How virtual spaces re-render the perception of reality through playful augmentation

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Abstract — In this article we are going to explore a fundamental problem of modern virtual spaces in so called location-based games: annihilation of space through augmentation. Augmentation re-shapes the perception of the real object in space (which is not originally part of the game) by making it an active element of the game, i.e. it utilizes the object (and furthermore the surrounding space) and thus frees it of its original meaning and utility. Furthermore, it gets incorporated into the artificial (virtual) space and acquires two new properties: it becomes interactive and as a result, interchangeable. The perception of reality thus gets augmented at the same time as it gets reduced to the bare minimum of information needed to reach the goal of the game. Space becomes efficient and therefore loses its uniqueness and identity, with effects on the user’s very own perception of reality.

Keywords – location-based, anthropology, space, augmentation

I. INTRODUCTION

To explore the consequences of the game design of one popular example of a location-based game (Foursquare) to the perception of reality, we have to limit this perception of reality to the perception of place and space in general. Goal of this paper is to give a deeper understanding of the ability of the game to re-render the user’s perception of the city he lives in, as a concrete entity, and the implications this might have for the way he interacts with the places he visits, especially implications regarding the perception of uniqueness of a place, making the latter to the entity it (originally, and genuinely) is, having its own history and location in space; for instance, when you take the market place of an old town that looks in this way and no longer itself, so to say, but became mine, the user’s one; it ceased to lead an existence independent from me, the user, but became "my" entity. I can do with it what I, the user, is wanting to do. In other words, the place is no place any more, a part of a world independent from me, the individual

Foursquare, in general, is a prototype of a special kind of location-based game, the geosocial game, which by the term implies that it deals with location and social interaction. Goal of the game is to provide a mechanism to share information about the places one visits (to be more specific: to share the message about the fact of visiting a specific place) and the experiences at these places with the peer group in a playful manner. Foursquare therefore can be seen as a digital diary (a life log [2]) of all visited locations and as a geographically bound undirected communication channel to your peer group and the rest of the user base. Foursquare can therefore be seen as an augmentation of reality as it enhances the reality with (not obvious) information about the place. It means that it "enhances" the genuine, i. e. original place with characteristics not intrinsically belonging to that place and by that, turns the place in question into something different, in changing its status: the original place with its genuine, and finite characteristics making it to that place that it definitely is as a unique entity (e.g., a market place of an old town that looks in this way and no other) turns into an entity that isn't unique any longer but which becomes exchangeable, depending on the "content" the respective user adheres to it. The place in question is no concrete or well-defined entity any more, no truly individual one with its finite and unchanged characteristics which alone are responsible for making it to the place it is, which endorse it with the qualities necessary to be this place and no other; but instead, it became an ad libitum depending in its very existence solely from the user, from the latter's preferences which are formulated as "contents" the original place can be "filled" with. By such an operation, the place in question lost its individuality and hence, its identity. It is no entity any longer that can be addressed in a clear-cut manner, can be identified in a literal sense. It is no place any longer but became a fluidum, something exchangeable, ephemeral; the original place with its identity changed into a something.

At the same time, this exchange from individual identity to just something resembles a possessive act: the place is no longer itself, so to say, but became mine, the user's one; it ceased to lead an existence independent from me, the user, but became "my" entity. I can do with it what I, the user, is wanting to do. In other words, the place is no place any more, a part of a world independent from me, the individual

Exemplifying Foursquare is justified by both the popularity of the game [1] and the very simple game rules it uses. Foursquare, in general, is a prototype of a special kind of location-based game, the geosocial game, which by the term implies that it deals with location and social interaction. Goal of the game is to provide a mechanism to share information about the places one visits (to be more specific: to share the message about the fact of visiting a specific place) and the experiences at these places with the peer group in a playful manner. Foursquare therefore can be seen as a digital diary (a life log [2]) of all visited locations and as a geographically bound undirected communication channel to your peer group and the rest of the user base. Foursquare can therefore be seen as an augmentation of reality as it enhances the reality with (not obvious) information about the place.

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user, but it became incorporated into my, the user's, world – which is a world defined by my own (like in case of a former Christian God), solely depending on my own. And this whole process is called an augmentation of reality then, a melioration of the real by incorporating it into my individual (and by necessity, ephemeral) world. The market place of the old town is no longer that individual, genuine place but became my market place – and hence, no place at all. By such a process (and first and foremost, by such an understanding) of "augmenting" reality the latter ceases to exist, in fact. What remains from that old independent reality are augmented fragments, its places and spaces are destroyed and constantly remixed into the fluidum of 'my' new reality, the thereby "augmented" one. It equals a destruction of place and space altogether, a destruction of the old individuality in favour of the new one belonging to that new reality.

II. ETYMOLOGY AND CONSEQUENCES

To better understand what it is all about when speaking of an augmented reality, etymology might be of help, as it is etymology which provides the original range of meanings owing to a notion and hence, may be of help to clarify it. From its Latin origin, "augmented" stems from augmentum, the growing, or adding of something; derived from the verb augmentare, to add something in order to enrich it, to make more out of something already existing. It goes back to augere, the verb for enforcing something, to let it grow in the direction of adding values to it which it didn't have before [3]. Decisive is the active character expressed by the verb – the "something" in question has not the capability to grow out of itself, and therefore, to enhance itself out of its own powers; instead, it needs some external force to do so, a subject who actively, and decisively, is undergoing to enhance that something, that entity in question. This by that leads to that entities' melioration. This is what we, the augmenters, believe at least: that an existing entity gets "better" somehow if we are endorsing it with additional qualities; because we think that these additional qualities are enhancing it.

This in itself, and seen by itself, is a mere presupposition, of course - a pure believing and nothing more. We only tend to think that things get better when we enhance them; sometimes, this may be right, but sometimes not. To demonstrate the whole problem inherent to an augmentation of existing realities, let's take the case example of the market place again: is the market place really getting better, is becoming "more" market place than it was before when we endorse it with qualities which genuinely didn't belong to it? When we change its substance, in other words? And "better" for whom and in which directions? What gets better for the "user" when changing the substance of things? Moreover, what are notions like substance, individuality, or identity really denoting when they become exchangeable in an almost total since encompassing manner? Because being "better" implies a frame of reference, something unchanged that can serve as a measure if something other – compared to that reference – became better or worse than it was before. In other words, when speaking about becoming better in meliorating it, it needs a substance it is compared with, an unchanged compared to which something became better, or 'enhanced' at all. Without such a substance as a stable frame of reference the whole idea of an augmentation doesn't make sense because without such a reference, it becomes meaningless. Also the concept of life logging makes no sense without such a frame of reference: a history of one's own life, in order to be history at all, needs anchoring in reference, that is, in the final, in substance. Substance I cannot have when everything is changed all the time, and at the top of it, when the changes made are following no rules (are not being 'substantiated') but are driven by chance. This is the case when they are primarily driven by momentaneous personal wishes and likings since the latter are volatile and out of this alone, no reliable measure of things. If this is the case, what is it that gets "augmented" by it?

Related to all that, let us get back to etymology. Augmenting something does also mean that something gets magnified in the direction of exaggerating it, of trying to make more out of it than "it", if seen just by itself, is able to be. The market place can just be what it is, and already was: this specific place and no other. It will remain, irrespective of my attempts and desires. So, in trying to converse it into something different, the best melioration would be to converse it totally, that is, to annihilate its former existence and to create it anew - according to my personal wishes and likings, in being the "user" of this market place; but this won't succeed, since the place owns resistance to these likings – in just being what it is, namely this place. Its genuine identity is a real obstacle to conversion. So, in order to follow my likings and out of this, to "fill" the original (the market place) with the "contents" I like, even more perfect than creating it anew would be if I would need no original at all, if I would be able to refrain from it – which is the case in Foursquare: a point to come to. In this case, the old references of space and place, and the related spatial settings necessary for a basic human orientation (the former anthropological dimensions of substantiality, so to say), they are no longer needed. These are outdated world 1.0-stuff we had successfully overcome, by inventing games like Foursquare. Space and place as orientation became obsolete since they can be constructed by the user in form of installed pseudo-places, virtual localities in the on-going stream of life logging content generation. Thus, space as a cosmological category is destroyed since it became the victim of the innovation process. Because all such processes of destructing former substantialities are interpreted as embodying innovations (only), as harmless since nothing but technical achievements. And technique, we are told, is value-free, is nothing but technique, nothing but what it is, and ever was – like the market place we looked at. This specific kind of destructing substances is the important
perspective we have to deal with here; it is not just about gaming, or some games. As detailed before, it goes much deeper.

The etymological origins and connotations of an ‘augmented reality’ have been addressed in order to understand the phenomena we are confronted with here, whereby the game Foursquare can serve as a pars pro toto, as just a case example as was the case of the market place. Because opposed to a present day belief, such phenomena (like all other ones) cannot be envisaged in isolation, i.e. as distinct matters standing exclusively by their own, without any linkages. Phenomena like those to be dealt with here are embedded in a cultural context, and therefore, cannot be looked at independent from it.

Games like the one illuminated, aiming at a destruction of reality altogether by creating a new one, are embedded in a broader historical and cultural context of destruction. What began as a so-called "destruction of space" starting with the onset of modernity [4] in the old world 1.0, that of physical reality, and what continued with an annihilation of the place, of the concrete locality, and which led to the "transit spaces" and "non-places" of a hyper-modernity (to cite Auge), that means in its final, to the world 1.0 in its current shape [5] – this process of an overall destruction is continued by an even more encompassing one to be illuminated here: the destruction of the world by creating a new one, a new world that justifies its very existence by destructing the old. In both its claim and longing, and expressed in traditional terms, we are confronted with a true creatio ex nihilo. Albeit it cannot be pursued in more detail due to lack of space, it is an important aspect of the phenomena to be examined here, namely the continuity in the production of the discontinuous. As Flessner pointed out (long before the arrival of Foursquare and similar attempts to annihilate reality by generating a new one), it is about the myth of a second creation in the context of a so-called posthuman culture: that man is enabled to privatize himself from his own anthropological belongings in form of "older" (means former) frames of reference [6]. Which does fit indeed with the broader cultural context to privatize nearly almost and everything [7], and at the same time, which does fit into our Christian heritage (despite the attempt's worldly appearance) of world creation. That means, which does fit into "substantial" since long-lasting cultural substrates we are belonging to, although it tries to destroy these substrates altogether; not willingly, of course, but in fact. So far to the broader context the phenomena in question are embedded in, despite their seeming banality [8].

III. THE CASE OF FOURSQUARE

Foursquare, as an example for a so-called location-based game, gives its users the ability to do "check-ins" at the places they visit. These check-ins fulfill several functions: First, they can be utilized as a life log, i.e. as a detailed list of all places visited (e.g. restaurants, bars, clubs, museums, parks, etc.), and this life log is easily comparable to other user's life logs. Second, it gives its users the ability to see who else was or currently is at that location – and to share his or her perception of the location with the general public (by adding commentary texts to the virtual profile of the location in the game). Taking into account the first function, the location itself becomes a "collectible item", it gets a purpose in the meaning of the game (visiting the location increases the number of different locations you have visited) and (from the perspective of the game) loses its original purpose – whatever kind of purpose it was, in being a specific location and therefore, a location at all; a locus, a place with its own right of existence. This loss of purpose is also reflected by the word that is used: location. This new location is not a place with its own right (purpose) to exist, but a derived entity whose existence solely depends on the game, i.e. which has no existence by its own; it is a virtualized entity in that very sense. And by that, became a mere item, it became itemized and thus "augmented" for the game. In its original Latin meaning portrayed above, it became enhanced, 'meliorated' by becoming a nothing. From the perspective of the rules of the game the location is a location, no matter what its purpose was or is – it does not only get comparable, it completely loses its identity and history. Following the idea that the actual place loses its history by becoming an "augmented" entity, it needs to create a new history, which it does implicitly by the interaction with the users of the game. Even further, the location (the former place) becomes independent from the actual space: When the identity of the place is not important in terms of the rules of the game, then it simply does not matter where the place is located. Every single place in the world can become a part of the game, yet every single place in the universe can become a part of the game, whether it is accessible to humankind or not. A place becomes an abstract collectible item and collectible items can further be formed from other collectible items: In the case of Foursquare, badges are these collectibles made up based on other collectibles (the locations itself). If the overall goal is now not only to increase the number of locations visited but also the number of badges earned, then the location itself even as a location becomes unimportant in contrast to the badge. The badge is the abstraction of the abstraction of a place – being that it is nothing that augments a place. Even more specific, it creates a new space where every badge is an actual place and this space has no location (and time) whatsoever; it annihilates the space that it utilizes to justify its own existence.

Embedding this concept of space annihilation provided by the Foursquare game to a more general context, we can say that the game transforms actual places into locations, which can be seen as non-places. [5]

The concept of non-places provides a solid framework to further analyse the phenomenon of space annihilation and
its consequences for the perception of the user’s reality. By Auge’s definition, non-places are „spaces which are not themselves anthropological spaces and which […] do not integrate the earlier places“ [5, p.78]. Even more: „[…] listed, classified, promoted to the status of ‘places of memory’, and assigned to a circumscribed and specific position.“ [5, p.78] – which sounds familiar, as in Foursquare every place is seen as the sole entity of being a location. What Auge argues is that the former place gets transformed into something of a „solitary contractuality“ [5, p.94], which is exemplified by the need of Foursquare to describe all locations. The locations become defined by texts that describe them, derived attributes are displayed as “explicit and codified ideograms” [5, p.96] (badges, icons). This “invasion of space” is not bad on purpose; it could be truly an enhancement of reality. But as the locations are independent from their anthropological history, the text has to become the equivalent of something like a “history” – a meaning for the location that makes this location worth experiencing. This meaning is created by a virtual history of people who have visited the location in the past. Even when you would be the only person who is visiting the location at the time when you are there, you can be sure of many other people who have been there. You become a member of a group that has never existed and is virtual by all means. There is close to zero probability that this group will ever meet as a whole. The user becomes embedded into something bigger, something more powerful, into a group which was, is and will be bound to this place due to the bare fact of a single check-in sometime in the past. Auge calls this “experiences of a perpetual present” [5, p.105], which gives meaning to the act of checking into a location. He concludes the implications of this in a dramatic way: “But they play not part in any synthesis, they are not integrated with anything; they simply bear witness, during a journey, to the coexistence of distinct individualities, perceived as equivalent and unconnected” [5, pp.110] Of course this is a one-sided opinion, but as a matter of fact a place, being transformed to a location, becomes something different: not really augmented in its very sense, more something completely new, negating its history and creating a new identity of the location as such. It is truly an alternate reality, but an alternate reality which is never integrated into the reality that the user would perceive without the augmentation.

IV. CONCLUSION

Concluding, in this article we have examined the consequences of augmentation of reality as being loss or (in its extreme) even annihilation of places and space in general. Furthermore, some games may justify their own existence by providing mechanisms to escape the meaninglessness of the annihilated space by creating an alternate and “enhanced” history and thus reality around the “locations” that they generated earlier from real places by standardizing them from places to locations. This truly creates an alternate reality, but the price to pay is the annihilation of the surrounding space. The consequences of this (and exemplified by using Foursquare, but being applicable to a much wider range of location-based games) is a change in the way the user perceives the world that is exploited by the game. What we have seen so far is that it leads to the destruction and reconstruction of the anthropological sources of each ‘location’ in the game and therefore easily for the whole city. The purpose or necessity of these two steps, destruction and reconstruction, is presumably not done in bad faith – it simply derives from the rules the game uses.

V. FUTURE WORK

This article wants to serve as the baseline for future research on the anthropological effects of location-based games. Future work may include research on rules for location-based games that have a less significant impact on the perception of space and reality, on immersion techniques for location-based games in specific as well as for virtual spaces in general.

REFERENCES

[4] To the destruction of space by producing new ones, see for instance H. Lefebvre: The Production of Space, Malden etc. 2007. English translation by Donald Nicholson-Smith. Referring to p. 229f., where he treats the shift from absolute space to abstract space, as a general tendency making up the cultural context mentioned here
[7] In its etymological origin, privatization denotes an act of robbing, from Latin privare, to rob (off) something. From Heinichen (op. cit.), p. 673