Blockchain and Bodies© Incorporated: Media Arts Screening Economic Innovation

By Claudia Schnugg

In society, culture, and philosophy, many functions have been ascribed to the arts throughout the centuries: from their communicational function about the state of the art in society and culture to their creative capacities (Belfiore & Bennett, 2006). Since modernity arts, and especially media arts, positioned themselves at the forefront of newness and innovation. Media arts has not only the reputation of being at the forefront of technological and scientific development, but from the very beginning of the exploration of kinetics, the early computer arts, the inclusion of newest technologies, hardware and software, created a dialogue between artists, scientists, and engineers working in that field. In this dialogue, artists and artistic exploration of technologies enabled to push certain fields like computer visualization and computer graphics to emerge as an independent field within computer science (Taylor, 2014).

Media arts and artistic exploration of scientific fields did not stop at the invention of new technologies in mid-20th century, though. Parallel to the development of newest scientific disciplines and cutting-edge research in any scientific fields, artists entered into these fields and worked on questions related to the science being done. They started to collaborate with scientists, raised ethical and critical questions about ideas and processes, spun ideas in science fiction and speculative design processes, started to communicate outcomes and scientific opportunities through their artwork, and enabled public engagement in the scientific process through their activities (Bureaud, 2017; Dumitriu, 2017). In these projects, artists like Oron Catts, Victoria Vesna, and Anna Dumitriu demonstrated how they can create important artworks that push the boundaries of scientific disciplines and public engagement at the same time as they made visionary statements on the artificial production of leather and meat as Oron Catts and Ionat Zurr with the The Tissue Culture & Art since 2001, explored the metamorphoses of butterflies through sound as Victoria Vesna with James Gimzewski in Blue Morph since 2007, or the development of antibiotic resistance, its cultural embeddedness and newest possibilities like CRISPR to cut it out of a bacteria's genome, like Anna Dumitriu with her scientific partners in her Make do and Mend project Controlled Commodity in 2017.

The visionary statements artists make in these collaborative projects between art and science push the boundaries of the disciplines, but also help to reach out to a broader society. They make scientific visions and experiments accessible by contextualization of the work being done in an environment that is understandable by a broader public, but also reflects a broader social value of the scientific work being done back to the scientists who often mere focus on the necessities within the scientific community that allow for scientific contribution and publication. But art can do more than showing and visualizing scientific outcomes, economic innovations, or social trends. It can make the main ideas and visions experienceable, can subvert and reconfigure ideas observed through critical approaches, stories that are told, and a broader public is enabled to experience and participate in new ideas.

And with these opportunities, artists do not only approach scientific work and newest technologies, they also reflect on societal issues and screen economical developments. A case that is closely connected to

computer science, application of newest technologies, societal changes, and economy is Blockchain. Blockchain is something very intangible as it differs very much from everything we as society and culture know, and it addresses societal and economic change that is decoupled from the predominant economic and business logics that constitute big parts of societies and governmental approaches. Scientists, technologists, economists, and sociologists struggle provide an explanation about the technical fundament, its central functionality, and which societal changes could be triggered by the introduction of Blockchain.

Media artists started to explore Blockchain, the opportunities it provides and which social implications it can bring (Catlow et al., 2017). Most of the recently developed artwork in this field is mainly focusing on the technical functionalities of Blockchain, as for example Lightcoin (2017), a media art piece by Hrvoje Hiršl. The artwork plays with physical phenomena of particle entanglement, the physical limitations of current cryptosystems to the speed of light, and a website platform that monitors market fluctuations and supports with informative texts. As important such artworks are for communicating the development of cryptosystems based on Blockchain mechanisms, and as essential such artistic interpretation is in awareness building and public education, they tend to lean towards explanation of the system instead of experiencing the system's implications.

The recently re-invented art project Bodies Incorporated (or: Bodies© Inc in its original version, Bodies Inc 2.0 in the recent version) by Victoria Vesna tackles this missing aspect of experiential access to Blockchain, its social implications, and changed economies based on cryptosystems. The artwork itself has already a long history in displaying economical and social developments through technological innovation as it is based on the original version of Bodies© Inc that has been initiated by Victoria Vesna early in the 1990s. The recent iteration of the project uses the basic idea and initially created environment of this early net art piece to explore the potentials of Blockchain in the world of Bodies© Inc. The currently ongoing development of the new version of Bodies© Inc overlaps with a revived interest in the original art project as it has been selected for the web art/net art archive Net Anthology by Rhizome in spring 2017. On the following pages, we will dive into the world of Bodies© Inc and follow its development throughout nearly three decades to learn about the intensity of such participatory and interactive artworks in the communication of complex issues and implications of abstract technologies on the society, especially through economical developments.

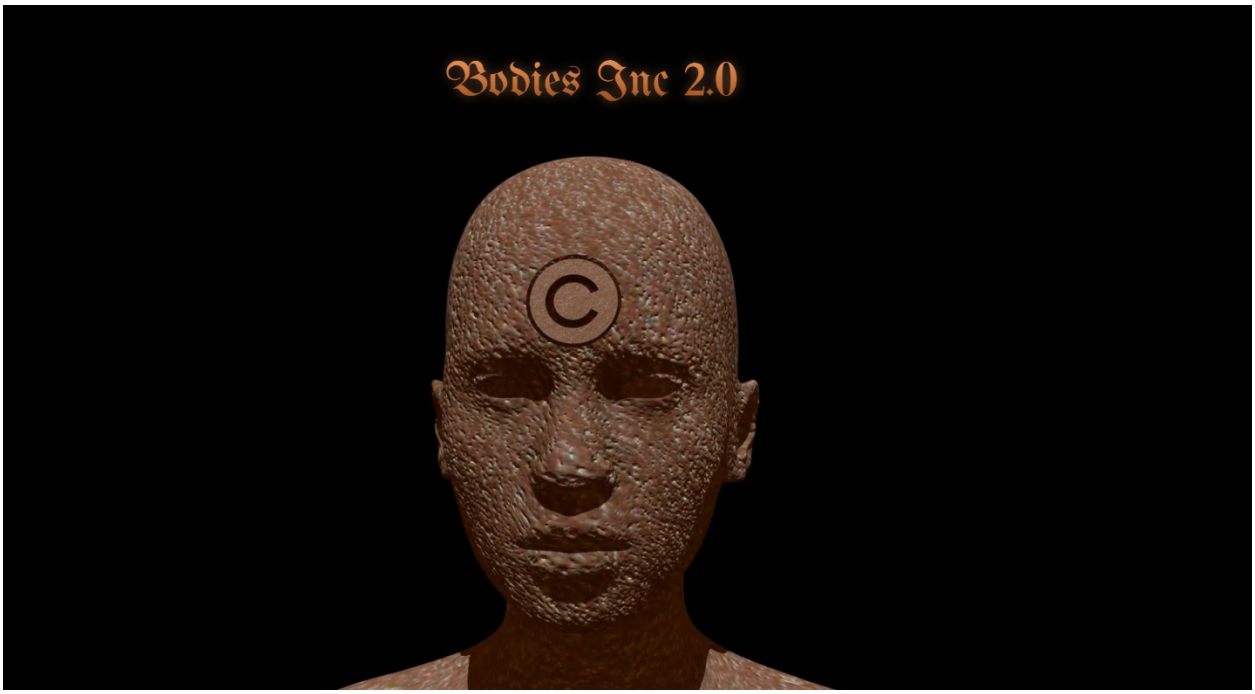

Fig. 1: Screenshot of the title page, webpage Bodies INC 2.0 by Victoria Vesna

After some first experimentation with the idea of a net art piece, Victoria Vesna started the project to develop Bodies© Inc as an interactive experiential artwork in 1993 which came to a first form in 1996 as one of as one of the first 3D net art pieces around worldwide (see http://www.bodiesinc.ucla.edu/frames1.html). As such it has been presented and reflected upon extensively. Right from the beginning, the project focused the display of how new developments could be integrate into the existing the art market and established gallery system. At the same time, the dynamics in the developing online economies and effects on society represented in the artwork are valid beyond their application to this very specific market. Basically, it was designed as a project that invites the audience to participate and has been extensively used and within that thousands of bodies were created and specially highlighted people from exhibitions in museums and galleries are still available to view. It is a collaborative project on many levels, from the team of artists implementing it, to the actively participating audience attempting to gain shares in the body of work. It was first exhibited in 1996 at the Contemporary Art Center and The Ernest N. Morial convention Center (for SIGGRAPH 96) in New Orleans and in 1997 at the San Francisco Art Institute.

In its core idea the artist describes, Bodies© Inc was an investigation into social psychology and group dynamics, actualized in corporate structure. Thus, on the one hand, Bodies© Inc comments on some of the more obvious contradictions of corporate culture of how individuals are incorporated in the organizational world, the connection of real identity and virtual identity, the reality of spaces in “real world” and virtuality, and the relationship of the own body, bodily knowledge and identity to virtuality, multi-user worlds, cyborgs and avatars. From within computer networks we constantly project ourselves and play complicated identity survival games. But this virtual reality does not only start at the line of virtual worlds in the technological and computer game realm, it is also connected to the construction of

corporate culture, structures, hierarchies, and the roles individuals play in these systems. Therefore, Bodies© Inc served an investigation into social psychology and group dynamics, actualized in corporate structure.

On the other hand, the work addresses broader issues that tackle pressing questions for art, especially new media art, as if only cultural institutions have legitimacy to display art, and the ways in which structures of physical and ephemeral spaces affect the society's collectively embodied behavior.

The experience of the initial artwork is created as follows: The webpage of Bodies© Inc offers an invitation to subscribe to the online company Bodies© Inc in order to create a body at your imagination with the body parts and meaningful textures that are available for your body. These bodies serve as your online representation, will possibly gain fame through exhibitions organized by the owners of Bodies© Inc, and are the basis for interaction and exchange with others. This interaction with others can be mere communication in a chat, but you are also allowed to build up collaborations through Bodies© Inc as platform, or you can use the Bodies© Inc Marketplace for economic exchange. But you have to be aware, everything you do is legally binding and right at the beginning of the experience, you give the rights of your body to the corporation that provides the platform that enables you to do all this.

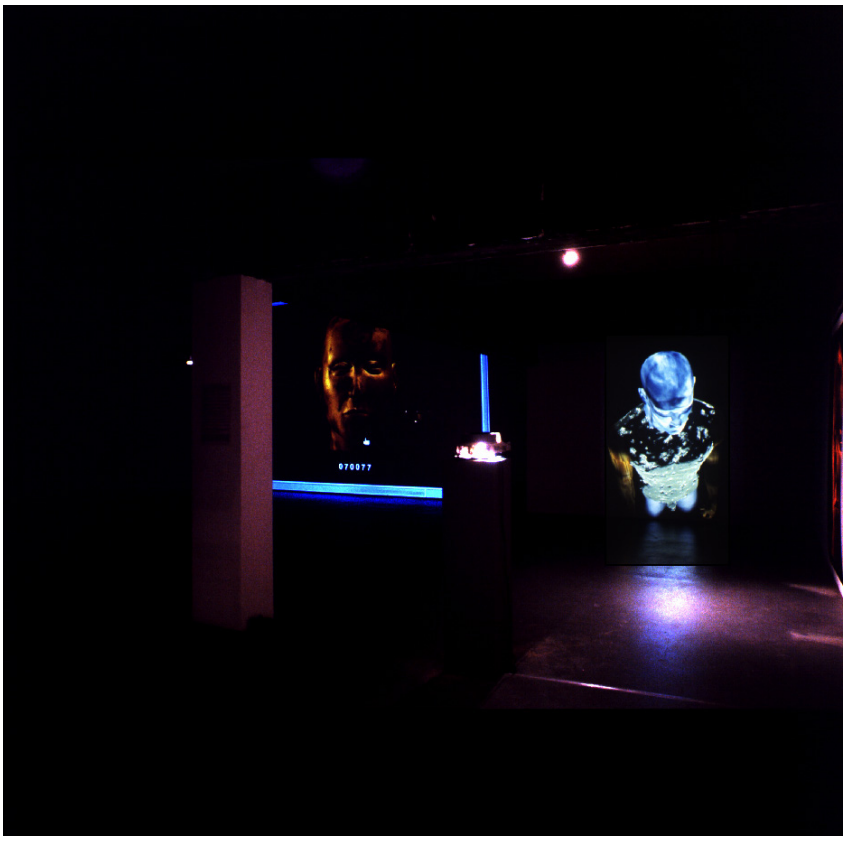

Fig. 2: Installation view, San Francisco Art Institute, 1997

Bodies© Inc invites the audience to act like players of computer role play games to create their own virtual body out of a selection of body-parts, textures they can add and sounds. Thus, they gain membership to a larger body-owner community and get access to virtual environments within which the activities take place: HOME, LIMBO© INCorporated; NECROPOLIS© INCorporated; and SHOWPLACE!!!© INCorporated. First, when participants enter Bodies© Inc, the have to click through a series of legal notifications where the corporation creates a controlling space that makes signing of legal documents and inputting of personal data an emotional experience. Assuming that no one is reading such notifications on the web – although they take all personal rights, – these 'legal' announcements were taken from Disney website to become non-sensical when read carefully. In a way, this already pointed to what was to come, by critiquing all these online and licensing acknowledgements you have to click and confirm while accessing software, platforms or now apps on your phone. It stores your data, has all rights over your data, and although you are able to quit and "leave the game", it creates a painful and long process for you to do so.

Now as participants were alert about the legal issues attached to their navigation through information space, they were invited to create their own bodies to become members of Bodies© INCorporated. For the construction of the bodies, participants can choose between textures with attached meanings, female, male and infantile body-parts from leg, arms, torso to head. Furthermore, they can choose from twelve sounds that can be attached to the body. After naming the body, choosing handling directions and comments, the body is submitted to the system and incorporated into the database. The available textures for your body are not only aesthetically pleasing, they represent meanings that are important in a corporate world and in social interaction. But the construction of the bodies did more than that: it raised questions of the articulation of identity through virtual avatars, asks if amplification and representation of the effects of capitalism an effective form of critique is, and wonders how individuals construct their identity when corporate structures and consumer culture define the only available options.

As soon as all the documents are signed by acknowledging them with a click and after the creation of the body, the user is immersed into the "game", the representation of the home, the showplace, and the marketplace. HOME is represented as computer 'motherboard' where the main interaction takes place as members have to take the actions to gain status within Bodies© Inc.

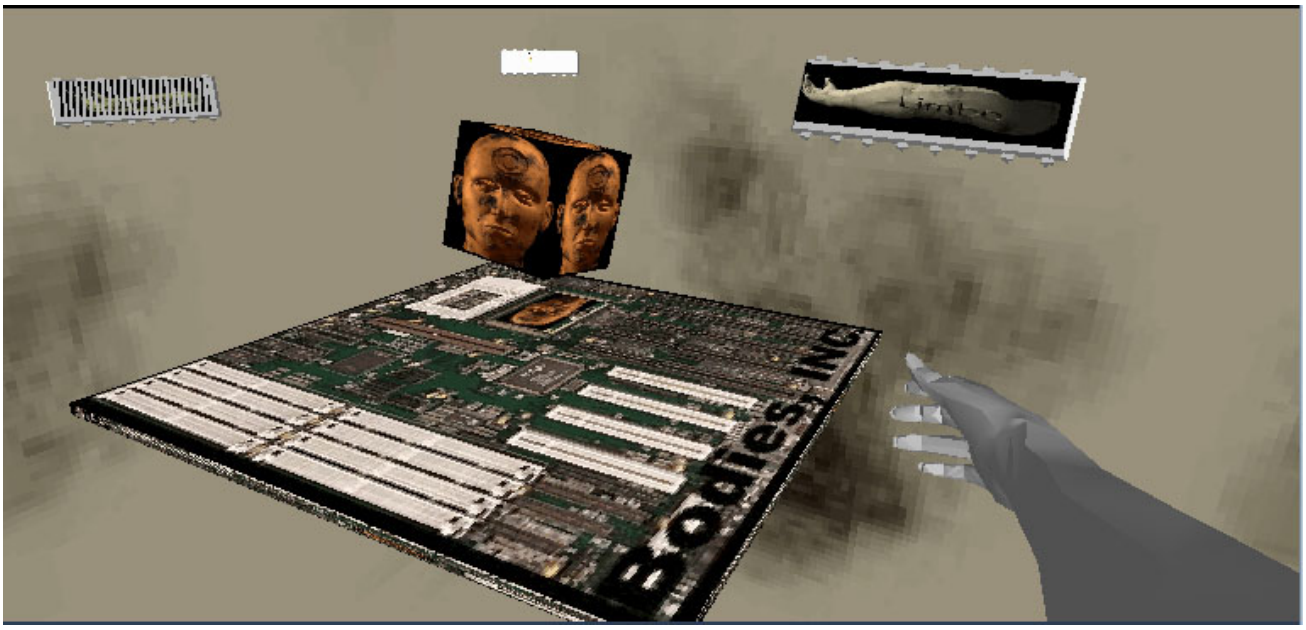

Fig. 3: Screen capture of HOME

The actions participants have to take – starting out as a simple member – are to demonstrate intelligent activity in personality following the laws of competitive market economies to evolve to the next level. As it is explained on the artwork's webpage:

> "Those of us who live in market economies have accepted the idea that when competitive conditions exist, whatever payment we receive is fair. The member typically comes into being through the egoistic impulse, based on desire and the relation of the Self to the Not-Self. Because everyone is self-interested, they strive to produce the best quotes, death methods and body enhancements, knowing that they will be fairly compensated. By active participation in the corporation and gaining 500 shares, member is promoted to being and adept."

Members have to become ADEPTS and AVATARS to get part of those groups who can take part in decision-making and determine mayor progress as the diverse boards are composed of adapts and avatars only. The adept gains control over material aspects and the avatar represents the will aspect, the power of the will, so-to-say, in order to make certain contacts. Becoming an ADAPT or an AVATAR is possible through gaining a certain number of shares that can be reached by logging on, sharing ideas, getting an approval of the Board of Directors or Advisory Board, submitting a 'dead philosopher's quote', or by getting promoted. The company Bodies© Inc select some bodies to be "on show" in a specific part. SHOWPLACE!!!© INCorporated, is where members can participate in discussion forums, view the star and featured bodies of the week, bet in the deadpools, and enter "dead" or "alive" chat sessions.

At this level the artwork raises a series of questions on the topic of identity construction in virtual space, how the identity is constructed if one projects oneself on the avatar, shifting the discourse of the body from the usual idea of flesh and identity. The constructed bodies of the members represent the

contradictions of the virtual environment, being a meta-body representing a personal identity, and being part of a bigger body – the business. Within the social networks and the network of the organization of computer networks, the artwork points to the issue that individuals constantly project themselves and play complicated identity survival games. As the artist explains on the webpage of the artwork:

> Events occurring within each of the zones ignite a range of emotional responses, and raise a variety of issues related to online community dynamics. For example, how does the graphic representation of the body amplify our relationship to it? What sort of psychological commitment and attachment do owners exhibit toward their "virtual" bodies? What happens when people find out that, with neither their knowledge nor participation, their body has been publicly altered in some way? How does the body become a source of pleasure and anxiety as it moves through changes and permutations out of the hands of the owner? What sort of emotional dynamics result from bodies being displayed as public spectacle? These are the types of questions Bodies© INCorporated actively explores. (Victoria Vesna)

The second topic the artwork discusses is the notion of the space and the necessary manifestation of artworks in the legitimate space of a cultural institution. Although the project was first conceptualized as a net piece that also discusses virtual and real space and the necessity of manifestation of bodies and ideas in space, the artist soon received invitations to exhibit the piece at cultural institutions. So, again the problem of the manifestation of the virtual in the real world arose. As the first exhibition of the artwork was treated more as an event at the Santa Barbara Museum in California by those whose bodies were exhibited by bringing their friends and families to see “their” bodies, the artist went on to develop this approach by making the exhibition of the bodies part of Bodies© INCorportated as a special treat. At ZKM the artist introduced the newly emerging “Marketplace” at Bodies© INCorporated: a place to chat which actually was not designed to interact with each other but get automatic responses by a bot that responded with random quotes of dead philosophers.

LIMBO is a gray zone where information about inert bodies that have been abandoned or neglected is accessed, after staying there a period of more than 40 days, there is no way to exit the place. As user, you suddenly loose access to your body, but at the same time all the information about the body, its history and its owner stays available to the company, in the possession of Bodies© Inc.

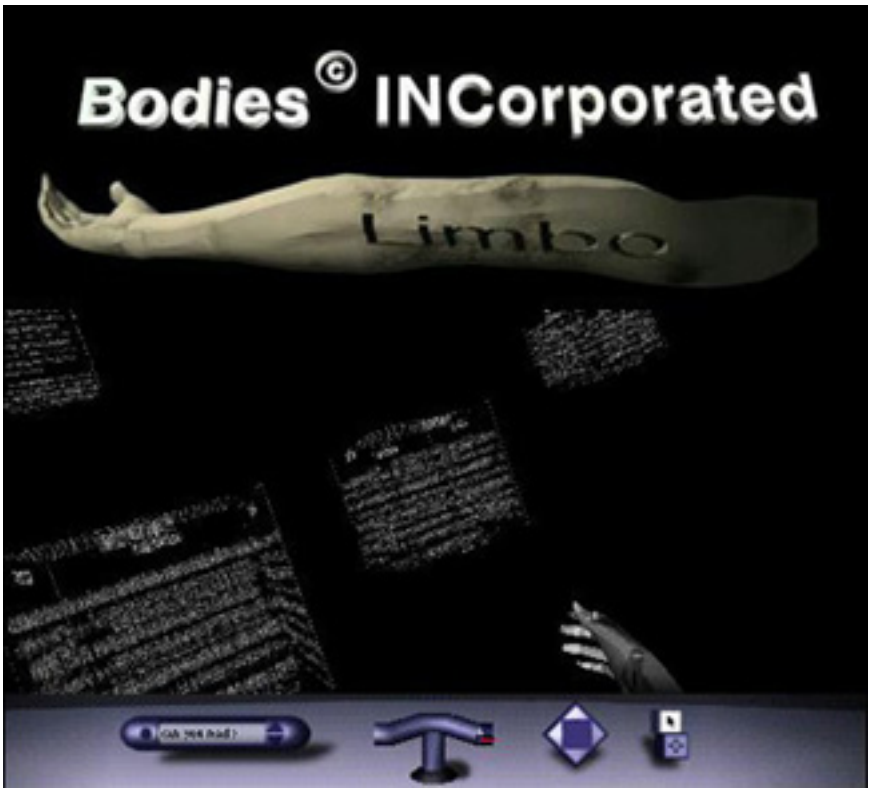

Fig. 4: Screen capture of “Limbo.”

NECROPOLIS is a richly textured, baroque atmosphere, where owners can either look at or choose how they wish their bodies to die if they want to delete their body by choosing a way how the body should die. Furthermore, one has to write an obituary and construct a grave. This move again crosses the lines between virtual life and reality, touching the user beyond the destruction of a mere commodity.

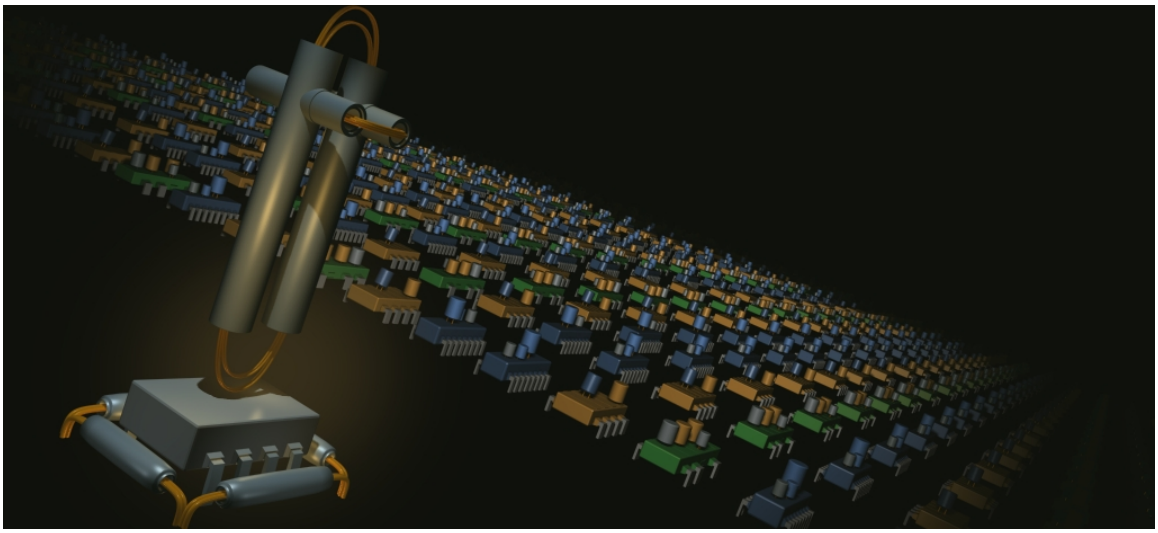
Fig. 5: Screen capture of “Necropolis.”

Though initially it was not possible to delete the body as the participants committed to Bodies© Inc by joining and going through the legal administration in the beginning, but the artist decided to create this possibility as she felt badly for people who were embarrassed by the sexuality of their imaginary body. Thus, the artist decided to create a space, where it is quite difficult to delete the body to make a point about how posting personal information can affect lives – in the real world outside of a purely "virtual" system.

Much has been written on the artwork and from standpoint more than two decades after the artwork's initial creation, it has pointed to some fundamental aspects of how new technological inventions like the internet, online purchases, immense amounts of data storage, and even social media. In that sense, this artwork was able to be highly innovative at a time where only a few individuals could imagine what such a technological innovation could bring with it. And it was able critically challenge the beginnings of what is prevalent in the social and economic life worldwide nowadays. But after raising critical questions, pointing to ethical problems, and societal changes through these new technological possibilities, the artist Victoria Vesna felt it was time to take this influential artwork and develop it into a next iteration. And this new iteration of Bodies© Inc approaches the upcoming technology of Blockchain in a positive vision of a societal and economic future, where new mechanisms of value creation between individuals can take place. In order to communicate a future marketplace based on the complex technology of Blockchain, to experience a story about Blockchain interaction and value create, an experiential art piece like Bodies© Inc presents itself as ideal.

The idea to create a new version of Bodies© Inc developed in 2015 in a collaborative effort between Victoria Vesna and Claudia Schnugg when we were asked to jointly contribute to an anthology about the art and business. Victoria Vesna, a distinguished professor in media arts who is known for her art-science collaboration projects, and I, as a researcher in the organization of arts and business with a focus on art & science & technology, decided to write this paper on the struggle of media artists although their importance as specialists in art & technology and their importance in pushing the boundaries of the field and we decided to use Victoria's project Bodies© Inc from 1996 as an example. Media artists, especially digital media artists, are struggling a lot in carving their place as fully acknowledged artists with only a handful of non-leading galleries working with them because handling digital artworks or technology dependent media artworks are difficult to sell, maintain and evaluate. Many of these artists working with their technological knowledge in a non-artistic job, struggling with the proof of IP rights and easy reproduction of their work without authorization. The chapter didn't work out as we planned, we had to drop Bodies© Inc and our ideas from the final book chapter (Schnugg & Vesna, 2017), but we went on exploring the possibility which this already established internet platform in combination with new applications of recent technologies like Blockchain could bear for establishing a market place for these artists. By questioning the precarious situation of media artists on the art market and the apparent impossibility of fitting media art into the established gallery system, the goal was to create a new system based on a new version of the marketplace of Bodies© Inc that allows media artists to exchange their work, to sell it, to create signed copies that can be sold safely, and that allows for new forms of value creation and exchange without intermediaries like galleries. The development of the technical system on which this new market place will be based is still ongoing and goes hand in hand with the current development of the interface and the web and mobile application. The aim is to release a first test version of the new Bodies© Inc 2.0 marketplace in 2018.

Inspired by the development of Blockchain systems and electronic peer-to-peer payment systems as advocated by Satoshi Nakamoto in the famous white paper on Bitcoin in 2008 (Nakamoto, 2008) Bodies© Inc 2.0 and its inherent market place take a next step into creating a positive outlook on a future, an experienceable example of optimistic speculative fiction. As societal change is always frightening, it aims at exploring positive alternate futures that take a different path by using such new opportunities to create a changed society. But as these ideas are much intangible and currently Blockchain and especially Bitcoin is adapted by the "old" economic system and explored through capitalist systems, integrated into the financial market as one of their kind, it is important to create another outlook that does more than questioning a "misuse" of Blockchain against the creators' original intentions within current economical paradigms and dominant organizational structures. At the moment of Bitcoin bubbles on stock markets as currently visible, it seems Blockchain was a missed opportunity and bowed to existing concepts and power dynamics, but there are more possibilities for this technology which have to be made visible to a broader public. From an artwork like Bodies© Inc 2.0, an understanding of what Blockchain can do and how it enables individuals to make a difference can grow through the experience it offers to its community.

Bodies© Inc 2.0 explores how Blockchain can enable new forms of transaction transparency and data integrity that allow individuals to keep control about their identity and property, their digital and tangible commodities. It also enables to create new opportunities for decision making, delegation of decision making processes, and allows direct exchange of commodities, ideas, and money. Last, but not least, decentralization of control, the often propagated "trustless trust" that is based on a shared knowledge of the history of all transaction through a delicate balance of transparency and cryptographic anonymity, and disintermediation foster new value creation processes and valuation systems. Individuals will be enabled to directly interact, exchange goods and monetary values, create value, and focus on social or ethical problems within the production line that they do not want to accept. Such a complex system and radical re-invention of how a society and economies can be governed and networked can only be experienced in an ongoing beta version as it seems event too complex and far from our own living experience for a single person's *Gedankenexperiment.* And this is where this artwork should do more than represent a possible future and make it experienceable, it should also provide a playful platform to experiment with it and co-develop the design such a desired future. The newly created Bodies© Inc system is based on a Blockchain system for commodity control, smart contracts, and a single Blockchain based currency.

In this updated version of Bodies© Inc the submission of the created body to the corporation that provides the platform for exchange will be made obsolete, as it now allows to protect your "third eye." It allows to protect your intellectual property, your data, your exchanges and interactions with others as yours. Personal exchange between the individuals and curation processes will enable artists of any background and craftspeople to share their work, collaborate, and push or advertise each other's work. Smart contracts, Blockchain systems to verify ownership, and exchange without intermediaries should lead to new approaches for valuation and exchange. Possibly the developments on the Bodies© Inc marketplace will even start to establish a new understanding of what market means. The artwork will also serve to ask questions about what privacy and social control means and should allow for a formation of new approaches to these social concepts.

As one of the Blockchain pioneers Vinay Gupta regularly explains: it is important to read the stories the developers of Blockchain had in mind when they created this system. When you want to understand

their creation you also have to know the myths the creators had in mind. These stories are those of the 20th century genre fiction and cyberpunk. But there is more to it than understanding the stories that bore the fundamental vision of this new creation. It is important to create an experience to better understand what these ideas that seem to be so far away from our daily life actually mean. And this brings the next generation of speculative fiction stories and experiential artworks to life.

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