B. B can give to as many Cs as he wishes, but the Cs will not be able to give it to any Ds."[15]

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[15] http://en.wikipedia.org/wiki/Second_Life (retrieved on March 16, 2007).

2.8 High stakes and investments as a basis for status struggles and social classes

Like in processes of colonization where immigrating new settlers tend to develop a high commitment to the land in which they invest so much personal efforts, owners of Second Life "unreal estates " may also become much involved to the degree they dedicate much personal work to their property by transforming their creative ideas into concrete virtual structures. As the psychological theory of cognitive dissonance (Festinger 1957) suggests, they may be disposed to define such efforts as "worthwhile" even in cases when not much objective benefits can be derived.

In fact, the main social divide in SL is based on a dimension reaching back to precapitalist feudal societies: land ownership. Whoever buys virtual land is considered to be a stable resident, and he tends to look down on "homeless" migrants who have no place to stay and to build their own home, and who may only be casually involve in the system (Hayes 2006). Thus, we may observe the emergence of a conservative class of settlers which develops high loyalty to Second Life: by participating regularly and by defending actively their interests (vis-à-vis Linden Labs as well as annoying and competitive newcomers). They may try to control the system collectively by actively excluding more marginal strata of more episodic users. Such highly committed elite strata do not exist in highly structured game worlds as "World of Warcraft" where everybody easily migrates to other worlds because little or no personal costs are involved in such changes.

In contrast to feudal systems of land ownership, however, the cleavage is not so much between social classes, but more between producers and consumers. Landowners have more "stake" in the SL system because they have invested more resources (some money, but particularly personal labour), while the casual "tourists" are merely consumptive. However, there is a symbiotic relationship between the two categories: because consumers may generate the public for all the entertainments offered, contribute to the mass of "eyeballs" which makes SL advertising lucrative and add to the revenue on which all SL entrepreneurs live (Hayes 2006).

This argumentation implies that with ongoing time, there may well be a growing bifurcation of membership "classes" between longer-term residents who are (and remain) highly committed and newcomers who have less commitment because they have not (yet) made considerable investments. This hypothesis finds empirical support in the survey study of de Nood/Attema who found that there is a high positive correlation between duration of membership and the amount of week time logged in SL (de Nood/Attema 2006: 18).

As possible interpretations, we may alternatively assume that with increasing time, only the most committed have survived, or that duration has itself led to higher commitments because more personal investments (in terms of learning processes, artefact construction, cultivation of social relationships etc.) have been made into the system. Another corroboration is provided by the regularity that property distribution in SL has a U-shaped bipolar structure. There are masses of non-owners on the one hand and a rather sizable wealthy "upper class" (with more than 200 000 L$), while intermediate "middle classes" are rather thin (de Nood/Attema 2006: 26).

An additional economic cleavage - familiar from RealWorld history - exists between the many "small artisans" who want to sell creations of their own hands, and the few big corporations who are colonizing SL with advertising in order to make profits with their highly standardized industrialized productions.

"Also, many long-time residents view the arrival of big brands with suspicion or worse. Big Brands are often seen as corporate threats to the native mom-and-pop shops and most have been slow to create interesting in-world experiences."[16]

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[16] "Second life lessons." Business Week Oct 31. 2006.

Paralleling well-known developments in RealWorld societies, we may well see an increasing turn toward "consumerism" in the future, because more and more users are directed toward predominantly receptive behaviour and roles:

"As the SL economy grows, an increasing number of objects can be purchased or even acquired at no cost, with potentially significant effects on the distribution of knowledge among residents, since they can buy what they want instead of learning how to create it. In fact, there is the possibility that SL will shift toward a largely "consumer-oriented" economy and culture, with production largely the realm of a knowledge elite." (Hayes 2006: 157).

2.9 Deficiencies in overall transparency, public sphere and political organization

SL mirrors the highly decentralized nature of the Internet, insofar as individuals or groups live their own life and follow their own goals without getting a perspective of the whole system of which they are a part.

Similar to the hyperlink network structures in the WWW, systemic integration is predominantly based on *horizontal* interrelationships between individual or corporate actors, not by their *vertical* connections to common centralized authorities or sources of information.

The conspicuous lack of in-world mass media has the effect that
- there is no "public sphere" in the sense of a pool of shared current issues and information which could ignite widespread discussions;
- participants lack knowledge about what is going on (or will be going on soon) in other places, so that they cannot draw much advantage of teleporting options);
- they get no sense about the place they currently occupy within the whole system (so that they have difficulty of optimizing their location in accordance with their activities and goals);
- they get no clear picture about overall macro-developments of SL (comparable to census figures, stock exchange indices, voting outcomes or "global warming" indicators in the Real World).

All such information has to be permanently imported from the outside, so that SL remains extremely dependent on First life communicational structures (including Web 1.0).[17]
The lack of a public sphere is a major obstacle for the unfolding of any form of SL politics. As no "public opinion" can emerge, there is no basis for democratic elections or votings - or at least for an explicit plebiscitarian approval on which the "enlightened dictatorship" exerted by Philip Rosedale and its (unelected) LL collaborators could base its legitimation. Political organization is additionally hampered by the limited server capacities that cannot handle large congregations of avatars (= more than 60 to 90) at the same location[18]
However, theoretical arguments as well as empirical indicators suggest that in-world politics may play a much greater role in the future. In 2003, a kind of virtual revolution took place led by SL participants who were protesting against Linden Lab's policy of levying taxes on virtual objects they have created (Bray/Konsynski 2006). Thus, SL seems to confirm the old saying that the root of all political conflicts is taxation. Additionally, the rise of in-world activity groups and social movements like the "Second Life Liberation Army" (SLLA)[19] testifies to the increasingly acute problem of political regulation - which again raises the demand for widespread democratic participation. In fact, the SLLA is correct in the analysis

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[17] This situation has not basically changed with Reuters "Second Life News Center" which is stationed within "Second Life", but transmits its messages through conventional channels of the WWW (http://secondlife.reuters.com/).
[18]. These restrictions are particularly harsh when avatars keep to a highly sophisticated bodily and facial appearance, (Biba 2006).
[19] http://secondlla.googlepages.com/

that SL hitherto functions as an "enlightened autocracy": with the Linden Lab as an authoritarian decision maker who is not accountable to anybody (inside or outside the system) (Dvorsky 2007). Even participants who follow strictly economic interests see the importance of a political framework that sets the macro conditions for economic action. For instance, a large part of the SL economy has to do with trading real estate; but the development of prices in this sector will of course be heavily determined by Linden Lab's policy to provide additional land. Thus, there may emerge an objective class conflict between established land owners who vote against territorial expansion (for keeping the values of their own properties high), and masses of newcomers who are interested in cheap virgin land.

2.10 The "Virtual Reality" of SL as a source of ambiguities

The term "virtual reality" is often considered to be an oxymoron because nothing can be virtual and real at the same time. However, there are particularly good reasons to apply this term to Second Life. First of all, SL satisfies to a great extent all the definitional elements usually connotated with this term: by offering an immersion into an interactive artificial environment that simulates features of reality by means of graphical interfaces.[20] And secondly, Second Life is particularly "hybrid" in the sense that it combines virtuality with capacities to interact with and impinge on the RealWorld - in ways that it may even be considered as an additional part of real human society, particularly in its economic dimensions.

On the one hand, Second Life is absolutely *virtual* in the same sense as World of Warcraft or any other Massive Player Online Games. As an installation constituted exclusively by digital code, it lacks almost everything that makes First Life so complex and thrilling: birth, maturation, aging and death, family and kin relations, ethnic identities and territorial identifications, agriculture and industrial production, patterns of history and long-term societal evolution, scarce goods as a basis for efficiency and economic transactions; physical force as a basis for military action and political authority; urban traffic congestions, changing weather conditions and lively discussions about in-worldly resource shortages, war casualties and climatic change. As mentioned above, SL is a highly simplified "Platonic Universe": platonic in the sense that persons as well as objects are frozen in an idealized state of eternal permanency: without continuous changes due to learning, maturation, psychological dementia or physical decay. Under this first aspect, even the word "Second Life" seems to be a misnomer because given all its deficits, it would be absolutely erroneous to think that it could be (or ever become) a parallel (or even a substitute) version of "First Life".
On the other hand, however, Second Life is also "*real*" because it is an arena for activities that are not only conditioned by, but also have an impact on RealLife.
A major link between the virtual and the real economy is of course provided by the possibility to convert Linden Dollars into real bucks (and the other way round). Other connections are based on various objects that function as windows or gateways to the external world. For instance, avatars may meet virtual screens linked to a webcam at some location of earth or a virtual telephone from which they can make calls to order real pizzas at their real homes. In addition, each participant is free to provide information about his "Real Life identity" in the profile of his avatar, and may even indicate his email address or phone number, so that he/she may be contacted as a real person.

In particular, SL has enriched the world with a new full-blown economy. For the first time, calculations referring to the global economy have to include the GDP of a nonterritorial entity, the size of which can roughly be compared with that of some minor Pacific islands.[21]

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[20] For a conceptual analysis of the term "Virtual reality" see Brooks 1999.
[21] In March 2007, total money supply held by all residents is 1.9 Buillions Linden Dollars (=74 Mio US$.), while transactions per day were about 300-400 Mio L$ (ca 1-1.5 Mio US$). In quantitative

Similar to these latter, the economy is largely based on a symbiotic relationship with residents who are predominantly productive and transitory visitors who stimulate the level of consumption, and its dynamics is driven by the same forces: free enterprise and protected private property.[22]

As the SL economy is still quite small, there is a high asymmetry in demand between Linden dollars and real Dollars: so that the Linden Dollar becomes highly devaluated whenever considerable exchanges into Real Dollars take place.[23] Up to the present, success in the RealWorld Economy seems not to be highly correlated with economic advancement in SL (de Nood/Attema 2006: 27). From this, we may tentatively conclude that a different mix of skills and motivation is needed in virtual economies - so that new opportunities are accruing to people who have not had much success in their RL occupational career. However, there is not much hope that in the longer run, SL will unfold to a "countereconomy" where RealLife losers can advance from rags to riches, because it is increasingly colonized by the big corporations which will certainly implement their conventional values and norms.

With its nonterriorial status, Second Life may be considered a particularly advanced and perfect expression of current trends of economic "globalization", because it basically evades all the governmental structures that are the historical product of territorial organization. It is to be expected that such Metaverses may increasingly become molestations for governments for various reasons, especially because they try to provide a shelter from taxes:

"In October 2006, the U.S. Congress began debating rules to tax the exchange of virtual goods and items in virtual worlds like Second Life. However, it is unclear which states have iurisdiction: those where the servers are located, or those where the individuals live who participate in the transactions." (Bray/Konsynski 2006: 5/6).

In a wider perspective, it is evident that the hybrid VR-status of Second Life is the source of many ambiguities and insecurities in legal and moral life, for which no ready solutions are at hand:
- To what extent can civil property rights be applied to virtual objects, and: is taking away a virtual object identical with a theft?
- Can the damaging of an avatar be conceptualized as "violence", and his deletion as a kind of "murder"?
- What does it mean to have intimate sex with a virtual avatar? Do couples extend the notion of "conjugal infidelity" to virtual forms of sexual intercourse?
- Are contracts among avatars acknowledged by civil law?
- Is the legal iurisdiction of a state over his citizens (including tax law) extended to the behaviour of these citizen's avatars in Metaverses?
- Do insults against an avatar qualify as "libel" in the legal sense?
- Are aggregations of avatars covered by the basic constitutional right of free association, and can there be "virtual curfews" where such assemblies are forbidden for security reasons?
- Can Metaverses constitute "virtual governments", and can such no territorial entities attain an acknowledged status within the community of states (even in the UN?).
- Is it meaningful (or even mandatory) to see SL residents as "citizens" who are entitled to political participation and other basic "human rights"?

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terms, SL can roughly be compared with the economy of Vanuatu where 200 000 inhabitants produce an yearly GDP of US$ 580 Mio.

[22] Following the advice of Laurence Lessig (called Second Life's "Thomas Jefferson"), Linden Labs decided in 2004 to grant their residents property rights on all the objects they have created.

[23] Edward Castronova, an Indiana University economics professor, quoted by Carr 2007.

3. Conclusive remarks

While the future of SL may appear uncertain, the Web 3D principles it represents and propagates are likely to remain salient and to even be expanded to a new mode of Internet browsing, By using this immersive mode, surfing would become a highly sociable experience because whenever I visit a website, I would meet all other visitors meeting the same page at the same moment, so that I could enter into a conversation for exchanging information, opinions and plans of cooperation.

Linden Labs readiness to rely on Open Source Software creates good preconditions for widespread experimentation in the field of Metaverses. Most of these current efforts aim to get away from centralized structures like SL, where a single company (unaccountable to its residents as well as to any larger public) determines all the features of the system.

As in many other aspects of Internet evolution, we may well see the substitution of such centralized Client-Server solutions by decentralized Peer-to-Peer arrangements where Metaverses are constituted by the joint effort of many participants who pool their computing and storing resources.

"Several open-source efforts are also underway to provide virtual worlds for participants. These efforts, such as the Open Croquet Project (www.opencroquet.org) or the Solipsis effort (solipsis.netofpeers.net), are intriguing because they are not sponsored by any particular corporate or public group, but rather seek to provide the tools for individuals themselves to create interactive virtual worlds for others. Some efforts involve thick clients that have to be installed on computers, whereas others rely only on a thin, webbrowser interface." (Bray/Konsynski 2006).

Of course, such developments could lead to a total collapse of the virtual world as a macrosociological "society" which constitutes the platform and overall frame for all lower level virtual constructions. Instead, we would have a multitude of private Metaverses mutually incommensurable like individual dreams.

For counteracting such disintegrative tendencies, there will be a need for Meta-Metaverse interfaces on order to secure migration and the transmission of information and goods.

"Individuals will be able to move between parts of multiple, unique virtual worlds located on physically distinct servers and potentially operated by different individuals or organizations. Virtual avatars will be able to exchange virtual items and currencies across multiple, virtual worlds." (Bray/Konsynski 2006).

Big strides towards a unified global Realworld society may be necessary for creating the structural and cultural prerequisites for a similarly unified "virtual society" where a basic interoperability between all human online activities is created and permanently maintained.

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