Genetic screenings, health standardization and potential illness: The biopolitical challenges of the future in Juli Zeh’s Corpus Delicti and in Gattaca

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1 In a world where people are divided into social classes according to their genetic data, blood becomes an entrance pass: If a person wants to enter the building of the space programme “Gattaca”, a blood sample is taken from the forefinger and analysed – if the green light flashes up, one is “valid” and allowed to enter, if the red light flashes up, one is “in-valid” and entrance is forbidden. This is one of the most obvious mechanisms the film Gattaca shows of the genetic class division in this society. The novel Corpus Delicti, on the other hand, shows no such obvious mechanisms and divisions in its depiction of a futuristic society that is situated in the 21st century, like Gattaca. In this world, health has become a central norm in society and every citizen has to strive to improve his/her health level constantly. These ideas clearly refer to the current philosophical and ethical discourse on “health” and “illness”.

As science fiction narratives often do, these texts bring “together the material of science with mass cultural narrative, making it a fascinating social focus of conflict, cross-fertilization, and negotiation.”

2 In the film as well as in the novel, each society depicted is based on a concept of “illness” that has problematic implications for its citizens – they are divided into different social classes according to their health status, are included in or excluded from certain work places and housing and/or are expected to fulfil or maintain certain health standards. The term “illness” has been chosen as the general term for analysis, even though “disease” could also be used, since illness is usually understood as “the problem as
perceived normally by the subject” and disease as “the internal state which causes (or tends to cause) the illness”. But as these narratives especially deal with the topic of “potential illness”, i.e. a disease or state of non-well-being that might occur, and interweave it with concepts such as normalisation and “genetic discrimination”, “illness” has been chosen as the predominant term.

The following analysis concentrates on Gattaca first to show not only how the film discusses “genetic discrimination”, but also how certain simplifications are made in this discussion. Afterwards, Corpus Delicti is analysed as a depiction of a philosophical argument about the concept of “health” in relation to the “norm”. Finally, the two narratives are compared to argue for the concept of “potential illness” as a central factor in the biopolitics of the future.

**Gattaca – IVF vs. natural selection**

In Gattaca’s futuristic America of the 21st century, parents are considered irresponsible if they do not consult their “local geneticist” before having a child. The geneticist helps parents choose the “most compatible candidate” from a certain number of embryos, based on its genetic potential. This practice is considered highly necessary, as one geneticist points out: “Believe me, we have enough imperfections built in already.”

The story is narrated by Vincent Freeman, one of the unlucky few who have still been conceived naturally and who are now considered “in-valid” compared to the superior “valid”. Due to his “minor” genetic potential, he is not allowed to pursue his dream of becoming an astronaut, since “no one exceeds his potential”. This potential is not only evaluated before conception, but also right after birth, when the genetic predisposition for certain diseases and the life expectancy are measured from a blood sample and printed on a data sheet (Vincent is for example expected to reach 30.2 years). By becoming a “borrowed ladder”, i.e. someone buying and using the genetic makeup of a “valid”, Vincent succeeds in becoming an astronaut.

The film clearly warns about what could potentially happen in the near future, if “genetic discrimination” were to become a central defining factor in a society. This concept is currently widely discussed in the social sciences and means that people are not treated equally because they suffer from genetic illnesses or are at risk of getting such illnesses. This form of discrimination has to be strictly divided from forms of discrimination due to disabilities, since the latter are based on phenotypic characteristics while the former are based on genotypes. The fear of a “genetic underclass” has begun to spread in current ethical and philosophical discussions and several studies have been undertaken in the last 15 years to prove that knowledge about genetics leads to new forms of discrimination. It seems to be a relatively new concept, but already in the 1960s, Georges Canguilhem warned about the consequences of a “chase after heterodox genes” (“une chasse aux gènes hétérodoxes”, “une inquisition génétique”)：“À l’origine de ce rêve, il y a l’ambition généreuse d’épargner à des vivants innocents et impuissants la charge atroce de représenter les erreurs de la vie. À l’arrivée, on trouve la police des gènes, couverte par la science des généticiens.”

While there is no “hunt” or “genetic police” in Gattaca, it depicts a society that has realised some of the fears voiced in current discussions. This is emphasized by the fact that measures for improving one’s health are not considered in this society, as a genetic
disposition for an illness is enough to be considered ill, as for example Vincent’s predisposition for heart diseases.\textsuperscript{10}

But how is this division or discrimination achieved? One learns about the surveillance mechanisms throughout the film as Vincent attempts to outsmart them: In order to pass urine and blood tests, he carries around the samples of a man named Eugene, whose valid identity he bought. He also carries around eyelashes and skin flakes to leave further traces. To avoid losing his own bodily waste materials, he regularly trims his nails and scrubs his skin. The film shows him during this process of “shedding his own skin” – during the opening titles, highly enlarged skin flakes and eyelashes are shown as the camera gradually zooms out.

Vincent lives in a typical “normalisation society”, where discipline and regulations are exerted to achieve normalisation processes\textsuperscript{11} - in this case, the norm is the “validity state” by which all individuals are measured and they either fall into one category or another. The division between these categories is visually accentuated in several scenes: A close-up of a gate shutting in Vincent’s face is shown when he is not allowed to go to school with other children (since the insurance costs would be too high); before he starts to work as an astronaut at Gattaca, he is only able to get a position as a janitor at the space station. In several scenes, he is shown pressing his face against a window looking at Gattaca employees ascending to work in escalators, thus perceiving society’s “glass ceiling”; and finally, he is often featured gazing through a skylight when the mission rockets take off.\textsuperscript{12}

Despite the challenges Vincent faces, Gattaca narrates the tale of an underdog winning against the system: When Vincent is suspected of murder (since he has accidentally lost one of his eyelashes at Gattaca at the same time as one of the programme directors is murdered), he escapes all tests and police raids. In the end, he goes on his mission to Titan as planned – even the doctor who is supposed to administer a final test allows him to pass, despite the fact that he doesn’t have a sample of Vincent’s urine and has to use his own. The doctor’s act of sympathy stems from the fact that he has an “in-valid” son who admires Vincent.

All in all, the film presents a rather simplified view of how genetic discrimination works – test are taken and people are excluded, but thanks to their real abilities that far surpass the estimated ones, they can trick the system. In reality, there are different definitions of genetic discrimination, e.g. studies differentiate the gravity of symptoms and whether there has been a breakout or not.\textsuperscript{13} Interestingly, indirect discrimination (e.g. prejudices and patterns of interpretation) is underrepresented in sociological research\textsuperscript{14} and like Gattaca, the sociological discourse assumes that genetic information has an epistemologically special status compared to other information about the body that should be questioned.\textsuperscript{15} Gattaca also centres on the genetic potential for diseases and therefore does not differentiate between people who are “asymptomatic ill” and those who are “symptomatic ill”, i.e. between people without and with actual outbreak of illness – a difference that is often made in philosophical and sociological publications and further complicates the discussion.\textsuperscript{16} A factor that is underrepresented in Gattaca is the question of “genetic responsibility”: it is only discussed in terms of a parents’ obligation to choose the “ideal candidate,” but the individual’s genetic responsibility is not discussed. The individual could be confronted with social expectations not to pass on his or her “faulty” genetic material, improve his or her health, succumb to treatments, etc. – these internalized pressures might lead to further social measures being taken, as Lemke points out.\textsuperscript{17} Vincent’s narration shows no awareness for these external pressures since
he only seems to face institutionalized discrimination and sees his life as a fight against social barriers that he has to overcome. Therefore, it remains questionable whether *Gattaca* can be categorised as “an example of an extrapolative science fiction film” that “projects, from today’s limited use of gene therapy, a world where the new eugenics is a reality” and “the filmmakers act as bioethicists”. As bioethicists, they should have considered the possibility that international movements and institutions strive to forbid genetic discrimination and that, in reality, laws are passed to prevent genetic discrimination in reality. In this context, it appears strange that anyone can easily obtain the genetic information of another person: everyone is free to bring a sample to a given company for a genetic read-out and within seconds, he or she receives a long list of detailed information.

Since *Gattaca* concentrates so much on the distinctiveness of genetic discrimination, it suffers the same paradoxical effect as legislative regulation against the discrimination of humans with an “abnormal” genetic constitution: it strengthens the belief in the exceptional position of genetic discrimination that it strives to prohibit. A wider philosophical framework – including, of course, the already mentioned concepts of “normalisation” and “genetic discrimination” – should therefore be considered when extrapolating future concepts of illness, as the following analysis of *Corpus Delicti* will also demonstrate.

**Corpus Delicti – Health and Normalization**

In his introduction to the anthology *Krankheitstheorien* (“Theories of Illness”) Schramme points out that if “health” and “illness” are seen as opposites and not as part of a continuum, people who are not in a state of absolute physical, psychological and social well-being would be considered ill, which would presumably lead to every human being considered ill. But what if most physical illnesses have been or could be dealt with, for example in society where common colds are extinct? In *Corpus Delicti*, a state called “METHOD” (“METHODE”) has been established. At its core, it has a similar notion of “potential illness” as *Gattaca* and shows similar methods of surveillance, but its normalisation takes a different form – and its discussion of “health” and “illness” goes further, since it includes philosophical discussions e.g. on health as a state ideology or works with the metaphor of the state as a body.

The novel narrates the story of Mia Holl whose brother was falsely accused of murder. He was found guilty due to genetic proof and committed suicide in prison. His sister Mia is unable to overcome her grief and becomes a central character in a media war over the infallibility of METHODE. The system is considered infallible by its defenders, since it uses genetic tests and medical data as basis for rules, regulations and verdicts. Mia begins to question her belief in the METHODE and is cast as an opponent of the system on TV and in the press which leads to a trial against her – during which her brother’s innocence is proven.

Surveillance in METHODE is achieved through several measures, e.g. a chip is implanted in every person’s upper arm and all personal health data can be read from this via scanners. The secret service is called “Methodenschutz” (“Method Protection”) and it reports to the “Methodenrat” (“Method Council”), which is the highest council for health measures. Whether this council is elected or if it also functions as an administration is not explained, but no other public institutions are mentioned. The police has been replaced...
by the “Sicherheitswächter” (“security guards”) who can arrest people and hold them in prison cells.

17 In addition, health screenings for infants are mandatory and health data are stored in databases. These databases containing statistical information about immunity status, genetic markers, etc. can be considered as modernised versions of what Foucault called “tableaux vivants”, i.e. the statistical and medical records first undertaken during the Enlightenment period which form part of what he calls “discipline” and therefore contribute to the advent of biopolitics.

18 In the so-called “Wächterhäuser” (“Guardians’ Houses”), health prophylaxis tasks are taken over by the inhabitants – thereby the state saves money and citizens develop a sense of community, as the narrating voice points out:

In Wohnkomplexen, deren Hausgemeinschaft sich durch besondere Zuverlässigkeit auszeichnet, können Aufgaben der hygienischen Prophylaxe von den Bewohnern in Eigenregie übernommen werden. Regelmäßige Messungen der Luftwerte gehören ebenso dazu wie die Desinfizierung aller öffentlich zugänglichen Bereiche. [...] Der Fiskus spart Geld bei der Gesundheitsvorsorge, und die Menschen entwickeln Gemeinschaftssinn."

19 This measure illustrates Foucault’s idea that social norms are used in biopolitics in order to gain economic profit and takes it one step further, as citizens are not only expected to fulfil norms themselves but also to carry out measures to implement them.

20 As Nordenfelt points out, there are different definitions of health, as it might be understood “as people’s happiness, or their fitness and ability to work, or instead just the absence of obvious pathology in their bodies and minds.” While METHODE uses the aforementioned measures to assure the absence of illness, citizens are also expected to constantly improve their fitness, for example by riding a stationary bike at home for a certain number of kilometres per week. The citizens have internalized the norms of constantly healthy living and fitness improvement and perceive them as “normal”. This becomes obvious when Mia starts to question the relation between “normal” and “normalise”:

Aber was ist normal? Einerseits alles, was der Fall ist, das Gegebene, Alltägliche. Andererseits aber bedeutet „normal“ etwas Normatives, also das Gewünschte. Auf diese Weise wird Normalität zu einem zweisechneidigen Schwert. Man kann den Menschen am Gegebenen messen und zu dem Ergebnis kommen, er sei normal, gesund und folglich gut. Oder man erhebt das Gewünschte zum Maßstab und stellt fest, dass der Betreffende gescheitert sei.

21 She arrives at the conclusion that adhering to health and fitness norms sets them as a standard; a person not following them could be understood as having failed to maintain his/her status as a citizen. She thereby starts to question the implicitness of these norms and unravels a process that has been going on in modern society since the 1700s: Since then, social norms (regarding health) have been established in Western society and at the end of the 20th century, the “normal” is an important pattern for orientation and for actions in modern societies. By defining “normality” as “health” and vice versa, METHODE has gone one step too far, in Mia’s opinion, and so she publicly renounces her faith in METHODE in a press statement.

22 This ideology – defining “normality” and “health” as synonyms – is centrally represented by the writings and speeches of Heinrich Kramer. The book starts out with an extract from him that explains the philosophical background of the METHODE, the first sentence of which is: “Gesundheit ist ein Zustand des vollkommenen körperlichen, geistigen und
sozialen Wohlbefindens – und nicht die bloße Abwesenheit von Krankheit.”³⁵ “A state of absolute physical, mental and social well-being” sounds hyperbolic, in fact paraphrases the introduction of the World Health Organisation’s (WHO) constitution.³⁶ This highlights the novel’s argument: that creating an ideal or a standard by which one must live his or her life; a guide (which the WHO’s constitution is to be understood, without a doubt) could lead to dangerous consequences. Another sentence within Kramer’s extract hints at the implicit dangers of this standardisation, when he writes that a human who does not strive for health is already ill.³⁷

This explains why Mia can be cast as an enemy of the state: She argues that her health is a personal matter and that she should be allowed to mourn for her brother privately. But the judge rules that there is a strong connection between the personal and the common well-being.³⁸ The state cannot afford the luxury of individual narratives of illness any more, as another character cynically explains.

The state is compared to a body with the law operating as its nervous system,⁴⁰ which has further implications: when Mia stands up against the system, she is cast as a leading figure of the illegal group R.A.K. (“Recht auf Krankheit”, or “right to illness” – the abbreviation reminds one of the German group R.A.F. and is also Russian for “cancer”). Kramer alludes to this underground group when he talks about “infectious thoughts” that have appeared in society.⁴¹ He reassures the public that the currently raging virus has already been identified and that the METHODE, the immune system of the country, is going to destroy it.

By depicting a society that has placed an ideal health status at its philosophical centre, Corpus Delicti demonstrates the possible consequences of taking current discourses about health and illness to the extreme. In this society, people are not only expected to live up to certain standards of health but their personal levels of health are also supposed to rise constantly, through achieving better fitness. While “health” is defined as the norm, “illness” is defined negatively as the absence of health. Physical illnesses are hardly discussed, but metaphorically, illness stands for a philosophical aberration. Mia is accused of this when she starts have doubts, which also seems to make her dangerous for the METHODE. When it is proven that her brother is indeed not guilty (he shared genetic material with someone else after receiving blood transfusions for his leukaemia – his donor is the killer), it seems that she might win against the METHODE. Nevertheless, it is clear from Kramer’s statements that one person’s wrongful sentencing does not question the whole concept of the METHODE; the well-being of the community is estimated as of higher importance than that of the individual.

Mia is found guilty of being one of the leaders of R.A.K. and is thus sentenced to cryogenic storing. In the end, she expects to die, but she is pardoned and sent to a re-education centre. As she has been pardoned, she cannot become a martyr figure, as Heinrich Kramer explains.⁴⁴ It seems that the normalisation process undertaken by the METHODE does not forget about individuals – it merely strives to reincorporate them into the state body.
“Potential illness” – the challenge for biopolitics in the 21st century?

In the 18th century, politics started to concentrate on specific problems of the population for the first time, namely “natalité, morbidité, durée de vie, fécondité, état de santé, fréquence des maladies, forme d’alimentation et d’habitat.” The emerging biopolitics combined population data with the already established disciplinary technologies for individuals (e.g. surveillance and normalisation) and thereby created the modern human (“l’homme de l’humanisme modern”), as Foucault explains.

Some of these processes of normalisation and surveillance have been internalized in the 20th century and might still be used in a similar way in the future, as Gattaca and Corpus Delicti postulate. The interest in problems of the populations is also still the same in both narratives, but the objects have changed: In Gattaca, mostly genetic data are stored, in Corpus Delicti, immune statuses and fitness data are charted. The central issues for biopolitics in the future therefore are no longer basics such as natality and mortality or the frequency of diseases.

The two narrative scenarios differ in certain respects: With regards to normalisation, Gattaca suggests a division into two groups, while Corpus Delicti depicts a society where all are measured by the same standard. The topic of genetic discrimination is not explicitly dealt with in Corpus Delicti and only depicted in a simplified version with a clear message to the viewer in Gattaca. But both narratives show that genetic data should not be taken as objective truth – they cannot predict the future and they might lead to false conclusions if used as sole proof. Also, both societies centre on avoiding “potential illness”: in Gattaca, the potentially ill are considered in-valid and excluded from several societal institutions and in Corpus Delicti, human beings who might become ill due to their incapacity to fulfil standards are also considered a risk. Since the main questions of biopolitics that Foucault postulated for the 18th century have been solved in these 21st century societies, they centre on potential deviations from a norm or exclude those who are supposed to deviate. But Gattaca’s society hardly seems threatening, since its normalisation and surveillance methods can be outsmarted and are exposed as fraud by Vincent’s personal victory. Corpus Delicti, on the other hand, paints a far more uncanny picture: its measures of risk avoidance are so far evolved that this society can detect, transform and incorporate potential threats. So, if “potential illness” turns out to be the central issue in tomorrow’s biopolitical discourse, as these science fiction novels and current discourse suggest, we might hope that the societal framework that accompanies it either turns out to be more diversified and less prone to standardisation than Corpus Delicti or as easy to deceive as in Gattaca.
BIBLIOGRAPHIE


NOTES

4. Ibid., 32.54
6. Ibid.
7. Ibid, pp. 14-15
9. Ibid.
15. Ibid., pp. 67-68.
16. Ibid., pp. 72-73.
17. Ibid., p. 139.
20. *GATTACA*, 37.00-37.38
24. Ibid., p. 66.
26. Ibid., p. 165.
28. Juli Zeh, *Corpus Delicti*, p. 22. (Translation : “In housing facilities, where the tenants have proven their extraordinary reliability, measures of hygienic prophylaxis can be taken over by the inhabitants themselves. These include scheduled measurements of the air pollution levels as well as disinfecting all common areas. […] The tax authorities save money in health care and the human beings develop a sense of community.”)
32. Ibid., p. 145. (Translation : “But what does normal mean? On the one hand it means everything that is the case, the given, the common. On the other hand “normal” means something normative, something that is desired. Thereby, normality becomes a double-edged sword. One can measure a human being according to the given (data) and come to the conclusion that he is normal, healthy and therefore good. Or one can decide that the desired is the benchmark and thereby determine that this particular person has failed.”)
34. Ibid., p. 9.
RÉSUMÉS


The film Gattaca (1997) and the novel Corpus Delicti (2009) both depict future societies in the 21st century. They refer to current discourses on “health”, “illness” and “normalisation” and develop them further: In Gattaca, the central topic is “genetic discrimination”. It mentions certain aspects of this special form of discrimination that are also discussed in the current sociological debate. Corpus Delicti shows a society where health is a central norm and the philosophical implications of this normalisation are discussed in the novel. While these narratives sketch different scenarios for the biopolitical future, both centre on “potential illness”. This article therefore analyses and compares the concepts of these two works in order to show what biopolitical challenges the future might hold.

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