The Modular Body: The Epistemological Force of Art

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Abstract

The paper will seek to examine the digital interactive project, *The Modular Body* (2016), by the Dutch filmmaker and visual artist Floris Kaayk. *The Modular Body* is an online science fiction storytelling project, composed of 56 interconnected documentary clips that share the story of Oscar – a modular lifeform created from 3D printed organs of human cells and an electric brain. In redesigning the human body into an open modular system, the artwork's narrative addresses issues such as those of biotechnological development and the impact it has on human life. Therefore, the text will attempt to explore in what ways this project engages with questions about the boundary between real and artificial and what does it contribute to the debate about human nature. For that purpose, the theoretical concept of 'originary technicity' will be examined. In the context of the constant technologisation of life and reinforcement of biotech industries, which the project addresses, the proposal of Krzysztof Ziarek that the human life has become subordinated to the domination of power within its social relationality will be taken into consideration. As *The Modular Body* is a digital web-based artwork it relies on channels of communication, inscribed within the control of power over society, which raises the question of how it engages with the technopower that governs social relations in the current world. On the other hand, the story it narrates, is imaginary, and being positioned at the borderline between real and fictional, as it uses 'real' figures and 'documents' the entire process of the creation of Oscar, it becomes credible, which allows it questioning the 'work' of digitality. Therefore, this paper tries to explore how *The Modular Body* inscribes within or contests technicity, understood as the modern attitude towards life, which is dominated by power and manipulation.

Key words: Bio-art, Human Nature, Technicity, Fictionality, Digitality

The Modular Body: The Epistemological Force of Art

The following text investigates the web-based storytelling project *The Modular Body* by the Dutch filmmaker and visual artist Floris Kaayk. The project consists of 56 interrelated documentary videos – an online science-fiction narrative, which tells the story of OSCAR, a modular lifeform created from three-dimensional printed with human cells, human organs and an electric brain. By designing a body as an open system, rather than the closed system of human life, the artist addresses the issues of biotechnological development in the 21st century and its consequences for the individual, referring simultaneously to the question about human nature in a world of constant technologisation of life and reinforcement of biotech industries. Additionally, the artwork shares a fictional story about the creation of a hybridised creature, which lives within the imaginary and 'real' worlds. The project is based online and thus it rests on communication, inscribed within the power-dominated technologised system of current society, which raises the question of how it engages with technopower that monopolises the current world. In order to propose consideration of these questions, this paper tries to explore in what ways *The Modular Body* inscribes within or contests technicity, understood as a modern attitude towards life, which is dominated by power and manipulation.

Firstly, the text will focus on the exploration of questions raised by *The Modular Body*, such as to what extent biotechnology shapes our lives; where is the line between natural and artificial and what is human nature. In relation to the importance of these questions, as a theoretical reference the philosophical concepts of Joanna Zylinska and Boyan Manchev will be taken into consideration. Zylinska proposes that human nature has already always been technical, yet during the last century – a period of emergence of new media and new technologies – the technological advancement and expansion over life has evoked a process of acceleration and intensification of human technical condition. Nonetheless, the process of discernment from nature defines the 'nature' of the human, who inscribes within a nature-culture dichotomy – a concept, developed further by Manchev, who argues that the recognition of the originary technical condition and constant transformability of the human is the only way in which we could resist the constant flow of technopower and the performativity of technicity. The story about Oscar,

which shows the life of a modular creature with electric brain and body formed from human cells, will be analysed with regard to the urgent questions of the power of technoscience and human life that it raises.

Additionally, *The Modular Body* is a fictional storytelling video work, which is based on the internet and uses the web space and social media for displaying and transmitting its message to the audiences. With reference to the theoretical analysis of Krystof Ziarek about the significance of a work of art in contemporary society and its incorporation within or contestation of the mechanisms of technicity of power, understood as a modality, in which power dominates contemporary society, resulting in its further mobilisation and increase rather than its disarticulation, it can be argued that the project about Oscar is integrated within the operative system of power-dominated relationality, as it is using ways of communication already implicated within domination and which come into being as an expression of commodification, manipulation and power. On the other hand, the story is imaginary and it will be argued that its fictionality generates a 'play', which uncovers the power at work in technicity, and in this manner contests the power-monopolised modality of social existence.

Touching upon these aspects would lead to the proposition that *The Modular Body* positions itself on the border between contestation and implication within the power system of the current world: as an online project it is involved in the operational systems of hegemony, which, however, becomes challenged by raising questions such as those previously mentioned: of human body, nature and power of the biotech industries, and by its fictionality, which allows disarticulation of technicity of power.

Floris Kaayk's work *The Modular Body* shares the process of designing Oscar, a scientific project led by a fictional biologist – Cornelis Vlasman, who, together with a team of supporters, aims to create a modular organism, refashioning the human body into an open life system. Experimenting with organic material, and utilising cells from his body, the researcher succeeds in creating the first living organism with a modular system – Oscar, who is the size of a human hand, and consists of clickable organ modules: interchangeable limbs, spare lungs and electronic

brain (figs. 1, 2). By using replaceable modules, the biologist Vlasman keeps Oscar's body functioning until the moment he decides to end his life, referring to the narrative of Mary Shelley's Frankenstein.

The aim of the artist is to share a story about the creation of a different form of living creature, which importance, according to the description of the project on its website is in: "the thought process preceding the organism, which comes down to this: (human) life can be regarded as a closed system but when it is approached as a modular system this may lead to innovative applications and solutions."[1] In a closed system the parts of the body and in particular its organs function in only one specific way, delimiting the functionality of the organism, whereas in an open or modular structure different parts operate as interchangeable modules that can act as an integral whole in various modes. The focus on flexibility and thus transformability of the human body is emphasised with respect to the 'plasticity' of the body's configurations and the possibility of reprogramming the bodily units. Thus, modularity as the grounds for an experimentation and enhancement of the capabilities and performances of the human body in its constant obsolescence refers to the power of biotech industries and their rapid development, which, on the other hand, raises the question of the 'nature' of being – its metamorphosis or non-changeability.

Responses to these issues are generated by the delegated participation of the audience, and along with it the distributed responsibility, due to the online access to the fictional narrative. Additionally, as *The Modular Body* is a web-based 'documentary', viewers can select the order, in which to watch different parts of the plot and, accordingly, can create their own story (fig. 3). As soon as one video is watched, clips with matching tags appear next to it as recommendations or suggestions from the algorithm, which articulates the limitations of selection as it becomes partially prescribed. Participation, however, is performed not only by creating one's own story but – most importantly – it refers to the possibility of the audience becoming involved in the discourse on human life and nature. As Zylinska observes, a response is already an assumption of a certain stance towards the issue at stake: "the artists place the responsibility on the viewers not only to engage with

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[1] Description of the project on its website: http://www.themodularbody.com/

an external art object but also to examine their own assumptions about, and their affective investments into, the ideas that underpin their reactions."[2] The involvement of the public enables the discourse to be employed on a larger scale and to become part of the discussion, generated by bioethics, which bespeaks the construction of the boundaries of the human and human life, and denotes the policy engagement with biotech developments. According to Zylinska, the key element in technoscientific expansion is the modality, which society needs to assume for living through the hybridised fashions of human-nonhuman relationality,[3] which is also suggested by the OSCAR project – its central configuration is the entanglement between the electronic brain and technologically processed human organs in a new human lifeform.

The complexity of the human-machine mode of existence involves, as mentioned, the preoccupation with or admittance of technologisation of human life, where human and the constructed 'other' collide into the creation of hybrid life initiation. Thus, the *Modular Body* questions the concept of human life in the contemporary world, and consequently investigates the 'nature' of human through the process of cultural articulation, which leads to the idea of a re-examination of the notion of life. In this regard, the philosopher Joanna Zylinska proposes the concept of 'originary technicity',[4] which implies that the human becomes such only in its differentiation from or confrontation with nature; therefore one has always been technological and is constituted by one's technical condition. In this perspective 'pure nature' becomes a "logical impossibility",[5] as "...the 'nature' of the human is produced only *as* and *through* technicity"[6] and one's genesis appears from the interconnection and interdependence between human and *tekhne*, which has always organised the human being in the world. Such perception allows the possibility of revision of the

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[2] J. Zylinska, *Bioethics in the Age of New Media*, Cambridge, Massachusetts, London: The MIT Press, 2009, p. 162

[3] *Ibidem*, p. 28

[4] The concept of originary technicity is examined in: J. Zylinska, *Bioethics in the Age of New Media*, Cambridge, Massachusetts, London: The MIT Press, 2009 and J. Zylinska, S. Kember, *Mediation as a Vital Process. Life after New Media*. Massachusetts: MIT Press, 2012

[5] J. Zylinska, *Bioethics in the Age of New Media*, Cambridge, Massachusetts, London: The MIT Press, 2009, p. 169

[6] *Ibidem*, p. 170

relationship between human-nonhuman, viz., human being and technological environment, enabling different human-nonhuman relationality in which *tekhne* comes into existence as part of the human essence rather than a constructed 'human other'. The theoretical assumption uncovers the dichotomy of nature/culture aiming at its overcoming, so that the identification of the 'essence' of human nature would take place, in order to unveil possible modes for response and living in the technically modelled power relationality of the modern world and the constant flow of performativity of technicity.

Along with the 'originary' existent role of technicity, the human body encounters the process of constant obsolescence, which becomes its condition for change and turns into the impetus for its transformation. This perpetual metamorphosis might be as well reflected in the modularity of Oscar's body and his open system, which is available for constant reconfiguration – if a module stops functioning, a new substituting one might become designed. Moreover, the new unit might be as well enhanced for a better functionality. Therefore, the technically conditioned evolution enables the recognition of oneself as "always already invaded: human and technology, human agency and corporeality seen as always already reliant on, connected to, and becoming with, *tekhne*."[7]

Tekhne is a key concept for understanding the potentiality for resistance to technicity and a simultaneous preservation of *tekhne* as human ability in Boyan Manchev's theory. Within the political organisation of existence, which guarantees life's sovereignty, the notion of 'nature' relates to the concept of cultural faculty – *tekhne*, opening up an understanding of the double bind, in which nature becomes the organising fiction of the culture.[8] The conclusion of Manchev, therefore, draws upon the idea that the human is a biologically insufficient creature – a creature whose inadaptability to the environment generates its development, as it comes to be detached from the immediate, with which action the 'nonorganic enters the world': "The nonorganic, therefore, is a *pros-thetic* substance of the substantially insufficient,

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[7] *Ibidem*, p. 171

[8] Boyan Manchev, *The Body-Metamorphosis*, Sofia: Altera, 2007, p. 25 (Б. Манчев, *Тялото-Метаморфоза*, София: Алтера, 2007)

i.e., flowing into the environment creature: a creature with ontological instability…"[9] Therefore, the contemporary condition of the human should not be described as a transformation of the human nature, as its transformation is the same 'nature' of the human. Recognising *tekhne* as human essence and revealing its originary existence provides a solution for resistance of the technologisation of the human while preserving the originary potential for transformation of *tekhne.* Additionally, this process of identification requires new forms of actualisation, therefore creativity and imagination. Thus, in the process of revealing a world that is "technical in essence before science and technology can become effective ways of grasping or manipulating it", *tekhne* becomes the point of immediacy between artistic and technological, reflected in Heidegger's discussion about two related meanings of *tekhne*[10] – as craft/art and as technics/technology, which notions reworks the proximity between art's 'forcework'[11] and the technological 'forcework'.

The understanding of technological 'forcework' as a tendency for increase of power, refers to technicity – a term used by Krzysztof Ziarek in his theory, in which he draws upon the concept of *Technik* by Heidegger. The philosopher explains technicity as the modality, in which power in the contemporary world operates upon institutions and social relations and coordinates and organises them towards a further increase in power. Technicity is therefore "a modality, or better yet, a disposition, that determines the value of relations among beings and phenomena in terms of production and manipulation, thus giving this relationality a distinctive momentum: an overall intensification of power." [12] Significantly, and in close relation to the OSCAR project, the recent 'personification' of technicity, according to Ziarek, is digitality, which allows global control over individuals with its modification and manipulation, as it is a coexisting elicitation of the essence of life in an operative societal system, in which being becomes digitalisable and thus calculable and programmable: "technicity itself has become digitality, disclosing the contemporary

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[9] *Ibidem*, p. 28
[10] K. Ziarek, *The Force of Art*, Stanford: Stanford University Press, 2004, p. 38
[11] In his theory Ziarek uses the concept of 'forcework' in order to explain the significance of art in current society, defining art as a force field, in which forces redispose in a different fashion, alternative to the socio-political condition of art's production – in: K. Ziarek, *The Force of Art*, Stanford: Stanford University Press, 2004, p. 30
[12] K, Ziarek, Op. cit.*,* p. 61

world as the unstable, global flow of information."[13] He argues that the freedom that one has the feeling to possess in one's access to the internet and virtual world finds itself in strong relation to power, which controls life and social practice: "the contemporary digital form of technicity, by disclosing everything as analysable as information in its microelemental structures, and thus as intrinsically predisposed toward manipulation, reprogramming, (re)linking and (re)transmitting, has allowed power an unprecedented sweep, agility, and, consequently, intensity."[14] Therefore, there is a need for a space in which power becomes disarticulated, and Ziarek argues that art might be that realm, which contests the hegemonic regulations of society and its practice and enables a turn within, as the forcework of art is able to redispose the modality of relations in a manner that questions the technicity of the world in its production, commodification and manipulation. However, art might also be a complication rather than contestation of technicity as digitality seems to invade the essence of art and to question the differentiation between art and technology.

In this perspective the question about *The Modular Body* comes to be raised in terms of how it is accountable in regards to technicity of power – how does it inscribe within and how does it contest it, i.e., whether its 'forcework' disputes manipulation and programmability, mobilised by power, or whether it is another instantiation of technicity itself. As a web-based project the story of Oscar is a set of 56 interconnected films, i.e., computer-mediated technology, which takes place on the internet and is reflected by different media – social media and TV programmes – and creates virtual possibilities for sharing, as well as 'creating', the narration. Its digitality, however, works in ways that are already incorporated within the systems of technicity; as Ziarek remarks, "…what remains unexamined in the idea of telematics art is the way in which communication itself has already been implicated in domination and power."[15] In this sense, *The Modular Body* appears to be assigned within a sphere of extension and reformulation of increasing technicity that constructs social practice, as the mechanisms of communication, which determine being as information and data, enable the possibility of computability and programmability:

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[13] *Ibidem*, p. 63
[14] *Ibidem*, p. 65
[15] *Ibidem*, p. 93

"…the introduction of new forms of (hyper)links and channels of interaction, does not as such disagree with or alter the informational matrix of relations, structures, and practices underwriting today's society."[16] In this mode of activity the story of Oscar might find itself open for reprogramming by the technicity of power in its potentiality – the possibility that "the artistic merges without difference and thus disappears, as such, into the technical",[17] which would turn it into art, indiscernible from technicity as if its essence relies on communication and interaction, then it would be just another instantiation of technicity. Using online media allows the extension for a larger reach of individuals and organisations, and relies on their participation in order for the idea to be understood or constructed as the viewer has a choice to decide the story based on limited videos available on the website. Another aspect of the existence of 'digital technicity' in Oscar's life-story is the programmability and prescribed interactivity, where chance comes to be subjected to manipulation and calculability – the selection of sequences of clips represents the development of redesigning human body depends on choice and decision already prescribed by the tags leading the path. This algorithm by itself is loaded with data as it consists of a considerable amount of information.

Interestingly, the information shared and spread all over the media is also represented as part of the concept, i.e., the process of Oscar's becoming a famous 'creature' plays a role at the interactive platform itself, which in itself reflects its own 'digitality' and channels of communication, underpinned by technicity of power (figs. 4, 5). Thus, *The Modular Body* presents its own reliability on digital media and Internet as part of the story of Oscar – different events, documented by short videos, are displayed: the response in social media, Facebook in particular, to the result of bioengineering process and the virtual life of Oscar;[18] a German news programme informing about the successfully printed heart of the new lifeform;[19] an online YouTube channel, initiated by the leading scientist of the project;[20] an explanation of

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[16] *Ibidem*, p. 93

[17] *Ibidem*, p. 87

[18] The video follows the timeline of *The Modular Body*'s Facebook official page: https://www.youtube.com/watch?v=D72HY-GmCbM

[19] Video on YouTube about Oscar's heart: https://www.youtube.com/watch?v=yhIRzDGGJek

[20] YouTube channel of The Modular Body: https://www.youtube.com/channel/UCKrcaODOtIGMGKVnCkzllVw

how Oscar functions and the role of the biologist Vlasman and his team by a famous blogger.[21] The 'self-reflection' of the artwork in which the credibility and fictionality of the story is considered, brings into play the notion of communication, permeated by power domination, resulting in manipulation and, therefore, reveals the power at work in technicity, expressed by the inverted value of digital realms and their impact in the social world, for in this manner it generates a 'play' with the mechanisms in which audiences and society come to be manipulated by media. Representing the motion of digital channels incorporated within the narrative, it raises the question of functionality of media itself – how it works and how the 'being' comes to be manipulated in its existence in the world of technicity and power.

Moreover, the fictionality of the narrated story in the simulation of a real situation, i.e., biotechnological achievement in the fast-paced environment of technoscience in the 21st century, opens up a possibility for credibility, which further enriches the complexity of the work and questions additionally the operations underlying hegemonic social relationality and flows of calculability and manipulation. The plausibility of various events within the process of creation of the new lifeform is rendered at the border of 'fictional' and 'real', for it comes to be constructed by the ambiguity of perceptions accorded to a belief in or a refusal of what is seen, which positions the work itself on the borderline between the 'technological' and the 'artistic'. The documentaries show key figures and factors in the process of realisation of the concept which appear authentic – for instance the legitimacy of the initiator and a leader of the project – the fictional character of a real biologist with the imaginary name Cornelius Vlasman, whose biography is presented by showing real (or not) pictures of him at a younger age,[22] or an actual famous blogger who explains the imaginary life of Oscar and his significance for our reality.[23] Consequently, specifically in the blurring of the boundaries of 'fiction' and 'reality', *The Modular Body* performs a manipulation of the manipulative power of social media and internet through their channels of communication, as its fictional-real hybridity reveals different disposition of forces, which come to be disposed artistically, rather than

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[21] https://www.youtube.com/watch?v=3co5CXE9E30
[22] https://www.youtube.com/watch?v=AKFkCu-_DNo
[23] https://www.youtube.com/watch?v=3co5CXE9E30

technologically, and in this sense it disrupts the power-dominated societal system by using a medium – technology – which is part of this system. Furthermore, in relation to Ziarek's concept of *poiesis*, which is proposed by the philosopher to indicate not a process of producing or making but rather as a letting be or a release, performed within the art space, the force of art retains its capability of posessing and expressing two types of momentum: technic and poietic, which preserves the double bind of force, and in this manner allows art to open up space of transformation[24]. Therefore, referring to Ziarek's theory, the work of Kaayk can be perceived as a turn in technicity "in which technical relationality comes to reflect upon itself and calls itself into question,"[25] and in which the thin line between fictionality and reality underlying the project, opens up a possibility of a critical turn – a turn, which remains intrinsic to technicity in its deployment of power. However, revealing its fictionality, it demonstrates "the double valence of force[26] – the enacting of power by artwork's forces or their redisposition into release of this power, which in this case is achieved by disclosure of its mechanisms, considering the process of redisposition of forces in the artistic space: "metamorphosing of force depends on how it comes to be disposed, on what kind of relationality it draws out – in other words, on whether forcework becomes disposed artistically or in terms of power."[27] In this regard, the urgent inquiry, which *The Modular Body* engages with, comes to be defined by the ambiguity of a technological and simultaneously artistic realm, which positions its space on the edge of *tekhne*, i.e., it constitutes of technicity and simultaneously its reworking, as *tekhne* is "characterised by the ambiguous play of two faces – a technical *tekhne* and a poietic *tekhne*…by the tension between technopower and aphesis."[28] It is not a matter of expansion of technicity but a way of disarticulating technicity from within, as the turn is not a withdrawal negating the technological organisation of power but rather an inscription within the mechanisms of programmability, mobilised by power, aiming for its disclosure, which raises questions about the existence of the human in the climate of the 21st century's biotechnological developments and the channels of value making and manipulation

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[24] K. Ziarek, op. cit., p. 40
[25] *Ibidem*, p. 99
[26] *Ibidem*, p. 100
[27] *Ibidem*, p. 100
[28] *Ibidem*, p. 99

generated by the technicity of power – "this beyond or 'otherwise' is neither post-technological nor outside the reach of technology but constitutes a certain 'outside-within', whose forces consists in manifesting the poietic modality of relating within the technic paradigm of modernity."[29] Thus, the technicity underpinning the art project turns out the medium, which assists the questioning of technicity itself.

The art project examined in this text – *The Modular Body* by the Dutch filmmaker Floris Kaayk – in its multi-layered complexity opens up urgent questions about human life in the rapidly increasing process of intensification and acceleration of changeability, in which the transformability and technicality become a source for contention of the manipulation of being in a world governed by power and technicity. The project suggests different points for analysis, which include issues of the biotechnological development and the thin boundary between human and technological, which in turn refer to the question about human nature. The fictional creation of the first open lifeform system, which includes a process of hybridisation between human and technological that questions human-nonhuman relationality and opens up a possibility for recognition of the technical condition of the human, which might become a site for arrest of the mechanisms of technicity in performing a 'cut' in the constant flow of performativity and increasing requirement for productivity and simultaneously preserve the faculty of constant transformability, which is part of human nature. Incorporated within the system of hegemony and its domination and manipulation of social relationality, *The Modular Body* project enters the channels of communication governed by the technicity of power. However, relying on its structures and functionality based on instrumentalisation, the story of Oscar surpasses the technologised means through which it comes to be narrated in order to reveal the organisation of power and its work by its believability, which turns out a simulation of probability, which consequently redisposes the forces within the technical into an artistic relationality, and calls that technicity into question.

Therefore, *The Modular Body* creates a space for experimentation that raises urgent questions involved in a process of complication and contestation of the technicity of power and its functionality of modern world. As an artwork generating

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[29] *Ibidem*, p. 94

audience response(s), it opens up a space for reconsideration of the human status quo in the 21st century, which play an important role for resistance against technopower and the technologisation of the human nature, while simultaneously preserving the originary potential for transformation of *tekhne,* understood as the ability of the human and, with this, providing a solution for resistance and further development.

Fig. 1. *The Modular Body*, open lifeform system, website: http://www.themodularbody.com/

Fig. 2. *The Modular Body*, Presenting Oscar, video snapshot: https://www.youtube.com/watch?v=tfoVOGMz054
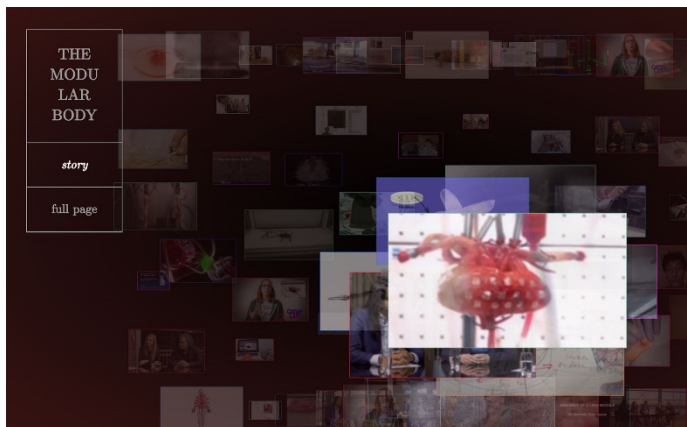

Fig. 3. *The Modular Body*, online storytelling, website: http://www.themodularbody.com/
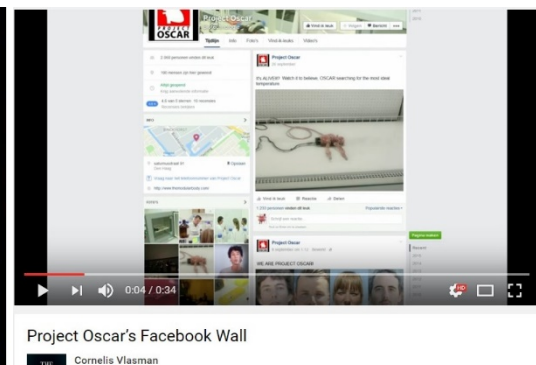
Fig. 4. *The Modular Body*,   Fig. 5. *The Modular Body*,

German news programme reports on Oscar's heart, video snapshot: https://www.youtube.com/watch?v=btJcqiUxC5s

Project Oscar's Facebook Wall, video snapshot: https://www.youtube.com/watch?v=D72HY-GmCbM

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4. K. Ziarek, *The Force of Art*, Stanford: Stanford University Press, 2004

5. K. Ziarek, 'A Global Tradition? Power and historicity', Research in Phenomenology 34 (2014), pp. 103-120