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# 1. Introduction

The essence of science fiction and utopian literature, as Parrinder formulates it, is “that by imagining strange worlds we come to see our own conditions of life in a new and potentially revolutionary perspective” (4). Therefore, it is possible to state that science fiction literature and film makes us reflect, in various ways, on our own reality.

The novels and movies which have been selected for this thesis, are going to be analyzed to take a closer look at power relations between mechanical creatures and human being. In addition, it is going to be asked in which way the described power relations reflect reality. In order to do so, the way these robots and cyborgs are depicted in the novels and movies must be considered. It is important for this thesis to show how these mechanical creatures are depicted, as power relations can only be discussed, if these robots or cyborgs are on the same level as human beings, at least when looking at non-physical characteristics.

To do so, first the terms *robot* and *cyborg* are going to be defined at the beginning of this thesis, followed by a brief discussion of artificial intelligence and an analysis of the depicted mechanical creatures with the focus on if, and how they differ from human beings. Afterwards, the concept of social groups and oppression is going to be introduced and applied to the robots and cyborgs depicted in the novels and movies. Finally, the power relations between these futuristic creations and the human beings in the works used for this thesis, are going to be analyzed.

The selected novels and movies for this thesis are: *I, Robot*, *Do Androids Dream of Electric Sheep*, *Blade Runner*, *Ex\_Machina* and *Cinder*.

*I,Robot*<sup>1</sup> was written by Isaac Asimov and first published in 1967. He and Philip K. Dick, who wrote *Do Androids Dream of Electric Sheep?*, are two of the most influential science fiction writers, inspiring many filmmakers and authors that followed (Houswitschka

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<sup>1</sup> *I, Robot* is further referred to as IR

124). IR presents the reader with nine short stories about different robots, which are under human control with the help of Asimov's famous three laws of robotics. These robots range from rather simple ones, to highly intelligent machines.

*Do Androids Dream of Electric Sheep?*<sup>2</sup>, written by Philip K. Dick and first published in 1968, tells the story of a bounty hunter who must kill androids, which is the term used for the robots in this novel, that do not behave the way they were programmed, and leave their work on an off-planet colony to return to Earth. This novel especially highlights what is thought to distinguish a human being from a mechanical creature, and poses other philosophical questions.

*Blade Runner*<sup>3</sup> is the movie adaptation of Dick's novel, directed by Ridley Scott and released to theaters in 1982. However, Scott revised the movie several times, which is the reason why there are four versions of the movie. For this thesis, only the latest version from 2007, the so-called 'final cut' is going to be used, as it is assumed that this is the version Ridley Scott wanted to produce and how the movie should be. The movie follows the basic plotlines of the novel, with the bounty hunter (or Blade Runner) Rick Deckard, played by Harrison Ford, having to kill androids that return to Earth. However, these androids are depicted completely differently from the ones created in the novel, which is why the movie should be analyzed too.

*Ex\_Machina*<sup>4</sup> is a science fiction movie by Alex Garland that was released in Austria in 2015. This movie directly asks the question of what it means to be human. Calab, who works for Nathan's company, is asked to join him at his estate, as he has won a (fake) raffle. When he arrives, he is confronted with a robot and the task to find out if she can be called an

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<sup>2</sup> *Do androids dream of electric sheep?* is further referred to as DAES

<sup>3</sup> *Blade Runner* is further referred to as BR

<sup>4</sup> *Ex\_Machina* is further referred to as EM

intelligent creature. However, this game soon turns out to be far more dangerous, as also Calab starts wondering if he is human at all.

The novel *Cinder*<sup>5</sup>, published in 2012 by Marissa Meyer, is the only story in this thesis which includes robots as well as cyborgs. However, the main focus will be on the cyborg Cinder, the protagonist of the story. The basic plotline follows the Cinderella story, but is set in the future, with new technology and political conflicts at hand. This novel has been chosen for the thesis as it highlights the importance of the identity question, and furthermore asks the question when one stops being human due to bodily changes.

As explained before, the mechanical creatures, which are depicted in the novels and movies, are now going to be described. This is followed by a discussion of artificial intelligence and power relations.

## 2. Cyborgs and Robots

In order to discuss the power relations between robots, cyborgs and humans a definition of these mechanical creatures is needed.

According to Eichhorn, the word *robot* was first used in *R.U.R.: Rossum's Universal Robots* by Karel Capek, who derived it from the word “robota” meaning ‘forced labor’- or as in the German original of Eichhorn’s text - “erzwungene Arbeit” (7). *The Cambridge Companion to Science Fiction* on the other hand states, that “[a] robot (from the Czech *robota*) is a worker” (166, emphasis in original). In this translation, no judgment is made on the nature of the work the robot has to perform, it could be either forced or not (166). For this thesis, the translation by Eichhorn (7) is going to be used, as calling it ‘forced labor’ already implies that the robots have free will, otherwise they could not be forced to do something. On which basis it is possible to assume that a robot can have free will, have a consciousness and is an intelligent being, is going to be discussed in the chapter examining artificial intelligence.

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<sup>5</sup> *Cinder* is further referred to as CI. However, if ‘Cinder’ is used, it refers to the protagonist of the novel.

Most robots can be classified as either anthropomorphic or non-anthropomorphic. Non-anthropomorphic robots often lack human speech. Those representatives that are equipped with some sort of acoustic communication might just make noises. One very famous representative is the robot (droid) R2D2, featured in the *Star Wars* Universe created by George Lucas. Anthropomorphic robots, on the other hand – called humanoid robots or androids – derived from the Greek word “andro“ which means ‘man’ have human-like features and are often able to speak. *The Oxford Dictionary of Science Fiction* defines an android as “an artificial being that resembles a human in form, especially one made from flesh-like material (as opposed to metal or plastic)” (6). The androids that are described in DAES, BR or EM, are indistinguishable from real humans when reduced to their appearance.

Another relevant concept that is examined in this thesis is the cyborg. According to Gray et al. “[m]any see Mary Shelley’s monster, Frankenstein’s creature, as the first cyborg” (5). Even though her creature did not have any mechanical parts, it was created from the body parts of corpses. Furthermore, *Frankenstein* is also a story of a cyborg that is treated differently by humans because of its appearance and identity, which is a common theme in cyborg stories, as for example in CI. Frankenstein’s monster was not called a cyborg, as the term only came into existence in the paper by Manfred Clynes and Nathan Kline in 1960, introducing human enhancement to facilitate space travel (Eichhorn 6). The word cyborg combines the two words “cybernetic + organism” and is defined as follows:

[A] creature whose body has been modified to extend its abilities beyond its normal limitations; a creature whose body consists of both biological and mechanical elements. (*The Oxford Dictionary of Science Fiction* 31)

Furthermore, Gray, Figueroa-Sarriera and Mentor (2) state that there are many different forms of cyborgs with a varying ratio of biological and mechanical parts. The relation between biological and mechanical components will be especially relevant in the discussion on how

these creatures are depicted in CI, to find out if a person stops being human or even loses his/her self when some of his/her body parts are replaced by mechanical ones. A cyborg is not just a creature in a science fiction novel or movie, but part of our reality, as Gray et al. suggest:

Anyone with an artificial organ, limb or supplement (like a pacemaker), anyone reprogrammed to resist disease (immunized) or drugged to think/ behave/ feel better (psychopharmacology) is technically a cyborg. (2)

Following this definition by Gray et al., Eichhorn gives a selection of “real life cyborgs” including the athlete Oscar Pistorius, who has prosthetic legs, and Kevin Warwick (7). Kevin Warwick, as he himself reports, was implanted a chip in his upper left arm which can be used for different purposes e.g.: identification (Warwick 2). This chip is very similar to the chips every citizen in the book *Cinder* by Marissa Meyer, has implanted, with which people can be traced and also identified. Applying this definition would brand everyone a cyborg, thus a differentiation between enhancement and being a cyborg has to be made. It can be concluded that those who could actually live without the enhanced body parts are not cyborgs, while those who urgently need the bodily change to survive are.

In this section the terms robot and cyborg have been defined. The main difference between the two is that only a *human* can be made into a cyborg, but robots can be created in a factory by using different kinds of materials. However, as depicted in the novels and movies, both can be forced to work.

### **3. Human versus the Machine**

In this chapter the nature of the robots and cyborg represented in the selected novels and movies is examined, to see what differentiates them from humans. This takes into account the way they are depicted in the novel or movies, what their role in general is in the story and how

their body influences their identity. Furthermore, the topic of artificial intelligence has to be discussed before looking more closely at the robots.

### 3.1 Artificial Intelligence

BR, DAES, EM and IR *present* the audience with different robots who show a high degree of artificial intelligence. The *Oxford Dictionary of Science Fiction* provides a basic definition for artificial intelligence, or AI, which is “the name for the science of creating ‘intelligent’ computer programs, a sentient, self-aware computer or computer program” (10).

Furthermore, Mateas identifies two research traditions in AI, namely “classical AI” and “behavioral, or interactionist AI” (110). He states that “classical AI’s research program is concerned with developing the theories and engineering practices necessary to build minds exhibiting intelligence” (110). In classical AI, intelligence is the most important factor. Consequently, if a machine or robot has “special-purpose knowledge about a specific task” and if it can solve specific problems (110), it can be considered intelligent. This however seems to be a very limited understanding of intelligence, as in this case, a machine is seen as intelligent when it can operate with symbols and process data. However, the way Mateas describes it (110) these machines are not able to think outside the box, but are only able to fulfill a certain task. In this case, the way intelligence was described is rather problematic, as a computer that can solve a specific problem for which it was designed, but nothing else might not be considered as intelligent, but rather simply as ‘running a program correctly’<sup>6</sup>.

The second strand of AI is concerned, as the name suggests, with behavioral patterns and interaction. Mateas states that:

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<sup>6</sup> To give a short example: At a rather big Austrian cinema, a computer is used to develop the weekly duty roster. This computer has a specific knowledge about the workers, how many ours they are allowed to work, and so forth. Furthermore, it knows if there are events and special occasions so it has to adapt to various situations. Even though this computer is able to solve problems, plan ahead, etc., it would not be considered as intelligent.

Where classical AI concerns itself with mental functions such as planning and problem solving, interactionist AI is concerned with embodied agents interacting in a physical or virtual world. Rather than solving complex, symbolic problems, such agents are engaged in a moment-by-moment dynamic pattern of interaction with the world. (110-111)

This second form of AI, namely interactionist AI, is of higher interest for this thesis, as the interactions between humans and robots, represented in the novels and movies that were selected, is rather important to the various stories. These interactions reveal the robots' identity to the reader and how the world in which they live reacts to them.

Having made the distinction between classical AI and interactionist AI (Mateas 110-111), one has to consider two other conceptions of AI, namely weak and strong AI (Searle 417). Searle defines the two forms of AI as follows:

According to weak AI, the principal value of the computer in the study of the mind is that it gives us a very powerful tool.[...] But according to strong AI, the computer is not merely a tool in the study of the mind; rather, the appropriately programmed computer really is a mind, in the sense that computers given the right programs can be literally said to understand and have other cognitive states. (417, emphasis in original)

It is evident that human-like AI has to follow a strong conception of AI. However, Searle indicates a problem with strong AI, namely the problem that understanding is key and that it sometimes is hard to tell if a computer really is intelligent and does understand what it is doing, or if it is simply a program that seems intelligent, but in fact is not. To explain this further, a thought experiment by Searle, in which he explains the problem of 'simulating' understanding is used. This thought experiment is called the Chinese room experiment (Searle

417-418), in which Searle is locked in a room that no one can enter. He is given some pages of Chinese writing and a rule book which is written in English. As he does not know any Chinese he can only compare the shapes of the Chinese symbols with the ones depicted in the rule book. Furthermore, he can only respond to the questions that are slid under the door into the locked room, with the help of these rules (Searle 417-418). Searle then explains the problem with this Chinese room, namely that a person who is not in the room, asking those questions, would assume that the person in the room fully understands Chinese, or maybe even is a native speaker (418). However, as explained above, the person in the room only follows a rule book, which Searle calls the “program” (418). He states that “[f]or simulation, all you need is the right input and output and a program in the middle that transforms the former into the latter” (423). In his Chinese room experiment the input is the written question, he – Searle, in the room, takes the place of the computer, with the rule book as the program and the written answers he gives are the output, which links his thought experiment to a simulation or a computer program. Thus, it appears that no understanding takes place, which however is of high importance for strong AI according to Searle (418). He also states that it could be possible for a machine to understand things if it had something like a human brain (423). However, with computer programs that are used in machines, or also robots, it is, according to Searle (423) hard to tell if it is just a simulation or real understanding. He concludes:

Why on earth would anyone suppose that a computer simulation of understanding actually understood anything? It is sometimes said that it would be frightfully hard to get computers to feel pain or fall in love, but love and pain are neither harder nor easier than cognition or anything else. For simulation, all you need is the right input and output and a program in the middle that transforms the former into the latter. That is all the computer has for anything it does. (423)

Searle does not believe in strong AI without a computer that is similar to a human brain, as the programs used can only simulate understanding, like the Chinese room thought experiment exemplified (418-423). Searle's understanding of AI ties in more with the definition of classical AI rather than interactionist AI as it also concentrates on problem solving and does not look at embodiment and interaction at all. However, in the situation described in Searle's Chinese room experiment, the machine would be called intelligent, following the definition of classical AI, as his program would be able to solve the problem.

By looking at the different robots described in the novels and movies, one can see that it is not easy to distinguish whether a certain action is 'just' a simulation or really something that can be compared to human behavior and understanding and interpreting a situation.

As explained above it is not easy or even impossible to disprove Searle's Chinese room experiment, which would lead to the conclusion that strong AI cannot really exist. However, as shown by Harnad, this problem of intelligence versus simulation can also be applied to humans:

There is also the 'other minds' problem. How do I know that anyone else but me really has a mind? Couldn't they just be behaving exactly as if they had a mind - exactly as I would under the same conditions - but without experiencing anything at all between their ears while doing so: just mindless physical bodies going through the motions? (45)

According to this idea, nobody can be sure if other humans, but themselves, have minds, or a consciousness. So, he arrives at the following conclusion:

If our only basis for judging that other people have minds is that they behave indistinguishably from ourselves, then there's no ground for withholding the same benefit of the doubt from robots. (46)

This basically means that a robot showing significantly human-like behavior can be assumed to have a mind and a consciousness. Looking back at Searle's Chinese room (418-423), the problem he proposes can also be applied to human beings. Any human could also simulate certain responses with the help of a rule book, or another source of information, as the other person still might think that the responses are 'real'. At this point it is impossible to make a distinction if a response is simulated or not, not only with machines, but also with humans. As the robots depicted in the novels and movies possess a brain similar to the one of humans, as Searle required (423) for achieving real understanding they can be said to possess strong AI.

In this section, we have defined artificial intelligence in different ways and have discussed that there are certain problems while looking at robots and machines. In general, it is difficult to define the point at which they can be called intelligent, and according to Searle (418-423), it seems that it is not possible at all. However, as the other mind problem by Harnad explains (Harnad 45-46), it is not even clear if other humans have a mind and a consciousness, thus making it possible to assume that the robots in the novels and movies can be called intelligent creatures.

### 3.2 The Identity of the Robots and Cyborgs

In this section, the various mechanical creatures that are represented in the novels and movies are going to be discussed. The focus will lie on how they are distinguished from the human beings in their world and if a clear distinction can be made between human and non-human 'inhabitants'. The robots might also influence the way society sees humans, or as Hampton formulates it:

Furthermore, I assert that if and when machines are made to resemble humans in form and deed, there will be an unavoidable miscegenation of machine and humanity that will shift the aesthetic

of the human body and the social systems that police human behavior. That which was once defined as inanimate or object, will eventually become animate and possessed of subjectivity despite its man-made origin of being. (Hampton X)

Hampton seems to imply that robots which are human like in their appearance and behavior have the potential to become a subject. However, this can only happen on an intellectual level as the robots are still designed and built by people, meaning that if such a creature would be opened, their artificial parts could be seen. Furthermore, Hampton (X) focuses on the changes that the human society will live through, namely the change of the category 'human' itself. Thus the question arises, what defines a human being, and if robots and humans can be clearly separated in the way they are depicted in the novels and movies. Furthermore, in the case of the cyborg, the essential question is concerned with finding out when one stops being human, due to the mechanical parts added to the body. Kakoudaki, in the introduction to her book *Anatomy of a robot*, reviews the different characteristics that could define a human being. These are not qualities that happen on an appearance level, but which are "old-fashioned characteristics of live matter such as emotion, generation, and corruption, processes such as growth and decline, and deeply embodied experiences of emotion and sexuality" (24). According to her, these characteristics make us human. Thus, robots should not be able to have these traits, which however, might not always be the case in the novels. However, as Kakoudaki (23-24) points out, these characteristics change over the course of time. Therefore, the novels and movies chosen for this thesis are going to be analyzed in order to find out what the key characteristics of being human are and if a clear line between man and machine can be drawn.

### 3.2.1 *I, Robot*

In Asimov's *I, Robot* the reader is presented with a multitude of different robots. When taking a closer look at the way robots are presented in the novels and movies, it is hard to differentiate their intelligence and behavior from that of a human. Even though the robots and machines presented in IR are very intelligent, they are easily recognized as robots, as US Robots "has never manufactured a robot of a humanoid character" (IR 190). Ignoring the fact that these robots do not look like humans, they do seem extremely human-like in their behavior and ways of thinking, which is going to be explained more closely in the following chapter.

Before looking at these robots, one should review the context in which Asimov wrote his robot stories. An explanation to Asimov's depiction of robots can be found in Portelli's discussion of the three laws of robotics. He states the following:

Since the outset of his [Asimov's] career, he has therefore been striving to rehabilitate robots as mere artifacts, built by man and therefore subjected to human control. As we do not expect an automobile or a light bulb to revolt, so we should not be afraid of a rebellion of the robots: like every other machine, a robot may possess built-in security mechanisms which make it harmless. (150)

According to Asimov himself (qtd. in Portelli 150), science-fiction stories were all the same, starting with the creation of a non-human creature and ending with it killing its maker. Thus, as pointed out in the quote by Portelli above, Asimov wanted to take a new direction with his laws of robotics and show his readers that these new technologies are not to fear. As will be discussed in the chapter on slavery and machines, Asimov also drew parallels between the fear of technologies and the fear of foreign ethnicities at his time (Portelli 152). Due to this, it can be argued that the positive portrayal of his robots should diminish the fear his readers

might have of new technologies (Portelli 150). The aim of this chapter is to show how the robots are depicted in the novel and to establish the main characteristics that a robot has to fulfill to be called a human-like creature.

In the first story, “Robbie” a nursemaid robot, who is not able to speak, and the special bond it has to the little girl, Gloria, he has to take care of is described. Robbie is described in the following way:

Robbie nodded his head – a small parallelepiped with rounded edges and corners attached to a similar but much larger parallelepiped that served as torso by means of a short, flexible stalk – and faced the tree. A thin, metal film descended over his glowing eyes and from within his body came a steady, resonant ticking. (IR 7)

Additionally, to this description, the reader is informed during this scene of playing games with Gloria that Robbie also has arms and legs that are powerful, (IR 6). In the first description of Robbie, it might be assumed that the robot can never be seen as a human-like creature as it only has slight similarities to human bodies. One can detect without any problems that it is a robot.

The rest of the story, however, revolves around the fact that Robbie is no danger to Gloria and that Gloria also has a special bond to Robbie on an emotional level. In the very moment when the little girl exclaims “[h]e was *not* no machine” (IR 16, emphasis in original), it is highlighted that Robbie’s physical appearance does not matter at all to this child, but only the moments they shared and emotional connections they have made.

This, shows that it was possible for Gloria to connect with Robbie on an emotional level, even though they were not able to talk to each other. It might even be possible to read this story as a parable against xenophobia, showing how characters who do not share a language or their ethnicity become friends and emotionally invested in each other. In

conclusion to the first story of the novel, it can be said that physical appearances seem less important than emotional bonds to see a mechanical creature as human-like.

The second story, “Runaround”, concentrates more on how Speedy, the robot presented in it, behaves when it is not able to fulfill his task due to the three laws of robotics. In this story the robots can already talk and are not allowed on earth anymore, which is why this story takes place on (and beneath the surface of) Mercury. Two male humans are “sent out to Mercury to report on the advisability of reopening the Sunside Mining station” (IR 33). Speedy, the robot on which the story focuses, is described as a very smooth and aerodynamic robot, as he is one of the fastest robots there are (at that point of the story) (IR 41). His actions while trying to fulfill his task, however, do not provide any information on character traits that could be called human-like. In the end however, Speedy seems to realize what problems it has caused, as the robot “hasn’t finished apologizing for the runaround” (IR 53), as one of the other characters in the story explains. In this scene, the robot shows that it knows that what it has done was wrong, and furthermore understands that its actions could have killed someone. Being able to show regret makes the robot a little more human while reading this story, especially, as in this moment, Powell, one of the humans working with Speedy, shows that he forgives him and takes his “metal paw” (IR 53) to comfort the robot. If Powell would think of Speedy as a mere machine, and not a human-like creature, he would not react in that fashion. Thus, being able to apologize and feel regret can also be added to the list of characteristics that seem to make a mechanical creature more human.

“Reason” is a story about creation. Again, the same team that has handled the mines on Mercury, Powell and Donovan, are sent to “Solar Station No. 5” (IR 54) to observe how the new robots are performing. In this setting they start having problems with the robot Cutie who does not believe that he was made by humans (IR 55), as they are an inferior species. As is described in the story, Cutie is an anthropomorphized robot, who is “composed of strong metal [...], continuously conscious, and can stand extremes of environment easily” (IR 60). It

is explained by Cutie himself that the robots are “reasoning beings” (IR 63). This leads, according to Powell, to the problem that there are two conflicting points of view in this situation, namely the one of the scientists and the one of the robots (IR 71). Of course one of the main points in this story is again to show that the robots take care of the humans, even though it does not seem like the robots are protecting them at first. However, due to the laws of robotics, they do everything to keep the humans safe, even though the other robots follow Cutie and “the Master”, which is actually the converter – the most important machine which the robots have to take care of (IR 61). However, the more interesting part of this story is how Cutie is portrayed. First of all, he does not believe that the humans can make robots that are far more superior to them and tries to find an explanation for that. He arrives at the following conclusion:

The Master created humans first as the lowest type, most easily formed. Gradually, he replaced them by robots, the next higher step, and finally he created me, to take the place of the last humans. From now on, *I serve* the Master. (IR 61, emphasis in original)

It has to be added to this quote that Cutie does not believe that a thing like earth exists, but thinks that the Solar Station they are on is the only place with life on it (IR 58). It is possible to argue that Asimov tried to ridicule religion with this story. As the robot was not able to believe the fact that he was made by humans, he turned away from reality and created a kind of god and religion for himself, which the other robots also started following. However, by making the Converter to their Master, the robots started even caring more for that machine, which in the end lead to a steady energy beam to earth – which is the main task of this Solar Station. Here again we have a story in which the laws of robotics have been fully fulfilled by the robots, but the humans were not able to understand the robot’s behavior at first. Secondly, besides again looking at the laws of robotics and maybe ridiculing religion, Asimov touches upon another interesting topic. He makes Cutie say the words “I, myself,

exist, because I think” (IR 59). By drawing a parallel to Descartes famous *cogito ergo sum* – which is further strengthened when Powell calls him a “robot Descartes” (IR 59) – to the story, Asimov also implies that intelligence is one of the main factors for a robot to be called ‘alive’ or, as has been used before, human-like. The ability of Cutie to think about its origin adds another interesting layer to the robot, as a simple machine would not even start wondering about this.

Donovan and Powell are sent on another mission in the story “Catch That Rabbit”, in which they have to watch robots that “are equipped for asteroid mining without supervision” (IR 77). In the first part of the story, DV-5 is described as a team of seven robots with one leader, which is the one robot with whom the team communicates. This team of robots works together “through positronic fields” (IR 78) – not using human ways of communication. Dave, the leader of the robot-team is described as heavy robot (IR 79) with a human-like voice and not being capable of facial expressions (IR 80). However, in a conversation it is shown that he can convey feelings through his voice (IR 81). Again, an anthropomorphic robot is described by Asimov. Furthermore, when questioned by Donovan and Powell why they have not “produced any ore” (IR 80), the robot responds by saying: “I can’t explain that, boss. It’s been giving me a case of nerves, or it would if I let it” (IR 80). On the one hand, it could be argued that Dave’s annoyance is just a simulation, as explained with the help of Searle above. However, it appears that the robot in question seems to understand why there is a problem and is also confused as he cannot answer why the problem came into existence in the first place, leading him to reflect on his behavior. As Torey points out, only humans are able to reflect (Torey 109) on actions, events and so forth. It thus can be argued that a ‘simple’ machine, which is not human-like, would not be able to reflect on its actions the way that it is described in this story. The robot seems to be confused as he cannot answer the question why no ore has been produced and tries to reflect on his and the other robots’ actions to solve the mystery.

The ‘fingers’, as the subordinate robots are called, are not described in more detail, but are said to be able to talk, receive and implement commands by Dave. Furthermore, it is stated that “[t]here is a large requirement of personal initiative” (IR 87) in Dave’s work, when no human supervision takes place. In these situations, it is suggested the robot fails. The robot Dave has to command and look after six other robots, his fingers. In emergency situations, he shows something like a nervous breakdown where he and his fingers just run around in curious formations. This pressure of being responsible for other beings, in this case his fingers, requires Dave to show a high level of personal initiative as pointed out in the novel. However, Dave is not able to abide this pressure and only stops his madness when humans are nearby, thus decreasing the level of personal initiative needed. This illustrates a very human behavior, thus actually ascribing Dave more human-like features. In the end the robots’ unusual behavior is compared to “*twiddling his fingers*” (IR 100, emphasis in original) by Donovan, as he compares Dave to a “psychiatric case” (IR 100). This also highlights that a normal human being would have struggled coping in this highly stressful situation when other lives depended on them. In this story, another human feature, besides voice and reasoning is ascribed to a robot, namely personal initiative. Furthermore, it shows that the robot is aware of hierarchies, as he himself is the one responsible for his subordinate robots, his fingers, but feels relieved of his burden when humans are around. These humans are hierarchically above Dave, thus letting them give the orders relieves him of upholding the third law of robotics, which orders him to protect himself. It seems as if Dave trusts these humans to give him another order, before he would experience any harm. However, it is stated in the end that by changing some hardware, Dave would be able to work with more than five robots under him, thus erasing the problem of missing personal initiative. This again highlights the robotic nature of Dave, reminding the reader that it is only a machine dependent on humans and not able to harm anyone. To summarize, it can be said that even though reminding the reader at the end that Dave on a physical level is still a robot, there are psychological aspects that can be called

human-like, as explained before, such as personal initiative, reflection and the understanding of hierarchies.

Other human features are ascribed to a robot called Herbie in the story “Liar”. Herbie is the only mind reading robot (IR 101) and was used on earth, which of course was a secret as robots were only allowed for testing on earth “before being shipped out to space” (IR 103). Again, the reader is confronted with an anthropomorphic robot, which, the first-time Susan Calvin encounters him, sits in a chair and reads a book. Herbie explains to Calvin that to fully understand “the interplay of human motives and emotions”, he needs to read fiction (IR 106). Apparently, the robot has a lot of technical, or mathematical information stored in his brain, but not so much information on human behavior. This is highly interesting, as Herbie’s responses are not distinguishable from the responses that would be expected from humans, thus painting him as very human-like. The robot takes the part as a psychiatrist for Susan Calvin, who has ‘love-problems’, in the first part of the story. At the end when she thanks him for listening and giving her advice, “Herbie turned slowly to his neglected novel, but there was no one to read *his* thoughts” (IR 109, emphasis in original). This could be interpreted in two ways. Either, Herbie thinks differently about the whole situation, which has been explained to him by Calvin, and lied to her – as the title of the story might propose – or he realized in that very moment that humans sometimes do not want to know the truth and that lying is sometimes better. By using the first law of robotics – “a robot may not injure a human being, or through inaction, allow him to come to harm” (IR 120) – it is explained why Herbie lies to the workers of US Robot that interact with him. By not telling them the ugly truth, he tries to prevent them of experiencing emotional harm (IR 120). It can be argued that he was able to learn what human emotions are, how they could be interpreted and that he must have an understanding of wants and needs. These different constructs seem very complex, especially for a robot that was not programmed for this kind of ‘work’. This gives Herbie a very human nature that might have scared some readers, which could be the reason

for Asimov having Herbie say the following sentence: “I’m a machine, given the imitation of life only by virtue of the positronic interplay in my brain – which is man’s device” (IR 122). This reminds the reader of Herbie’s nature and of the control that the humans have over him. By using the right order, Calvin evokes a malfunction, thus inducing a “living-dead” (IR 123) state in the robot. In this story the robot, through a mishap, receives the gift of thought reading, which in the end makes him learn about human emotions, which he is apparently not ready for. He starts to realize what the people with whom he interacts want to hear and what emotions they feel if given certain answers. However, if presented with more needs and wishes, as it is the case in the end of the story when he has to take into account the order of Calvin and the ego of the other two workers present (Lanning and Bogert), he crashes like a malfunctioning computer. This also shows that he does not only read thoughts, but has an understanding of what a hurt ego means. It could therefore be stated that Herbie is behaving completely like a human being, as he is able to understand that other people might think and feel different in certain situations. This very human feature is expressed by the theory of mind:

Since theory of mind [...] is a sophisticated social, cognitive ability of being able to represent the mental states of others – their thoughts, beliefs, intentions and knowledge – and, hence, to know the impact of our actions on another, it plays an important role in morality.

(Severino 24)

This explains that Herbie possesses this theory of mind, thus being able to understand that others feel differently in certain situations, which is a very human characteristic. If Herbie can be called a morally good ‘person’ is not entirely clear, as he might have thought that by lying to everyone he would do something good. However, due to hiding the truth all the time, unnecessary conflicts were created, thus questioning if he indeed possesses a concept of what is good and what is bad.

Not only does Asimov express his positive attitude towards technology (Portelli 150) in this story, but he also describes a robot that is extremely human as it is able to anticipate what others might feel in various situations, something that could be compared to empathy.

The story of Herbie is one of the few stories that takes place on earth, as robots are generally forbidden on that planet, even if there are some laws allowing some testing of the machine on the planet. It is a good thing, however, that Nestor 10 from the story “Little Lost Robot”, is the first robot (according to the story) that was lost on Hyper Base and not on earth (IR 125).

The NS-2 model was used for working on the “Hyperatomic Drive” (IR 125) alongside with humans. Therefore, the first law of robotics – “[n]o robot may harm a human being, or, through inaction, allow a human being to come to harm” (IR 129, emphasis in original) – was altered, because the robots were trying to ‘rescue’ the men from gamma field exposure, which actually does not harm the human, but could destroy the positronic brain of the robot if it is strong enough (IR 129). This means that the robots’ brains could be destroyed while trying to rescue a human, who actually could not be killed by the radiation. However, as the robots were still able to detect this radiation and thought it dangerous, they tried to help the humans and got destroyed, resulting in financial losses for US Robots. In order to work properly; the first law was therefore altered to “[n]o robot may harm a human being” (IR 130, emphasis in original), thus making the robots ignore the gamma radiation as it is not them harming the humans. This is problematic as it might work on Hyper Base, but as Susan Calvin points out, would not stop a robot from hurting people on purpose (IR 139). Keeping in mind that Asimov was in favor of new technology and wanted to show people that they do not have to fear those creatures as they are mere machines (Portelli 150), his horror scenario of altered robots harming and killing humans seems even more particular.

The robots are described as very human-like creatures, even though there is no description of their physical appearance. However, they work together to help Nestor-10 stay hidden from the humans, even those robots who still have the first law fully implanted.

The more serious problem with Nestor 10 would be his “superiority complex” (IR 157). He seems to love that game of hide and seek and feels superior the humans he is hiding from. However, in the end Asimov shows the reader that the robot, even though his first law was alternated, works together with the other robots and has a superiority complex, can still be found by the genius of Susan Calvin. It could be argued, however, that in this story Asimov gets closer to classical visions of robot or monster stories in which the creation in the end surpasses or kills the master.

Furthermore, the understanding of language is very important in this story. When Nestor-10 hides amongst the other robots, he works against his primary programming, but still is following the orders made by another human. In the story one of the human workers tells the robot to “get lost” (IR 155), which is the start of the whole misery, as the robot then starts hiding from the humans. Here one can see that he does not understand the phrase ‘get lost’, but takes it literally (IR 155). Not understanding what is meant by that expression shows that his understanding is only simulated and is therefore not a specimen of strong AI. Dascal (147) explains that “the appropriateness of linguistic behavior to an unrestricted set of situations is perhaps the best indicator of intelligence”. He also states that “[w]hat characterizes human use of language is its pragmatic flexibility” and that “[w]e not only can, but very often do, say one thing and thereby mean [...] another” (156). It therefore seems that when it comes to language, Nestor-10 fails the test and cannot be seen as strong AI.

However, in order not to be found, Nestor-10 tries to predict the behavior of the other robots, but in the end fails as he forgets that he has more knowledge on radiation than the NS-2s robots (IR 157). In trying to predict how the other robots would behave, a higher cognitive function can be detected in Nestor-10 which can be ascribed to strong AI. In order

to hide amongst the other robots, he has to ‘think’ like them, which is to understand their behavioral patterns. As there is no information found in the different stories in IR, it can be assumed that the robots are not programmed with a kind of manual that could be called ‘how to behave like another robot’ or ‘predicting robots’ behavior’, as they are built for a certain kind of work and would not need such a program. However, human beings are said, according to the theory of mind, to be able “to peer through the opacity of others, to infer what they might be thinking and feeling” (Oatley 13). Thus, it seems as if Nestor-10 does not possess such an ability that is inherent to human beings.

On the other hand, it has been shown that also some humans, namely those suffering from Autism, also have problems to think like other people. This is described in the Sally-Anne test by Baron-Cohen and Firth (41), in which the test-takers (in this case children) are shown a scenario with two dolls. The first doll, Sally, puts a marble in her basket and goes away. The second doll, Anne, takes the marble from the basket and puts it into her box. As Sally returns, the children are asked where she would look for the marble. Here the children have to try and think like Sally, as she does not have the same knowledge as they do, which, according to the test results, is nearly impossible for autistic children as only 4 out of 20 were able to answer correctly (Baron-Cohen & Firth 42). They conclude that “[autistic children] are thus at a grave disadvantage when having to predict the behaviour of other people” (43). It can therefore be argued that not understanding the other robots’ behavioral patterns cannot be called a strong argument for a simulated understanding. However, Nestor-10 even trying to predict the situation is a sign for strong AI.

In this story various aspects are presented that attribute human-like features to the robot, but can also be interpreted as arguments against human-like robots. Working together and having a theory of mind, as has been discussed above, can be signs for the robot being of a human-like nature. On the other hand, there is the “linguistic behavior” that has been discussed with the help of Dascal (147), which creates problems in this specific story, as it

would show that Nestor does not possess an important human characteristic. However, flexible usage and understanding of language is something rather exclusively human (Dascal 156), thus marking a robot capable of it as human-like.

The next story, “Escape”, presents the reader with the first robot story that does not involve an anthropomorphic robot. This robot, the Brain, does not move and, as described by Susan Calvin, has “a child’s personality” (IR 162), which apparently is important to perform difficult calculations or tasks, as “it doesn’t really understand what it does – it just does it” (IR 162). Here one can detect similarities to Searle’s Chinese room experiment, as it is highlighted that no understanding takes place, the program just does what it is supposed to do (Searle 418). This might also be the reason why The Brain, who is apparently ‘only’ a computer is addressed by using ‘it’.

This time the reader is presented with a more detailed description of the Brain:

The Brain was a two-foot globe merely – one which contained within it a thoroughly conditioned helium atmosphere, a volume of space completely vibration-absent and radiation free – and within that was that unheard-of complexity of positronic brain-paths that was The Brain. The rest of the room was crowded with the attachments that were the intermediaries between The Brain and the outside world – its voice, its arms, its sense organs. (IR 163)

It is not directly stated that it has eyes in the human sense, but it must have scanners, that are used to feed him the information, and it can see people entering the room. In the story it is given some papers to analyze them and builds a spaceship with the information those sheets contained. The scientists are baffled as they expected a dilemma, because their competitor’s, Consolidated, super computer broke down while analyzing these papers. The recurring workers Donovan and Powell are send on another mission, again to test the spaceship and find out that they cannot control it as The Brain is the one flying it. When the interstellar jump is

performed, Donovan and Powell die, but are in a way reborn again after the jump. This is important to the conclusion of the story, as Calvin explains that this was the point when Consolidated Robots' super computer broke down, as it would break the first law by letting the passengers of the ship die. When Calvin explained the task to The Brain she made one little mistake as she points out at the end of the story:

But I had depressed the importance of death to The Brain – not entirely, for the First Law can never be broken – but just sufficiently so that The Brain could take a second look at the equation. Sufficiently to give it time to realize that after the interval was passed through, the men would return to life – just as the matter and energy of the ship itself would return to being. (IR 184)

There were now two forces working on The Brain, namely the first law and Calvin's orders. To perform its tasks it had to fulfill Calvin's orders, but due to the laws of robotics it experienced a feeling of guilt. In order to make its masters happy, it had to find a coping mechanism, which in this situation was humor, repressing the machine's guilt of bending the first law. As Calvin explains: "He developed a sense of humor – it's escape, you see, a method of partial escape from reality. He became a practical joker" (IR 184). This is why The Brain was the only one having control over the spaceship, only feeding Donovan and Powell two types of food and installing a receiver for radio signals, but no sender. As Henman points out, "humor is associated with effective coping" (IR 85) in various situations, especially when the person – in Henman's case war prisoners – is under a lot of stress. In The Brain's difficult situation, it has to follow the laws of robotics and Calvin's orders as explained before. However, when Calvin talks about The Brain using humor as coping mechanism, she changes from the before prevailing 'it' to the personal pronoun 'he'. This change seems to imply that The Brain has displayed a quality that makes it/him more human.

In the beginning, it is described as a bodiless robot that cannot move and which only runs a program. It can be argued that these features might have robbed it to receive a human name and therefore be addressed with 'he'. In the end, however, as humor is apparently a new feature that *The Brain* reveals, he receives the honor of being uplifted to the same position as the anthropomorphic robots presented in the other stories. Thus it seems, as has been explained before, that for Asimov the body of the robot does not play a crucial role in distinguishing if something is human or not, but he rather concentrates on personality and character traits. Therefore, it might be stated that this is the first story in IR in which these features of what makes something more human, are directly highlighted.

The story of Stephen Byerley, "Evidence", is a special story in the canon of Asimov's robot stories, as it is the first time that someone is accused of being a robot. The story "Evidence" is thus important as it is the first story in IR that comments on the notion of "passing", which means that a robot can be seen - passes - as a human (Portelli 152). This means, as Portelli explains, that it is possible for Byerley, who is thought to be a robot, "to get elected mayor in an anti-robot community" (152). He furthermore explains that "it is not the *fact* so much as the *doubt* of passing which makes it so dreadful" (152, emphasis in original). This can be observed in the story, as the team of US Robots is called into Mr. Quinn's office, another mayoral candidate, whose investigators reported that Byerley never eats (IR 189) and are asked to perform an investigation to find out if he is a humanoid robot or not. Quinn is able to convince Lanning from US Robots to start the investigation as he accuses them of having made that humanoid robot, in order to persuade people that these robots should also be allowed on habited planets (IR 191). When Susan Calvin and Lanning talk to Byerley and ask him to eat something, Calvin explains two things. First, she states that on a psychological level humans and robots are completely different, as "robots are essentially decent" (IR 195). Second, when Byerley eats the apple she provided, Calvin points out that "[h]e is almost too human to be credible" (IR 195). This shows that Byerley, if he is a robot, shows every feature

a robot needs to possess, on a psychological and physical level, to pass as a human. He is described as a very gentle and caring man (IR 197) and generally a “very good man” (IR 199). It is also stated that “you just can’t differentiate between a robot and the very best of humans” (IR 201).

It is pointed out in the story that if Byerley is a robot he would have to adhere to the laws of robotics, which would make him “a very honorable and decent human being” (IR 201) or maybe also better than the decent human beings that exist. Thus, Asimov shows his reader in this story that a robot mayor would not be a problem. This statement can also be applied to the real world, showing that the origin of a person is not key, but their behavior.

In the end, he can pass as a human being due to him punching someone else while an angry mob is watching in front of his house. This scene is important as a robot cannot hurt a human being due to the first law of robotics. Thus, Byerley passes as a human being as he was able to hurt someone. However, as later pointed out by Calvin, it would be possible for Byerley to punch another man if he was a robot too (IR 214). The story does not provide an answer if he was a robot or not, but as Susan Calvin points out to her interviewer, it does not matter as he did an amazing job (IR 215).

Concluding the story of Byerley, it can be said that this story again shows how personality and character traits are very important to Asimov when it comes to describing his robots as human-like creatures.

In the last story of IR, the so called Machines have taken over and “are running the world” (IR 215). However, Asimov’s description of the year 2052 is not a post-apocalyptic one. In the story “The Evitable Conflict”, the Machines are described as successors of the Brain (from the story “Escape”) (IR186) and keep the world’s economy stable, which “will remain stable, because it is based upon the decisions of calculating machines that have the good of humanity at heart through the overwhelming force of the First Law of Robotics” (IR 220). This story concentrates on the aspect of showing people that the Machines, or

technology in general, cannot take over in a negative sense, but would only profit the humans (IR 244). This story does not provide any indications of what might constitute someone as human or non-human – as the Machines in it are mere thinkers without character and were not built to replicate human behavior. Furthermore, it is pointed out that there are still professions that the Machines cannot perform. They calculate everything, but still humans are the key element to performing the work, thus not taking away too many jobs, but performing those humans cannot.

After now having discussed all the stories presented in IR, it can be summarized that Asimov presents the reader with various characteristics that can be called typically human. These characteristics are all on a personality level, therefore showing that the body is not the most important thing to define somebody as human. In the case of IR, being able to feel regret, having an understanding of hierarchy, creating emotional bonds, expressing emotions, being a good person, having a theory of mind, being able to use language and using coping mechanisms are features that mark something as human-like. It is, however, not possible to find these traits in all of the robots depicted in IR, as it can be seen as an evolution of the robots from Robbie to the Machines.

This cannot only be seen in the way the robots are depicted, but also in the name of the company developing them, as they are called US Robots in the beginning and with chapter 5 (“Liar”) change their name to Us Robots & Mechanical Men. This could of course just mean that two companies were fused together, but it is also possible to imply that the next step in evolution has taken place and one is now able to compare the robot to a man. There are two lines of development presented in the novel. The first one is the one of the anthropomorphic worker robot, that after being able to move and mime to communicate, is able to speak and starts learning things as Nestor, or is able to move more smoothly and faster as Speedy. The final version of this line of robots would be Byerley, if he is a robot, who, as Calvin points out, is “almost too human” (IR 195). The second line of evolution would be the one of the

super-thinker computer. This computer has no anthropomorphic features, but it can talk and calculate various things. There are only two examples of such a computer in the novel, namely the Brain and the Machines. These robots seem to work in a different direction, namely getting less human. The Machines in the last story are not said to talk, or to have any human features at all. Thus, it could be assumed that the Brain is the more human computer, as he has a personality and is able to use humor as a coping mechanism. However, there are not enough details presented to the reader about the Machines to assume this with absolute certainty. This is an implication that intelligence is not a factor for being human in Asimov's stories.

In this chapter the robots in IR have been described and it has been explained that Asimov's robots all show various traits that can be called typically human. As his novel can be seen as an evolution of the robot, not all characteristics can be ascribed to every robot presented in it. However, a list of what would account as human-like in the IR universe has been established, and it can be summarized that personality and character are far more important to Asimov than the body of the robot.

### 3.2.2 *Do Androids Dream of Electric Sheep?*

After having discussed how the robots are presented in IR this thesis will now consider the androids in Philip Dick's novel. These androids<sup>7</sup> are on the same level as Stephen Byerley in IR, meaning that on a physical level they replicate humans perfectly. At the beginning of the book, DAES, it is pointed out that:

The Nexus-6 android types [...] surpassed several classes of human specials in terms of intelligence. In other words, androids equipped with the new Nexus-6 brain unit had from a sort of rough, pragmatic, no-nonsense standpoint evolved beyond a major – but inferior –

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<sup>7</sup> The robots in DAES are called androids, or sometimes andys.

segment of mankind. For better or worse. The servant had in some cases become more android than its master. (DAES 25-26)

These specials, mentioned in the quote above, are human beings who fail “to pass the minimum mental faculties test”, thus representing a lower human species (DAES 15). As has been shown in the quote above, the Nexus-6 android is more intelligent than the specials. This would lead to the conclusion, that an android participating in the “minimum mental faculties test” (DAES 15) would be classified as intelligent, meaning that at least on this level it would be better than other ‘real’ human beings.

The question that arises while reading the novel is “what makes humans even human?”. The difference between DAES and IR is that a test is needed to distinguish androids from humans. This test is called the “Voigt-Kampff Empathy Test” (DAES 26) and as its name already proclaims, it tests if the person who is questioned is capable of feeling empathy. It is explained that “[e]mpathy, evidently, existed only within the human community, whereas intelligence to some degree could be found throughout every phylum and order including the arachnida” (DAES 26). The author states directly what the big difference between the androids and the humans is, namely empathy. However, another factor is introduced with the character of Isidore, who is a so-called special, and is not allowed to leave earth as he does not have the minimum intelligence to be called a normal human being. Thus, it is not only empathy but also intelligence that plays a role in defining what human beings are. Even though Isidore is a real human being, in this society he is not perceived as such, due to his lack of intelligence.

After having described the world in which the main characters (humans and robots) live, their behavior is going to be described in this chapter.

The story takes place in a San Francisco (DAES 12), in 1992 (DAES 2), after World War Terminus (DAES 12). It is said that there is no information on who actually started the war and if anyone really won, but that the war caused the world to get polluted, which was the reason for animals to become extinct and what started mass emigration to other planets (DAES

12). Not many people stayed on earth and it is mentioned that this “potentially meant finding oneself abruptly classed as biologically unacceptable, a menace to the pristine heredity of the race” (DAES 13). A dirty world can thus be imagined, with new technology like hovercars, mood organs, mechanic animals and the androids or also called andys. These androids were used to get the people to migrate to the new worlds, as everyone received an “android servant” upon arrival (DAES 13). Rick Deckard is a bounty hunter on earth and has to kill escaped androids. This does not violate any personal rules for Deckard because of the following reason:

For Rick Deckard an escaped humanoid robot, which had killed its master, which had been equipped with an intelligence greater than that of many human beings, which had no regard for animals, which possessed no ability to feel empathic joy for another life form’s success or grief at its defeat – that for him, epitomized The Killers.

(DAES 27)

This is not in conflict with the rule Mercer – on whose life and teachings the state’s religion is built - had established, namely that “[y]ou shall kill only the killers” (DAES 27, emphasis in original).

In this quote above, it is shown that these androids are apparently intelligent, do not have any feelings and are capable of violence (DAES 27). The androids that are described in the novel and are hunted down by Deckard are all of the Nexus-6 generation, meaning that they are “extra-clever andys” (DAES 24) and Harry, another bounty hunter, is against them being built at all, as it would make it far too difficult or even impossible to detect their identity with the Voigt-Kampff Test (DAES 24-25). It is suggested at different points in the story that the Voigt-Kampff test might actually not work under certain circumstances (DAES 32, 45). Furthermore, Palumbo points out that “the test really measures only a socially engendered, culture-specific aversion to killing or harming animals, this society’s primary taboo, rather

than any truly universal, innate, and exclusive – and therefore definitive – human quality” (1277). He also states that not many humans in the real world would react with shock to the questions asked in the Voigt-Kampff test “specifically, from Dick’s American contemporaries in 1968” (1277). This also highlights that a distinction between human and android can only be made on a physical level, in this case however, the androids are extremely advanced so that simply ‘opening’ them – like a faulty kitchen appliance – is not enough. There is only one infallible possibility to find out if the person is an android or not, namely the bone marrow test (DAES 44), which is, however, “slow and painful” (DAES 44).

Furthermore, towards the end of the novel, Rachael, who is Deckard’s first test-subject in the book, explains that there are various types of androids and that Pris, one of the escaped androids Deckard has to find, is the same type of android as she is (DAES 163). This shows that on a physical level, there are several androids who are completely the same.

Looking at the personal pronouns that are used to describe the androids by the characters in the book and the narrator, it has to be mentioned that most of the time ‘he’ or ‘she’ are used. There are only a few instances in which ‘it’ is used. One of them is at the beginning of the novels when Deckard is testing Rachael and she gives “[a]n android response” (DAES 42). Deckard highlights that she is “[f]ailing to detect the major element, the dead animal pelt” as “[h]er -its – mind is concentrating on other factors” (DAES 42). Another usage of ‘it’ would be towards the end of the novel when Roy is described by Deckard (DAES 160). In this description, as Roy is supposed to be the worst of the escaped androids, it seems as if by using ‘the android’ and ‘it’ the author wanted to highlight the non-human nature of this creature, or Deckard’s aversion towards it. In general, it is possible to state that these creations look exactly like humans.

The topic of empathy is therefore a rather important one in this book, as it allegedly marks the only difference between people and humanoid robots. Even androids themselves state that they “lack a specific talent [...] humans possess” (DAES 107) which is empathy, as

officer Garland, the android officer from the fake police department at the Mission Street Hall of Justice building (DAES 97), points out. However, and this is very striking about the novel, it seems that the only one who really is capable of displaying empathy is John Isidore and in some situations, also the androids that escaped from the colonies. However, Rick Deckard seems to lack this ability even though he is a human, and probably other humans have difficulties as they need the mood organ to generate certain feelings, and the empathy box to fuse with other people.

This empathy box also promotes the religion of Mercerism and everyone who touches the twin handles of the box at the same time fuses with all people in the universe (DAES 18). It seems however, that the people who should actually feel empathy without any help, as it is a human characteristic, as suggested by the novel, need these two items – the mood organ and the empathy box – to experience empathy and different moods in an otherwise rather cold world. An interesting point which Palumbo (1278) makes, is that Deckard is a “solitary predator” (DAES 27) which is a quality he, Deckard, ascribes to the androids he has to hunt. Furthermore, when Isidore is confronted with the fact that a bounty hunter is after Pris, Irmgard and Roy – the escaped androids - he shares his vision of such a man:

He [Isidore] had an indistinct, glimpsed darkly impression: of something merciless that carried a printed list and a gun, that moved machine-like through the flat, bureaucratic job of killing. A thing without emotions, or even a face; a thing that if killed got replaced immediately by another resembling it. And so on, until everyone real and alive had been shot. (DAES 138)

This description of a bounty hunter is made before Isidore realizes that his guests are actually androids, which makes no difference to him, as he assures them (DAES 141). In his description, it is very interesting to see that even though the image of a machine is used, he was able to grasp the nature of Deckard’s job rather accurately. Especially, when he states that

they are replaceable, as this is the case in the story. Deckard only received his assignment to kill the androids as Dave Holden, a colleague, “got shot” in the field (DAES 24). Furthermore, it seems that Deckard cannot explain why he feels depressed after he receives the news that Holden has been injured severely, as “he should be at least guardedly pleased” (DAES 29), because he can now get the bounty that was reserved for his colleague. As Palumbo (1278) points out, this shows that Deckard is not able to understand what his feelings mean, thus displaying stereotypical android characteristics. When Deckard encounters Phil Resch, the bounty hunter from the fake police department, he realizes that he has problems feeling empathic towards him, as he apparently enjoys killing androids, and has, what Deckard calls, “a defect in your [Resch’s] empathic, role-taking ability” (DAES 122). In addition to this, he realizes that he is able to feel empathy towards certain androids, and he mentions Luba Luft, an android who took over the role of an opera singer, and probably also Rachael – who is not directly mentioned (DAES 123). The androids he seems to feel for are both female; on the one hand he is attracted to Rachael on a sexual level and on the other hand he really cares for Luba Luft’s art (DAES 123). This might be called the point in the novel, when Deckard realizes that it is rather difficult to make distinctions between humans and androids and that it must be something more than this that makes a person feel empathy towards another.

At various parts of the novel it is highlighted, not only by Deckard, but also by androids themselves, that they are not capable of feeling empathy and would not help other androids as they are “solitary predators” (DAES 27). However, these accusations are confuted in instances when the androids indeed show that they work together (e.g.: get to earth, or the fake police department) to protect themselves. Furthermore, when Pris learns that only Irmgard, Roy and herself are the last of the escaped androids that are alive, she seems to be genuinely shocked and depressed (DAES 135). Rachael, towards the end, also shows that she understands human commitment towards animals, when she points out that Deckard loves the goat he has more than anything in the world, also more than his wife (DAES 175). With the act of killing the

goat in order to avenge herself and the already killed androids, she indirectly displays some empathy as she was able to understand how that would hurt Deckard. Furthermore, Paul M. Sammon, explained in an interview that when Philip Dick talked about androids “he was talking about people without emotions – without empathy – people without feelings whose sole goal in life seemed to be to only satisfy their own cravings” (Das Opferlamm<sup>8</sup> 00:02:18-00:02:38). This notion, however, is displayed by nearly everyone in the novel. On the one hand, Deckard wants to kill the androids in order to quit his job, get an animal and be happy with his life, and on the other hand there are the androids that want to start a life on earth and also want to feel the sensation that is created by fusing.

This is also highlighted, when Mercerism is unmasked as fake. This religion and its practice of fusing was the most important thing to be able and feel connected with everybody – to feel empathy. Now that it has been revealed as fake, the androids cannot possibly experience empathy as humans do with the help of the empathy box. However, this would also imply that the humans displayed in the novel cannot feel this kind of empathy either, but are only showing a kind of simulated empathy which is very android like in its nature. This is reflected in a statement by Dick made in an interview when he explains that “[t]he theme of the book is that Rick Deckard is dehumanized in his job of tracking down the Replicants [androids] and killing them. In other words, he winds up essentially like they are” (Das Opferlamm 00:04:05-00:04:13). Therefore, it can be stated that in the book, the androids and also the bounty hunters are on the same level, namely performing tasks to satisfy their needs and not being able to fully grasp emotions and empathy.

The only person, who is capable of that would be the special Isidore, as Palumbo (1280) points out, as he displays the most empathy. This can be seen in various scenes throughout the novel. First of all, animals are very important to him, as they should be to all

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<sup>8</sup> „Das Opferlamm“ is part of the specials DVD included in the collector’s edition DVD box of BR, which was released in 2007.

humans in this world, but he appears to feel for the fake animals he brings to the repair shop. At the beginning he has to take care of a failing cat – which is actually a real cat, but he is not informed about that – and talks to the machine as if it were real, trying to comfort it (DAES 61). Furthermore, there are many more instances in which he shows empathy, especially when he talks to the androids and tries to help them (DAES 130, 139,141). Isidore is a special, also called a chickenhead (DAES 15). This factor, according to the definitions applied in the world Dick created, makes him non-human too. As Palumbo points out:

both definitions of ‘human’ are called into question simultaneously, in any case, because they contradict one another in the person of Isidore, who exhibits more empathy, the primary definition, than any other character in the novel and yet cannot exhibit ‘minimum mental faculties,’ the secondary definition. (1280)

It can already be seen that the definition of what is human is not clear in the novel, as the ones that are called humans do not fully exhibit the features needed to belong to that category. Furthermore, the question arises, if the androids can really feel emotions the way it is described in the book, or if it is a simple simulation, as has been discussed before when talking about artificial intelligence. There is a moment, in which the android, Luba, says that she had to play a role (DAES 116), however this does not mean that she does not feel anything, maybe simply not those things people are required to feel in this society (e.g.: empathy towards animals).

There is another interesting example in the novel that should be considered when talking about the depiction of these androids, which is the questioning of Luba Luft, the opera singer (DAES 87-92). She does not directly answer Deckard’s questions during the Voigt-Kampff test. What she does is commenting on them by taking some information, or just a word directly from the question by Deckard and uses it to formulate her response. By doing this, she is not revealing any vital information that could tell Deckard if she is an android or not. Abrioux explains that this tactical way of responding has been described by the “ELIZA

programme” in which “the computerised ‘psychoanalyst’ invariably picks up on the patient’s utterances in a reflexive mode” (142). Thus, key words in the question or statement made by the other person are used to formulate a question or a sentence. This only works, as pointed out by Ekbia when he quotes Hofstadter, due to “the susceptibility of people to read far more understanding than is warranted into strings of symbols – especially words – strung together by computers”. (311) Abrioux furthermore states that:

The success of the illusion – the conceptual mismatch that attributes to the machine an ‘intelligence’ altogether more sophisticated than that which it actually has – is known as the ‘Eliza effect’. (143)

Can this effect, which can be compared to the Chinese room by Searle, explain if the androids in DAES can be classified as intelligent or not? The Eliza effect and the Chinese room experiment have in common that an illusion or a simulation of intelligence is created that in reality cannot be ascribed to the machine/computer/robot.

If only emotions are considered, especially those connected with animals, one might state that it is only a simulated reaction or a program that produces a certain response. However, as Palumbo points out, it can be argued that what Deckard tests is only something that is a “culture-specific aversion to killing or harming animals” (Palumbo 1277). Thus, a person who only grew up in the colonies and does not know much about how important animals are to the older generation might also simulate a response to Deckard’s questions. This allegedly happens when Rachel is tested in the beginning (DAES 45). It is explained that she grew up on a space ship and therefore “scored as an android might” (DAES 45). If Rachel would be a real person, one might assume that even she does not feel that way, she had to simulate a fake reaction in order to fit into society. As this cannot be solved, a clear conclusion if the androids in general only simulate their emotional responses or if they really do understand what it means to be sad, shocked, loved and so forth, cannot be drawn.

It has been established in this section, that for Dick empathy and intelligence are important factors for being human. However, at the same time, these two characteristics contradict each other in the novel through the characters presented. In order to discuss the importance of empathy as a typical human characteristic, the movie BR, which was inspired by DAES, is going to be analyzed.

### 3.2.3 *Blade Runner*

Ridley Scott's movie *Blade Runner* tells nearly the same story as Dick's novel, however it does not concentrate on the importance of animals that is highlighted in the book. The setting was changed to Los Angeles 2016, however the story remains the same. Deckard and others are used as Blade Runners, bounty hunters, who have to track down escaped robots. In BR it is made more explicit that the robots are very similar to humans. Their name differs to the one given in the book, as they are not called androids but Replicants. These Replicants are described as follows in the opening titles of the movie:

Early in the 21st Century, THE TYRELL CORPORATION  
advanced robot evolution into the NEXUS phase - a being virtually  
identical to a human - known as a Replicant. The NEXUS 6  
Replicants were superior in strength and agility, and at least equal in  
intelligence, to the genetic engineers who created them. (BR  
00:02:05-00:02:09)

This shows that the Replicants in the movies can be treated as human-like creatures, when it comes to the criterion of intelligence, as it seems as if there is no difference between them and their makers, as pointed out in the quotation above. It is also possible to suggest that the name Replicant, instead of android, was chosen for the movie as these creatures are a replication of humans.

As one can see the basic storyline is the same, even though the names of some androids from the books and their professions are changed. Furthermore, there is no fake police office where

Deckard encounters Resch, the bounty hunter has no wife, and also, Isidore is replaced by a character called J.F. Sebastian. However, this analysis is not going to concentrate on the differences between the movie and the book, but will describe the depiction of the Replicants in the movie and, again, will discuss what makes a human a human and if the robots come close to being like humans as the opening titles might suggest.

In general, the Replicants are rather aggressive robots and display violent behavior in various scenes. It can be argued that this behavior results from their original uses in the colonies, as the functions of Roy Batty, Zhora, Pris and Leon are described as combat, part of a murder squad, military/leisure (00:14:04-00:14:45). This could mean that they are programmed as aggressive, thinking fighters who have no problem at all killing people to achieve their goal.

It is also stated that “they were designed to copy human beings in every way, except their emotions. The designers reckoned after a few years they might develop their own emotional responses [...] so they built in a fail-safe devise [...] a four-year life span” (00:14:29-00:14:45). According to this, the Replicants depicted in the movies should not have any emotions at all. However, it seems, to the viewer, as if Deckard is the one who is cold as ice and who is more like a machine than human, as he does not have any difficulties with killing the Replicants. Furthermore, in the famous ‘fight’ scene between him and Roy, the Replicant is the one showing empathy and emotions when Deckard nearly falls of the roof, literally clinging to life, and Roy helps him up again after saying: “Quite an experience to live in fear isn’t it? That’s what it is to be a slave” (BR 01:41:01-01:41:11). It would be rather unsurprising if Roy would have not helped Deckard as he has killed everyone Roy felt connected and emotional to, but in that moment, Roy realizes how Deckard must feel, as he himself had to live with that fear of dying from the beginning and thus decides to help the Blade Runner. If the tables would be turned, it could be assumed that Deckard would not have helped Roy at all, as he would not have been able to understand what Roy has felt all his life.

Therefore, this is a very significant moment as Roy performs something unusual for a creature that is said to be without empathy. This scene shows that the criterion for being human, namely empathy, cannot be clearly ascribed to Deckard, but more to the Replicant.

Thus, it can be argued that the boundary between the self and the other is arbitrarily constructed in this novel. Before reviewing this in more detail, the self and the other have to be defined shortly. According to *The Oxford Companion of Philosophy*:

[A] self is conceived to be a subject of consciousness, a being capable of thought and experience and able to engage in deliberative action. More crucially, a self must have a capacity for *self*-consciousness, which partly explains the aptness of the term ‘self’.

Thus a self is a being that is able to entertain first-person thoughts.

It could be argued here that Deckard as a human being thinks of himself as a human capable of empathy and has a rather clear self-image. From his perspective, and probably also from the perspective of every other human in this world, the Replicants are seen as the other, because they feel that they cannot include them in the group of ‘human’, as they are told, and therefore perceive them as not being able to be empathic. The line between humans – the self – and the Replicants – the other – is therefore created by the simple fact that it should not be possible for the latter to develop empathy and emotions. The way the characters are created by Ridley Scott, however, shows the viewer that there is no real boundary. According to Lauritzen, the other “is all too often rendered dark and suspect” (18). This is also done in BR, but still the Replicants show, as has been established before, that they are capable of emotions and empathy. They also seem to feel connected to each other as they are sad when one of their little group is killed. Furthermore, it could be argued that Deckard is irritated by the fact that in the end Roy shows empathy towards him – and helps him to get back on the roof – as he was not suspecting such a behavior from the so called *other*. In this moment, he might have realized how frail these socially constructed borders are and therefore, started to rethink his

whole self-perception. This is the reason why he takes off with Rachael, an android, in the end to start a new life, after now having experienced how it is to live in fear of dying, thus having changed his world-view.

The importance of being alive and losing the mentioned fear of death is also an important issue in the movie, as the main goal for the Replicants is to find out how to stop them dying after four years. They get Sebastian to trust them, as he is fascinated by them as he also worked on the Nexus 6 program, in order to contact Tyrell – their creator – to ask him for a longer life. As they arrive at Tyrell Corporation to meet Tyrell himself, the viewer is confronted with a very religious scene as Roy calls Tyrell father and asks him to prolong his and the other Replicants' life. Furthermore, Roy is called “the prodigal son” by Tyrell before the father is killed by his son, while getting kissed (BR 01:19:43-01:22:14). First of all, Tyrell is in a god like position. He has created the Replicants who he apparently sees as his children, and at the same time, due to his own failure, created the four-year lifespan, thus becoming the one responsible for life and death at the same time. Second, one can argue that the kiss can be compared to the biblical scene when Judas betrays Jesus with a kiss (*New American Standard Bible*, Lk. 22:47-53). However, in this case the son betrays the father with a kiss, in a rage provoked by not receiving the answers Roy was looking for and desperation as he is not ready to die. In this scene Roy literally kisses Tyrell and after doing so brutally kills him. Kakoudaki points out the following:

The idealized difference between a powerful creator and a subjugated created being echoes primordial stories of divine creation as well as dialectical conflict between masters and slaves, with both poles subsequently devalued when seen against the “original” moment of creation. As we see in myriads of stories of overreaching scientists and their constructions, the two players fail to reach the

status they desire: the aspiring human does not become a god and the artificial person does not really become a person. (19)

This quote holds true when it comes to the movie at hand, as Tyrell is not able to become a real god as his creation still has flaws and is not able to live more than four years. Even though it has been stated that a four year life span has been installed for safety measures (BR 00:14:29-00:14:45), it seems at the end that Tyrell has tried everything to prolong the life of his creations, but failed. Furthermore, as the creator is not able to undo this wrong, Roy is prohibited of becoming a real human, as it seems that the limited lifespan is the only thing that is between him and his goal.

Before the final scene, when Roy helps Deckard in order to save his life, another religious theme is displayed as Roy pushes a nail through his hands, which resemble Jesus's stigmata. In this moment, it seems, the Replicant also realizes that he has no chance at all to survive and at one points accepts his fate and is ready to die. This also has some similarities with the crucifixion of Jesus, when Christ says: "Father, into your hands I commit my spirit" (*New American Standard Bible*, Lk. 23:46). There is also a symbol in the movie that indirectly shows that Roy accepted his fate, namely the white dove, a commonly known sign for peace. During the final scene when Roy helps Deckard to get back on the roof again (BR 01:41:55-01:42:04) he is constantly holding a white dove. This could highlight in this situation that the Replicant, offers Deckard peace. By accepting his fate, Roy is able to calm down, working against his programming as a combat humanoid machine, and is able to reflect on the whole situation and being able to show empathy towards Deckard. Furthermore, it could also show that the now accepted death gives Roy inner peace, as the dove flies away in the moment he dies and is followed by a camera (01:42:54-01:43:07).

These scenes again show that the Replicants in the movie are creatures that are extremely human. They do not feel physical, but emotional pain and, what is far more important, have the urge to life. Thus, as has been discussed, displaying another very human

factor. It is possible to summarize that in the movie, which is based on the novel by Dick, not only empathy and intelligence are factors for being human. They are mentioned, especially empathy is highlighted because of the Voigt-Kampff test, but the factor that seems far more important for being able to declare something as human or not, is the will and urge to live. Therefore, the movie adds another layer to the question of what qualifies as being human. Finally, as explained before, it can be said that the Replicants in the movie, show a lot of human traits, and again the ones that behave like cold machines up to a certain point, are the bounty hunters, especially Deckard. He behaves more robotic than anybody else in the movie and only when it comes to Rachael is he able to display emotions.

#### 3.2.4 *Ex\_Machina*

In EM the question of what constitutes a human and what does not is directly raised by one of the main characters as the plot of the movie starts developing around the question if the robot Ava has artificial intelligence. The movie discusses what human features are and from which point on the robot in question could be called a human being.

Caleb, an employer at the world's biggest search engine Blue Book, is, by using a fake raffle, selected by his boss Nathan for an experiment at his estate. Nathan has created a robot, Ava, and Caleb's task is to find out if she can be called artificially intelligent. For perfecting Ava Nathan's search engine was used. However, in the beginning he presents Ava to Caleb without hiding her robot parts. She only has a human face that, as one discovers later in the story, has been designed after Caleb's pornographic profile. He is confused in the beginning why Nathan shows him that she is a robot, as this would make it harder for her to pass the Turing Test. Nathan answers him by saying that: "[t]he real test is to show you that she's a robot and then see if you still feel she has consciousness" (EM 00:15:38-00:15:44). Throughout the whole movie the question if Ava can be called a conscious being, or strong AI, is constantly asked. In the end it is stated that she is such a being as Nathan explains the following to Caleb:

“Ava was a rat in a maze and I gave her a way out. To escape she’d have to use self-awareness, imagination, manipulation, sexuality, empathy, and she did. Now if that isn’t true AI, what the fuck is” (EM 01:21:26-01:21:31). One might argue in this case, that the early Ava, the one presented in the first session, could be called a computer that is reacting to questions. However, the later Ava has developed as she wants to escape her maze and has become more human. If she really does understand these concepts she uses or simply simulates them is not easy to say, even though Nathan wants the viewer to believe that she is strong AI.

Furthermore, as introduced in the movie EM itself, another thought experiment exists called Mary’s room. The thought experiment was discussed and designed by Frank Jackson in text “What Mary didn’t know”. In the movie it is called “Mary in the black and white room” and can be summarized as follows. Mary is educated in a black and white room and does not have contact with anything that has color. She learns about color, but only when she leaves the room she really starts knowing what it is like to see colors (Jackson 291). In the movie it is added that it is the moment when Mary leaves the room that she becomes human, and before when she was in her room, she is merely a computer. Taking this argument, one can add to the statement made before that Ava is becoming human because of the interaction with Caleb. Her interaction with Caleb can be compared to Mary experiencing colors for the first time so she can really start to understand them, the same way Ava starts understanding human concepts she had in her brain before. The final step to becoming human takes place at the end of the movie when Ava covers herself with artificially made skin and leaves Nathan’s house and in the last scene is seen in the human world, thus finishing her transformation. As Houswitschka points out, “[r]obots and androids challenge human evolution” (124). This can be seen in the movie, as it is not only pointed out how complex Ava is, but there is a scene when Caleb is not even sure anymore of his own identity and even cuts himself to see if he bleeds and has no wires inside (01:10:53-01:11:01). Furthermore, as portrayed in the movie,

the question of passing (Portelli 152) as a human is again asked, and one can assume that Ava does pass as a human, even though she shows Caleb that she is a robot.

One can therefore add several things that are seen as human characteristics to the ones that have already been discussed in the other books and movies, namely “self-awareness, imagination, manipulation, sexuality, [and] empathy” (EM 01:21:26-01:21:31). Sexuality seems to be very important in this experiment conducted by Nathan as Ava was designed for Caleb to find her attractive, which is probably the reason for her always to be called a she and never it. This highlights that she is not simply a machine but a conscious being with personality, identity and gender.

### 3.2.5 Humans vs. Robots

To summarize the various ways the robots have been described in the novels and movies it can be said that it is hard to distinguish them from humans on a mental, intellectual level. Some of them cannot even be distinguished on a physical level, without opening them. The way these creatures are treated in the novels shows, that they can be assumed to be comparable to human beings as they depict various human-like traits as has been discussed in the last chapters. These features that are displayed in the novels and movies would include various coping mechanisms, a sense for hierarchy, intelligence and emotions. They can all be called human features, and especially in BR, DAES and EM the reader has a difficult time figuring out if the human is the one behaving more like a machine or the robot itself. Before arriving at the final conclusion for this section, one has to discuss the last novel that has been chosen for this thesis.

### 3.2.6 *Cinder*

In the case of *Cinder*, the main character of the novel of the same name, the question of identity is not the same as in the case of the other robots, as she in fact has a human part in her, was born as a baby, grew up and has a family. This is different as the robots in the other

examples were built as grown-up robots, with a gender ascribed to them and a specific purpose. Cinder, however, is different. Before discussing the way she is depicted in the novel, one has to briefly outline its main plot. Cinder, a cyborg, is the stepdaughter of Adri, who has two daughters of her own. The father who adopted Cinder is not alive anymore, thus leaving Adri with Cinder. The story follows the classic Cinderella plotline: girl meets prince, falls in love with him, isn't allowed to go to the ball and so forth. However, the setting of this story is the future city of New Beijing that has to deal with an illness called Letumosis, for which no cure has been found so far. The conflict of the story results from Cinder's identity that is not a hundred percent clear until the end of the novel.

A second people is introduced, namely the Lunars, who inhabit the moon and are depicted as a rather violent and lying people (178), who have to kill their children that do not possess the gift under the dictatorship of Queen Levana (176). These Lunars who do not possess "the Lunar glamour" (179) are called "shells" (176). With the help of this Lunar glamour "[t]hey can manipulate it [bioelectricity in others] so that people see what the Lunar wishes them to see, and even feel what the Lunar wishes them to feel" (172). However, shells cannot be influenced by the glamour (179), "as she [Queen Levana] cannot trick the netscreens, neither can she trick a mirror" (172). By using her gift, Queen Levana controls her people and also wants to gain control over New Beijing. As Cinder is a cyborg, a Lunar, which is found out during medical testing for a Letumosis antidote (175) and also, as is revealed in the end, the missing princess Selene and rightful heir to the Lunar throne (380), she is in a constant identity crisis.

At the beginning of the novel she only knows that she is a cyborg and is unaware of her other 'identities'. However, this seems enough for her to handle as it is stated that "[t]he fewer people who knew she was cyborg, the better" (10). In general, other people seem to think negatively of cyborgs (5, 63, 65, 70) and thus, Cinder does not have a positive self-image. When she finds out that she is Lunar too, she states that "[o]ne was enough to make

her a mutant, an outcast” (178). In the first chapter at the market where Cinder works, the reader is informed that some of the other people at the market do not want to be near her (4), resulting in Cinder saying to herself that “wires are [not] contagious” (5). Even though some parts of her are mechanical, Cinder in general is a human being that also fulfills various criteria explained in the chapter before.

A thing that seems to make her less human, especially for Adri, is the fact that she does not have tear ducts (81). For Adri this seems to be a sign for Cinder not to be human as she assumes that she cannot feel emotions in general (63). Here again the notion of passing as human is very important to the protagonist herself and drives her actions (Mitchell 54). Identity is again a main topic in the narrative especially for the protagonist, who “although [she] considers her own emotions to be substantial and meaningful, [...] is consistently dehumanized as the family scapegoat” (Mitchell 54). Furthermore, Mitchell adds that “much of Cinder’s concerns throughout the novel may echo the typical teenage angst about not belonging, but the specificity with which that angst is tied to Cinder’s bodily make-up invites queerer analyses” (54). She argues that Cinder’s sexual identity is not clear due to her mechanic parts and continues to explain that Cinder, as she was not asked to become a cyborg, struggles to develop a concept of her own identity (55). Mitchell states that “[r]ather than an intrinsic conception of selfhood, Cinder’s identity comes from what others have put onto and into her body, once again destabilizing any notion of fixed coherence” (55). Due to this forced changes to her body, she is regarded as an outsider to those who know her secret, and also has the feeling that the people who do not know yet will soon find out and then of course dislike her. Being a cyborg in Cinder’s world is not giving her more freedom but is actually “alienat[ing][her] from virtually *all* possible sources of origins and community” (Mitchell 56). Cinder, as Mitchell puts it, is a trans creature who is not sure of her identity, is constantly confronted with the question of who she actually is. For the reader she seems to be a normal human girl, but for the other characters in the novel she is less than that as she is partially

made of wires and metal. Furthermore, it seems that the body is far more important for this community, as the protagonist is reduced to her artificial parts and there is no chance for her to prove to the people that she actually is 'normal'. This is combined with the problem that Cinder always reminds herself, due to the stereotypes that were constructed in the culture that she inhabits, that she actually is a lesser creature. She is not a mere machine, but also not fully human. In addition to all this, she finds out that she is Lunar too, and is plummeted into another identity crisis. However, towards the end when Cinder escapes prison after it has been revealed who she really is, the narrator informs the reader that she has new hope in her (386). Furthermore, she removes her ID chip, making it impossible to find her (387) and indirectly showing the reader that she will start a new life, with a new identity.

The novel which was published in 2012, on the one hand comments on racial issues, which can be seen in various passages throughout the novel when Cinder thinks less of herself due to her being a cyborg, and the way she is treated by Adri. On the other hand, as this book's target audience might be young adult readers, it also concentrates on this question of identity and becoming a different person. What is highly interesting for this thesis, is that Cinder's identity crisis is triggered by her not having knowledge about her own background. She cannot remember her youth at all, and also not why she became a cyborg. In BR and DAES the reader is informed how important memories are for humans, and in the case of Rachael in BR, they make her think that she is a real human. Even though Cinder is a real human, she does not have any memories resulting in identity insecurities. From this, it is possible to conclude that memories, knowing one's origin and in general growing up is something very human.

### 3.3 Robots, Cyborgs and Humans

The robots and cyborg that have been presented and described in the previous sections have all been described as different to human beings in the novels and movies. However, especially in BR, DAES, EM and CI, the reader sometimes struggles to remember who is the creature and who is the human, as the machines display more, or at least the same amount of

human characteristics on a mental level, as the people displayed in the works. Certain criteria are established by the authors that distinguish a robot from a human being. Most of these criteria are on a psychological level, as for example empathy and emotions. Furthermore, one can state that these robots, and also cyborgs are all intelligent creatures (see Harnad's other minds problem). In IR the robots, with the exception of Byerley, are distinguishable from humans on a mere physical level, however, they too show very human characteristics as has been described before.

The robots in general are always highlighted as being the other, in contrast to normal humans. It can be assumed, however, that these robots are used on the one hand to question the treatment of ethnic minorities (Portelli 152 ), thus science fiction can be said to reflect real world problems (Parrinder 4). By using this approach, it should be highlighted that even though the robots and cyborgs are depicted in a very human like nature, they are always the outsiders of society, thus forming a different social group. Because of this, the power relations between human and machine in these novels and movies will be discussed in the following section.

#### **4. The Slave of the Future**

As summarized by Hampton (2), the genre of science fiction not only tells a story set in the future with new technology and new ways of living being presented to the audience, but it also reflects certain aspects of reality and sometimes also indirectly comments on topics relevant to the audience. This chapter therefore investigates similarities between slaves and robots in the selected literature and discusses power relations. As has been established in the previous chapter, these robots can be called artificially intelligent due to Harnad's other minds problem (Harnad 45-46), thus being able to compare them to humans.

## 4.1 Social Groups

The robots the reader encounters while reading the novels or watching the movies are, as discussed in the previous chapter, very human-like. Some of them have a humanoid body, but can be easily identified as a mechanical being due to their physical appearance. Others, especially the ones in BR/DAES and Stephen Byerley from the story Evidence in IR cannot be distinguished from humans without a test. The focus in this section of the thesis will lie on the relationship between the robot, cyborg and their masters.

As the robots and cyborgs described in the novels and movies all work for someone, or should work for someone, one might ask the question if it is possible to see the robots as a suppressed social group. It is important to define the robot as a social group in this case, as according to Young (46-47) only social groups can be the victims of oppression. Young defines a social group as follows:

A social group is a collective of persons differentiated from at least one other group by cultural forms, practices, or way of life. Members of a group have a specific affinity with one another because of their similar experience or way of life, which prompts them to associate with one another more than with those not identified with the group, or in a different way. Groups are an expression of social relations; a group exists only in relation to at least one other group. Group identification arises, that is, in the encounter and interaction between social collectivities that experience some differences in their way of life and forms of association, even if they also regard themselves as belonging to the same society. (43)

In this case, it is important to Young that a group cannot create itself, but also needs a kind of reference group, which in the given case would be humans. The humans see the robots and

the cyborgs as ‘the other’ classifying them as one group. However, not only how other people see members of a social group is important for Young’s definition of a social group, but also a certain internal feeling of identity. She names an example (44) of Afro-Americans with a lighter skin than others, who still identify themselves as Afro-Americans. Thus it is possible to say that it is rather the social status than the feeling of identity that is important for creating a social group (Young 44). This is formulated similarly by Cudd:

What makes a person a member of a social group is not determined by any internal states of that person, but rather by objective facts about the world, including how others perceive and behave toward that person. (36)

However, for Cudd only these objective facts are important and not how group members identify themselves. She also discusses two different forms of social groups, namely “voluntary social groups” (37) and “non-voluntary social groups” (40). The names of these groups are, in a way, self-explanatory. Social groups that are voluntary are groups like football clubs, chess club and so forth, groups which one joins voluntarily and that follow a certain goal e.g.: winning a competition (37-40). The members of the “non -voluntary social group” (40-42) fall into the category of class, race and gender. One is not able to decide if one wants to belong to such a group or not. Cudd states that “[t]he members of a non-voluntary social group share social penalties and rewards consequent on their being so grouped” (41).

Before continuing to discuss oppression, the robots and cyborgs depicted in the movies and novels have to be looked at and it has to be clarified if they can be called a social group. In the case of IR, we have different stages of robot development over the course of several years. The first robot story is dated to the year 1996 and using Dr. Calvin’s age it can be assumed that the last story must have taken place before the year 2057 (IR 1-4). If only Cudd’s argument that objective criteria are important for defining a social group is used (36), then it can be argued that robots are a social group as long as they can be identified as robots

by merely looking at them. However, there are instances in which the robots work together and could be called social group not only by objective definitions. One of these instances is described in the story 'Reason' in which Cutie does not believe that he is created by humans, but believes that a higher being created him (IR 55). Later on in the story a kind of religion is formed by the robots with the purpose of working for 'the master', which is actually the energy converter (IR 60-61). Even though Cutie does not realize that by working for 'the master' he also performs the work he has actually been designed for, he in a way rebels against his human masters. By forming this religion in which 'the master' is the highest power and Cutie is his prophet (IR 63), a social group is created. While ignoring the fact that these robots can be distinguished from humans easily by their appearance, this could be called a voluntary social group as its members all follow a certain aim or purpose, namely to serve the master. Furthermore, one could argue that these robots would not work together, if they would not feel a certain connection. The other stories that are presented in IR are problematic to discuss in this context as they only depict how one robot interacts with humans (e.g.: Robbie) or does not give the reader any information on how the robots work together. However, there is a group in IR (231) called the "Society for Humanity" who "don't like the Machines [and] claim they're destroying human initiative". Furthermore, Susan Calvin informs her interviewer:

We sold robots for Earth-use then – before my time it was, even. Of course, that was when robots could not talk. Afterwards, they became more human and opposition began. The labor unions, of course, naturally opposed robot competition for human jobs, and various segments of religious opinion had their superstitious objections. (IR 4)

Later on, the interviewer is informed that robots were at all banned from earth and only permitted on earth for research (IR 29). This shows that the humans displayed a kind of fear

against these new man-made creatures. They wanted for earth to stay robot free, thus creating extra laws for the social group robot.

In BR and DAES it is easier to show that the androids or Replicants depicted can be called a social group. On the one hand they have to perform certain tasks for the humans in the colonies (DAES 14) and are killed when fleeing to earth (DAES 27), and abandoning the work they were made for. Even though one cannot directly distinguish them from humans by appearance only, there are special rules just for them, seeing them as an extra group, not included under the umbrella term 'human'. On the other hand, by fleeing the colonies, the androids help each other to get to earth and try to protect one-another, which is an example of feeling connected to each other which can be seen especially in the novel when Pris calls Roy and Irmgard her best friends (DAES 29).

In the movie, this connectedness can be seen when the group of the four Replicants, namely Roy, Pris, Zhora and Leon, are hunted by Deckard. When Zhora is killed, Leon is angry and seems to be sad and wants to revenge his fallen friend. The same reaction is displayed by Roy when he is the only one of the four Replicants left. Furthermore, they can be seen working together to get some answers concerning their expiration date.

EM first does not show the robots in interaction with each other, or how society reacts to them. However, it is shown that the creator of the robots sees them as his property, which, in his mind, allows him to do whatever he wants to do with them. At one point in the movie Nathan is compared to a god by Caleb (00:10:42-00:10:45). This seems to be the way Nathan is behaving throughout the movie, as it is later shown that he thinks that he has the power over his creations and also over Nathan. An interaction, or a bonding between the two robots can only be seen in the end between the two robots (Ava and Kyoko) when they combine forces to break free from the prison of their creator. They also share a moment when they talk to each other and even though the audience does not hear what they are talking, it seems to be a very important and intimate moment. It can be speculated that this is the moment when they realize

that they both suffer under Nathan and have to join forces to escape. Furthermore, the whole movie plays with the idea of ‘we’ human and the other, the robot different from ‘us’, showing that there are two different groups present. However, as explained before, it is Nathans aim to create a robot that is similar to human, but still, as he sees himself as superior wants them to follow his command. This can be seen especially in the treatment of Kyoko who is cook, servant and sex toy at the same time.

Finally, it can be stated that the cyborgs in CI are first of all seen as a lower social group. This is seen in the description of the cyborg draft and how Cinder interprets it. In addition to that, cyborgs do have less rights than humans in this setting. Furthermore, other people think of cyborgs as lesser creatures, which are therefore more suitable for medical testing (70) and it is also stated, “that cyborgs were not like everyone else” (29). In these few statements one can clearly see that also in the case of Cinder and the other cyborgs a differentiation between them and ‘pure’ humans is made, thus qualifying them as a social group.

## 4.2 Oppression of Robots and Cyborgs

As described in the last section of the thesis, robots can be called a social group according to the definitions of Cudd and Young. The question that now arises is the following: Can robots, especially those depicted in the selected novels and movies, be called an oppressed social group?

Cudd (25) lists 4 requirements that have to be fulfilled to talk of oppression:

- 1) *The harm condition*: There is a harm that comes out of an institutional practice.
- 2) *The social group condition*: The harm is perpetrated through a social institution or practice on a social group whose identity exists apart from the oppressive harm in (1)

- 3) *The privilege condition*: There is another social group that benefits from the institutional practice in (1)
- 4) *The coercion condition*: There is unjustified coercion or force that brings about the harm

To find out whether all of these conditions are fulfilled, one now has to analyze the depicted robots and cyborgs in the novels and movies. However, it must be remembered that the robots in question can be said to have a mind and a consciousness, as has been stated before. This makes them similar to human beings, at least on a mental level.

The 'harm condition' (Cudd 25) is easily observable in BR/DAES as the androids/Replicants are simply killed if they refuse to work for the humans (DAES 27) or return to earth as also explained in the opening titles of BR (00:02:05-00:02:09). Thus, they cannot decide what they want to do and are restricted in their freedom (if one can talk of freedom at all).

In CI, as pointed out by the main character, there is the general feeling that cyborgs are seen as lesser creatures, resulting in Cinder thinking less of herself. This lowered self-esteem can be seen in the various parts of the novel where Cinder talks to the prince and fears that he could find out that she is a cyborg.

In IR one could argue that the robots, as they show that they have a consciousness and are able to reflect on their work, as described before, are seen only as machines that could be replaced with another one if they have a malfunction. Thus these robots are reduced to mere objects, as if they were not able to feel anything at all. However, according to Harnad's other minds problem (45), one has to assume that they can feel, just as humans do. Furthermore, at a later point as humanoids are forbidden on earth, it can be argued that they are forced to work in mines and are not able to do anything else, which could also be called harmful if one sees the robot as a machine that is able to understand emotions.

A problem arises with the depiction of the robots in EM. We cannot talk about an institutional practice as there are only two people present and not the whole society is involved in the ‘experiment’. However, it is possible that the creator of the robots takes the place of the institution, hence harming the robots that are not distinguishable from humans, by forcing them to stay with him and by also using one of them as a servant and ‘sex-slave’. Furthermore, there is a scene in the movie, when CCTV footage of older robot models is shown and Caleb witnesses a conversation between Nathan and a robot. In this scene Nathan asks the robot how she is “feeling today” and the robot answers with the question “[w]hy won’t you let me out” (EM 01:07:43-01:07:48). This scene shows that the robot does not want to live in this room, but wants to see the real world, wants to learn and experience new things. This can be called harm, especially as this conversation is followed by a scene in which the robot in question bangs her fists against the door repeatedly until her mechanic hands and forearm break.

It thus can be said that the first condition is met in all the novels and movies.

The second condition, the ‘social group condition’ (Cudd 25) has already been discussed before, when questioning if the robots and cyborgs can be called a social group. They fulfil this requirement as first of all, the humans see robots and cyborgs as a different group in society and second, they themselves have a conscious feeling that they are different from the humans. This results in a social identity amongst robots.

Robots in IR and DAES/BR are produced to help the humans. In DAES they should work in the colonies “as body servants or tireless field hands” (14) and as explained in the opening titles of BR “Replicants were used Off-World as slave labor, in the hazardous exploration and colonization of other planets” (BR 00:02:06-00:02:09).

In IR, as depicted in the different stories, they should make life easier for the people on earth. Thus, one can say that the ‘privilege condition’ is met, as the robots do not earn money by working and when buying the robot their producer receives the money. The androids/Replicants in DAES/BR seem to earn money by disguising as humans and

performing normal jobs. Lula Luft for example works at the opera and Zhora (in the movie) is a variety dancer. If one sees the robots as equal to humans due to their ability to understand (Searl 349-350) one could say that they are exploited as they do not get any reward for working for the humans.

In the case of CI there is only one instance in which it is possible to argue that cyborgs in general, not only Cinder, are exploited by the humans, namely the cyborg draft. It is the only general information the reader receives on all cyborgs, as the rest of the book focuses on Cinder's situation only. Even though the cyborg draft was actually created to find Cinder, as revealed towards the end of the novel, one can still see that it describes the attitude towards cyborgs perfectly. As mentioned before, a medical assistant states that it is better to test if the antidote for the plague (Letumosis) works on cyborgs, before using humans (CI 70). Furthermore, Cinder herself states that humans had no problem using cyborgs as guinea pigs (CI 28), which shows that the humans in her universe are privileged compared to the cyborgs.

In EM society has again to be reduced to the house in which the story takes place. Thus, it is possible to say that the robots are used for a special purpose that helps their creator to achieve his goal. As the creator, he stands above the robots in the hierarchy, thus giving him privileges which can be seen in the instances in which the robots fulfill his wishes without scrutinizing them. Nathan does have the upper hand in the beginning, as the robots do not have any help and due to the construction of the house are not able to leave without the help of somebody. There are several security measures, thus making it possible to compare the house to a modern prison with only Nathan being able to access all areas.

The last condition described by Cudd (25), the 'coercion condition' can be seen in all robot-cases depicted in the books and novels. The robots in IR, DAES and BR are deprived of their freedom of choice, thus getting harmed as they can be seen as conscious beings. The same holds true for the robots in EM as they do have to work for their creator in his house, or taking part in his experiments, resulting in a rebellion to break free at the end of the movie. In

Cinder's case it is far more difficult to tell as there are not many incidences with other cyborgs but her. The situation with the cyborg draft has been described before, however, the cyborgs actually should volunteer for this draft. But, as seen in the protagonist's case, her stepmother decides for her to partake in the draft, (CI 66). This leads to the conclusion that other cyborgs could also be enlisted for the draft by other people (e.g.: family members), or have the feeling that they must partake in the draft. This feeling of coercion might be the result of owing something to science (CI 29), as it was science that saved the humans by making them into a cyborg.

With the exception of Cinder, all the other robots are deprived of their freedom of choice and forced to work, in some cases leading to rebellion (BR/DAES and EM). In Cinder's case, she herself is forced to work for her stepmother, but this cannot be assumed for all cyborgs in that universe. However, it can be said that a 'mental coercion' is taking place as most of them might feel that they have to act in a certain way as they are 'lesser creatures', which seems to be the general public's opinion (CI 5, 19, 70).

As one can see, it is possible to describe the robots and the cyborgs in the novels and movies as a social group that is being oppressed by the humans.

In addition to Cudd's description of oppression, Young establishes "five faces of oppression" (39) namely exploitation, marginalization, powerlessness, cultural imperialism and violence (48-61). Young concentrates, as mentioned before, on social groups being oppressed. However, as explained above, also robots and cyborgs can be considered a social group under certain circumstances. Before analyzing the works selected for this thesis, the forms of oppression Young describes are discussed in this section.

Exploitation, as she describes it (49), can only take place if there is a group that is beneath another group in the social hierarchy. The most important point, Young explains, is that the 'higher' group benefits from the subordinate group (49). This could mean that the 'lower' group would have to work for free (or for nearly nothing) or are even enslaved by the

superordinate group. This goes hand in hand with Cudd's "privilege condition" (25) that has been described before.

Due to marginalization, the subordinate group is denied certain jobs, access to events and so forth, thus causing a feeling of "uselessness, boredom and lack of self-respect" (Young 55). Therefore, one can conclude that marginalization does not only take place in a professional context, but also on a social level. Young (55) also states that those who are marginalized are denied access to cultural practices, resulting in them being outsiders of society.

The third form of oppression is powerlessness and is defined by Young:

The powerless are those who lack authority or power even in this mediated sense, those over whom power is exercised without their exercising it; the powerless are situated so that they must take orders and rarely have the right to give them. Powerlessness also designates a position in the division of labor and the concomitant social position that allows persons little opportunity to develop and exercise skills. The powerless have little or no work autonomy, exercise little creativity or judgement in their work, have no technical expertise or authority, express themselves awkwardly, especially in public or bureaucratic settings, and do not command respect. (56-57)

Even if those people would actually be able to learn new techniques, they are not allowed to and are kept at the same knowledge level, thus making it easier to control them.

Young (58-59) describes cultural imperialism as a form of suppression via cultural norms. The culture and traditions of the superordinate group are seen as the only true ones and the culture of the subordinate group is being ignored, thus forcing them to adhere to the

cultural norms of the dominant group. This also includes a way of thinking about the ‘lower’ group (including stereotypes) that are transferred to the mindset of its members (Young 59). Her last face of oppression is violence which, according to her, “is systemic because it is directed at members of a group simply because they are members of that group” (62). This form of violence, she continues, is often tolerated as it happens frequently. Furthermore, groups of people commit this kind of violence and one cannot speak of a single perpetrator. These assaults could be called random attacks on subordinate social groups, simply because they are seen as inferior, or sometimes to remind them that they are not like ‘the others’ (Young 62).

After the basic definitions of Young’s five faces of oppression have been described, the novels and movies are now analyzed to see if these forms of oppression can also be found when it comes to robots and cyborgs. It has been mentioned before that these different robots in the novels and movies can be called a social group and thus can suffer from oppression. It has to be kept in mind however, that they have to be seen as beings with a consciousness and also feelings as described before.

As the situation in BR and DAES for the androids and Replicants is nearly the same, the movie and the novel are going to be discussed simultaneously. The andys or Replicants, are forced to work in the colonies, as explained before and are not allowed to change their occupation and home planet. The exploitation of the robots can clearly be seen due to the description of their tasks “as body servants or tireless field hands” (DAES 14). There is also an advertisement for the colonies in BR that states:

A new life awaits you in the Off-world colonies. The chance to begin again in a golden land of opportunity and adventure. The custom-tailored genetically engineered humanoid Replicant – designed especially for your needs. (00:07:52-00:08:15)

As one can see, every human gets a Replicant/android and nowhere in the novel or movie is it said that these robots are paid for their work. In the movie the jobs of the Replicants that escaped from the colonies are stated at the beginning when Deckard receives the order to retire them (00:11:33- 00:11:37). The jobs the Replicants have in the movie are far more aggressive than the ones their counterparts in the book have. These jobs are listed in their files as functions and these are for example “combat, retrained political homicide, military, leisure and loader” (BR 00:14:04-00:14:40). At one point in the book (DAES 130) it is said that “Roy Baty and Irmgard ran a drugstore”. Furthermore, “Horst Hartman [...] ran a stamp store” (DAES 131). This leads to the conclusion that robots also perform ‘normal’ jobs on Mars, but still there is no comment on payment or if they are forced to work in these shops in the novel. It is not clear why the jobs the Replicants have in the movie are such different from the ones they have in the novel. These professions could be an explanation for the Replicant’s aggressive behavior in certain situation which is why they were chosen in the movie. However, in general, the escape of several robots to planet earth can be interpreted as a reaction to their oppression in the colonies, thus not being happy with the situation in general. It is not able to comment on marginalization or powerlessness, as there are no instances described in the novel or movies that point to them. However, the robots are hunted by Deckard as they fled from the colonies, which is not allowed by the superior group, the humans. As they are killed only because they are robots, it is possible to state that violence can be observed toward this group in DAES. Furthermore, as leaving the colonies is seen as a kind of crime and is punished with death, one can assume that the robots are seen as a subordinate group that has to follow the rules constructed by the humans.

It could also be argued that cultural imperialism is performed by the makers of the androids in the movie and the novel, especially in those cases when the android is implanted a memory chip thus giving them false memories that create their personality and background (DAES 51). These memory chips can be called to ultimate tool for ‘indirect’ oppression as the

androids might not even know that their memories are false. Furthermore, these chips rob them of their free will and ability to create their own memories. In the movie it is Rachael, a Nexus-6 Replicant who is tested by Deckard. He finds out that she is in fact a Replicant, but that she does not know about her true identity. Upon confronting her with the truth she is completely shocked and it takes some time for her to adjust to this new situation (BR 00:20:43). Tyrell himself reveals that Rachael is “just an experiment, nothing more” and that they at Tyrell’s corporation “create a past that gives them [the Replicants] a pillow for emotions, which makes them easier to control” (BR 00:21:05-00:22:15). In this scene it can be seen that they first of all use Replicants for testing, but also want to make them “more human” which leads to giving them emotions. Therefore, memories are apparently needed, thus injecting them with norms and conventions of the human culture.

In IR all the five faces of oppression can be found. Generally, it can be said that the robots do not experience direct violence, meaning that there are not any people the stories that go out on the streets to physically fight against the robots. However, this might not happen as the robots are forbidden on earth and are just used on other planets, or asteroids. This might be called marginalization as the robots are not allowed to take part in social practices conducted on planet earth and are seen as mere workers. There are also groups that are against the use of robots, and in the last story there is a worker mentioned that belongs to the “Society for Humanity” (IR 231) which is against robot/machine usage on earth. They “claim they’re [the machines] destroying human initiative” (IR 232). It seems that there is a general tendency, especially towards the end of the book (in the later stories) to accept machines, however, there are still people left that are against their usage. IR tells the stories of different robots, that are designed to work in different jobs, all too demanding for humans or even impossible. These robots are designed for a specific kind of work and are not allowed to perform any other work. However, as they are complex creations, as described in the stories, they would be able to learn new things and be creative, thus showing that the humans, also with the help of the three

laws of robotics, are suppressing them. The relation of the three laws of robotics and suppression is going to be discussed at a later point in this section when robots will be compared to slaves. Furthermore, one could state that in the case of Steven Byerley (IR 186-217) it is made clear that he would have no chance of becoming elected if he were a robot. Thus, to escape this oppression by the humans he has to ‘become’ human in order to succeed in his career. However, if the assumption is true that Byerley is only the robot version of his teacher who ordered him to take his place (IR 208), the robot again is under full human control and not able to decide for himself.

In CI the oppression of cyborg’s can be seen more clearly. As has been explained before they are used to find a cure for Letumosis and even though the cyborg draft is used to find the lost princess (CI 382) it creates a negative feeling towards the cyborgs. The public does not know that the cyborg draft is used for something else than finding an antidote. Thus they seem to think, as Cinder expresses, that the cyborgs owe their life to science (CI 29). Furthermore, it is established in the first chapter of the novel that these creations are seen as lesser creatures. In this scene Chang Sacha who works in a booth near Cinder’s at the market, orders her child “not to play so close to - “(CI 5). It seems that Sacha does not even want to use the word cyborg. This situation is met by Cinder mumbling “[i]t’s not like wires are contagious” (CI 5). One can detect hints of racism in this situation, as Sacha does not want her child to play near Cinder as she knows that she is not a real human. Furthermore, one can assume that it is not the first time that Cinder is confronted with such a situation as it is stated that it might be better that only few people should know what she really is (10). In addition to this, her booth at the market and her surroundings are described as follows:

It [her booth] was squeezed into a shady cove between a used  
netscreen dealer and a silk merchant, both of whom frequently  
complained about the tangy smell of metal and grease that came  
from Cinder’s booth, even though it was usually disguised by the

aroma of honey buns from the bakery across the square. Cinder

knew they really just didn't like being next to her. (CI 4)

Sacha thus is not the only one in the market who detests Cinder, but it is a general repugnance towards Cinder and what she is. She is furthermore exploited by her stepmother, Adri, to perform different chores, as for example working at the market and fixing different things at home. Her mother is the one who really benefits from her work as she, as is explained in the novel, owns her and also the money she makes with her work. When the stepmother finds out that Cinder bought herself a new foot, she orders her to use the old one again and wants her to pay back the money that was spent for this purchase. As Cinder belongs to Adri also all her belongings are hers. Thus, to prove that point, she orders Cinder to give her the newly bought foot which establishes the hierarchy and also shows her that she is powerless in this situation. (CI 280-281). Furthermore, Adri states that she treats Cinder "like a common cyborg" (CI 276) when she has her brought home by "law enforcement" (CI 265) under the pretense that she thought Cinder was running away. In the conversation it seems as if a "common cyborg" is something far worse than a "common criminal" (CI 276). During the fight for her foot Cinder realizes the following:

Jaw working, Cinder struggled to form an argument. But legally the money had been Adri's. Legally, *Cinder* belonged to Adri. She had no rights, no belongings. She was nothing but a cyborg. (CI 281)

In this short quote, it is explained to the reader that as a cyborg, Cinder has no rights at all, thus is powerless, as what her stepmother says counts and nothing else. Furthermore, she is not allowed to attend the ball and one can assume, other social events due to her identity, thus being marginalized. It is also possible to see that the stereotypes developed by the dominant social group are influencing Cinder's thoughts. This negative self-image created by the constant reminder that she is not human, is the reason why she feels powerless most of the

time. She has to endure the laws created for cyborgs and cannot do anything against her situation.

EM again presents a different situation as the other works, as it does not involve a whole society but 4 people, or to be precise 2 men and 2 robots that were ascribed a female gender. As the robots are of a strong AI and can be called, as discussed in the movie itself, conscious beings, it is possible to say that they are exploited by Nathan for his experiments of creating an even better robot. Furthermore, Kyoko is also exploited as a house servant and Nathan's personal sex-slave. These robots know about certain social conventions, but are denied access to those as they are imprisoned in the house and have to follow Nathan's rules. This could be called marginalization and powerlessness due to their identity and one can see that they suffer under these conditions as older models always asked why they cannot leave this place (EM 01:07:43-01:07:48). Furthermore, the attitude of Ava towards her creator can be seen in one of the conversations when she asks him: "Is it strange having made something that hates you?" (EM 01:19:31-01:19:35). At the beginning, no direct violence against the robots is shown, but Nathan likes to remind them that he is the one who is in power and deprives them of their freedom and uses them for whatever he wants to.

#### 4.3 Machines and Slavery - Asimov's Three Laws of Robotics

As has now been established, the robots and cyborgs in the selected novels can be called an oppressed social group following the definitions by Cudd and Young.

Hampton, in the Introduction to his book *Imagining Slaves and Robots in Literature, Film, and Popular Culture* explains that there are a lot of similarities between the depiction of robots in science fiction and slavery (ix-xvii). He also states, that "although the terms 'domestic robot' and 'house slave' may initially appear to be unrelated, they are in actuality synonymous when one begins to interrogate the truth of American History and destiny" (1). Hampton then continues by explaining what slavery was all about:

Slavery, after all, was largely invested in producing and controlling a labor force, which was dissociated from humanity. In many regards American slavery was a failed experiment to employ flesh and blood machines as household appliances, farm equipment, sex toys and various tools of industry without the benefits of human and civil rights. (2)

It is possible to apply this definition of slavery directly to robots in general. They are human-made machines to fulfill certain tasks, namely the same ones that were mentioned in the quote by Hampton above. Furthermore, as slaves, also robots and cyborgs (as presented in CI) do not have any rights, are not allowed in certain places and have a master. In the stories presented in IR the masters are either private persons (as in the first story Robbie) or employees of US Robots who produce the robots. There is, however, a certain point in the later stories, especially in the last one called 'The Evitable Conflict', where it is not that easily distinguishable if the machines really do have a master or if they have already become the master as it seems that they have more control than their 'masters' know. This seems very interesting as the humanoid robots were banned from earth (IR 29), as it was feared that they would take away the jobs of humans (IR 4), as has been established before. Even though this precaution was taken, in the end, the Machines mentioned in the last story indirectly control the humans that work for it. However, these Machines are not humanoid robots, rather than a kind of computer that calculates everything, or as Susan Calvin states:

[T]he Machine is conduction our future for us not simply in direct answer to our direct questions, but in general answer to the world situation and to human psychology as a whole. And to know that may make us unhappy and may hurt our pride. The Machine cannot, *must* not, make us unhappy. (IR 244)

All the other robots, with the exception of the Machine, presented in the novels and movies can be called modern slaves according to the definition of Hampton mentioned above. These Machines started out as computers doing the calculations the humans wanted them to perform, but have long ago stopped being really controlled by humans. They cannot really work against these Machines as they would also calculate that and gain control again.

Right at the beginning of IR one encounters a good example for such similarities between slaves and robots. Hampton stresses that “Mrs. Weston’s derogatory description of Robbie [as ‘terrible machine’] can too easily be replaced with the Antebellum term *Bad Nigga*, which carries the same level of malevolence intended for any field or house slave” (7). Robbie is called “terrible machine” by Mrs. Weston in the first story by Asimov (11) as she is displeased with her daughter being so fond of their “nursemaid” (IR 9). In addition, Portelli states that “[t]he analogy between Blacks and robots is obvious in most of Asimov’s work, though he makes half-hearted attempts at covering it up” (152). This phenomenon can also be seen throughout IR as the robots are not wanted on earth and are generally seen as a menace to real humans. In order to reassure the people of planet earth that nothing could ever happen to them Asimov invented the three laws of robotics that are implanted into every single robot. According to Houswitschka (124) Asimov had a great influence on the literature and also on the movies that followed his works. Therefore, one should also review his famous three laws of robotics. These laws can also be seen as a mean to control robots, thus leading to oppression.

The three laws of robotics are:

- 1- A robot may not injure a human being, or, through inaction, allow a human being to come to harm.
- 2- A robot must obey the orders given it by human beings except where such orders would conflict with the First Law.

- 3- A robot must protect its own existence as long as such protection does not conflict with the First or Second Law (IR)

The laws of robotics are introduced in IR before the introductory chapter without any further explanation. In the text, some behaviors that the robots show are explained via these laws. In the story “Runaround” the robot Speedy does not finish his work properly due to a conflict of the three laws. Speedy is supposed to receive selenium from the surface of Mercury, while the two workers of US Robots are working beneath the surface. The selenium is needed to fuel the power the “photo-cell banks” so that the workers would not die “by slow broiling” due to the strong sun (IR 33). However, Speedy does not return with the selenium but circles the selenium pool. Later in the story it is explained that he behaves that way as the third law of robotics has been strengthened by his builders, due to his high production value (IR 44). As there is a danger of some sort near the pool of selenium, rule three drives Speedy away from it, but as he was ordered to retrieve the selenium, rule two pushes him toward that pool as “it strikes an equilibrium” (IR 45). The robot Speedy is in this situation controlled by the rules of robotics.

There are also other nameless robots depicted in this story, which are described as extremely large, so that a human can ride them, and as dumb and simple (IR 34-36). Furthermore, it is highlighted that these robots have “a healthy slave complex” (IR 35) built into them and always respond with “[y]es, Master” (IR 35, 36). It is explained that these answers were apparently programmed into these robots to make them more attractive for people on earth, so that humans might rethink the ban of talking robots (IR 35). It can therefore be stated that in the second story of Asimov’s novel, the first conflict between the laws of robotics has been described, besides showing how enslaving these laws in fact are.

The way these rules make Speedy behave is the same way a human might behave if they are drawn between what they want and what certain rules or social norms dictate.

However, in this situation the rules are far stronger than social norms, thus can be seen as “a model for social control” (Portelli 153). Portelli explains that:

The First Law establishes class hierarchy and subordination, the interiorization of power relationships: the Second is the law of discipline [...]; the Third is the law of the preservation of the labor force. Taken together the Three Laws guarantee the social stability which is essential to the dynamics of human capitalist and territorial expansion [...] (154)

These three laws are thus not only used to control the robots, but also to assure the society living in that world that everything is stable and that there will not be a robot uprising of any sort. This is also ensured in the story “Robbie” when the reader is informed that a robot would become “completely inoperable” (IR 13) before he could break the laws of robotics.

Susan Calvin also explains in the novel itself that the first law is the one law that enslaves the robot and is thus the most important:

All normal life [...] consciously or otherwise, resents domination. If the domination is by an inferior, or by a supposed inferior, the resentment becomes stronger. Physically, and, to an extent, mentally, a robot – any robot – is superior to human beings. What makes him slavish, then? Only the First Law! Why, without it, the first order you tried to give a robot would result in your death. (IR 131-132)

Here again, it is highlighted that the laws of robotics ensure enslavement and safety so that no harm can come from a robot that is programmed with them. The way Asimov highlights that people would be save from robots if they are designed with the laws of robotics shows that there must have been a certain fear of technology at the time of his writing.

This fear of machines is also explained in Portelli’s text, as explained before, when he states that the events reflected in Asimov’s works is more concerned with the threat of middle

class workers losing their jobs due to machines and also “ethnic minorities – who were claiming an equal share in the labor market, thus pulling the wage scale down” (151). He continues to state that Asimov created an obvious “analogy between Blacks and robots” (152) and furthermore highlights that what is feared most is the notion of “passing” (152). Due to these points a comparison between ethnic minorities (slaves/cheap workforces) and robots can be made. As well as in the real and fictional world – as its reflection – a fear of the other is expressed. Kakoudaki also points out that:

In the specialized discourse of the artificial person the narrative treatment of this diegetic fantasy of animation is honed in the gothic experiments of the eighteenth and nineteenth centuries and continues to channel the era’s political and racial anxieties. (17)

Robots as minorities, but cheap workers are send to plantations or to mines on other planets and are not allowed to work on earth thus separating them from humans. This can be directly linked to the way ethnic minorities were viewed at that time, as also Portelli has pointed out (151-152). With the help of the three laws of robotics, the free will of the robot, which has been established before, is taken away to guarantee the dominant group, the humans, superiority. Portelli furthermore states that “[t]he Three Laws are thus shown to be much more than controls over a potentially dangerous artifact: they are a strategy for controlling productive labor, for keeping the labor force docile” (153). He then continues explaining that again these robots can be compared to slaves as they were the master’s machines and tools (153). This statement is followed by the conclusion “that the robot is machine and worker together” which “only doubles the guarantees of control” (153). He furthermore compares Susan Calvin, an important robo-psychologist that is interviewed in IR, to a “slave owner speaking of his slaves” (154). The robots are not given an own voice but they are talked about and others make judgments about their work and their behavior. Stereotypes are applied and the robot, as the subordinate group, is seen as a menace to human work forces on earth.

In DAES and BR, androids that have escaped from the colonies and are trying to come to earth, have to be retired (killed) (DAES 27) as they abandoned their master. According to the novel, their sole purpose is to work “as body servants or tireless field hands” (DAES 14). Here again we have similarities to black people working on fields/plantations or caring for their masters. Parish (17), in his book on slavery, explains the various jobs of slaves in America with a lot of them also being “field hands” (17). Here we can see a clear similarity between jobs slaves had and the labors described in DAES the androids have to perform. In BR the Replicants that fled the colonies have different functions as the ones in the book. However, it is said that everyone receives a “custom tailored, genetically engineered humanoid Replicant, designed especially for your needs” (00:08:07 – 00:08:15). Even though the Replicants Deckard has to hunt down, have ‘professions’ that can be located in the military field, it can be assumed that there are other robots which have the only function to please a human being. In addition, the advertisement that promotes these Replicants that are made for each and every human that leaves for the off-world colonies, suggest that these robots are like servants. They have to do what their masters want them to do, as they are just designed for this purpose. It can also be assumed that these Replicants are Nexus-6 too, thus making them very human like. It is possible to imagine that some robots are simply used as company, but others might be forced to work, or are even used for pleasure. Furthermore, one is able to find another parallel to slavery in both BR and DAES. It is pointed out by Forsdyke that:

The formation of colonies of runaway slaves [...] is attested in both ancient and modern slave societies and was one of the most effective methods for slaves to achieve some measure of control over their lives without taking the risks inherent in a more widespread rebellion. (21)

In a certain way, it is possible to call the ‘fake’ police department (the Mission Street Hall Justice building) in DAES (97) such a colony as described by Forsdyke (21). There are many

androids in this building, all have escaped from the colonies and are now working at this department. As it is explained to Deckard the whole building is “a homeostatic enterprise [...] a closed loop, cut off from the rest of San Francisco” (DAES 107). Even though it is pointed out that androids seem to not care for other androids, this small haven of peace has been created in which the androids can work and are not hunted down as nobody seems to know about them. In the movie BR this building does not exist or is not mentioned at all. However, the Replicants come to earth to find answers on how to prolong their life. This could be understood as them wanting to live, but not in the way they did before. By hoping to receive the key to a longer life they might also have had plans to start a new existence on earth. This could also be called the beginning of the formation of a colony for Replicants on earth, which in the end however fails.

In EM there is Kyoko, an Asian looking robot that is used by its creator as a waitress, cook and also sex robot. The way she is depicted is very interesting, as she does not speak any English and is probably designed to be appealing to her creator Nathan, as he also uses her for pleasure. Donovan (147-148) explains that, especially but not only on slave ships, it was common that female slaves were used for intercourse and that they sometimes were treated better by the masters/seamen in order to sleep with them. Kyoko, in EM, could be treated as such a slightly more privileged slave. She is allowed to move freely in the house, has a skin and clothing. However, she has to do chores around the house and has to be sexually available for Nathan. As she cannot speak, one is not able to tell how she feels exactly in this situation, but it can be assumed according to her facial expressions that she is simply doing what she is asked for. In the end, when there is a glimpse of hope to escape from her master, Kyoko is the one who initially stabs Nathan in the back. The main character Ava has a ‘higher’ purpose, namely to charm Caleb, in order to escape her maze and to show him that she could be passed off as a human being. However, she has to do that against her will and has an urge to escape and live her own life.

Nathan knew what he was doing, as has been already explained, namely giving Ava a chance to escape, thus making her show that she can be called an AI. Ava saw Caleb as a source of hope, as a means to flee from her master. It can be stated that by showing that she was indeed human, intelligent and a conscious being with the urge to be free, she was able to make her journey into the real world, leaving her slave-past behind her.

In CI we have a different situation as Cinder was not completely made, but ‘naturally’ born as a baby and only later received her artificial parts. The reason for that operation is only later revealed in the story and was unknown to Cinder and also her stepmother. Her stepmother treats her like a servant and her only task seems to be fixing things, as she has a talent for that. It is explained to the reader that Cinder is not seen as a human because she is a cyborg in the following quote:

Legally, Cinder belonged to Adri [her stepmother] as much as the household android and so too did her money, her few possessions, even the new foot she’d just attached. Adri loved to remind her of that. (24)

It can be seen that not only cyborgs, but also the androids in this story are treated as something that can be possessed by someone. In this case it is Cinder’s mother who ‘owns’ her and can also track her with the help of the ID-chip everyone, also humans, have implanted in their arm. However, there is no incidence described in the novel, in which a human is tracked by this device. Only Cinder, the cyborg that is apparently a lesser creature, is tracked as it is against the law for her to run away. Adri also decides, after her youngest daughter catches Letumosis and Adri assumes that it is Cinder’s fault, that Cinder has to partake in “the cyborg draft” (28). Cinder doesn’t want to volunteer herself for the cyborg draft as most cyborgs die during the procedure. The draft is described by Cinder as follows:

[Cyborgs] act as guinea pigs for the antidote testing. It was made out to be some sort of honor, giving your life for the good of humanity,

but it was really just a reminder that cyborgs were not like everyone else. Many of them had been given a second chance at life by the generous hand of scientists and therefore owed their very existence to those who had created them. (28-29)

As we find out later in the story, the cyborg draft was actually used to find Cinder, who is an important character in an interplanetary game of politics. However, in this short paragraph about the draft, the reader can see how Cinder feels about her situation, or the situation of cyborgs in general. They are seen as lesser creatures because they are not human and in her case she has her evil stepmother who controls her life.

Furthermore, Cinder's stepmother could be compared to a South Carolina slave owner as described by Little, who states "that masters had complete personal dominion over their bondspersons" (87). In addition to that, slaves were not allowed to travel freely and had to carry identification (Little 95), which can also be compared to Adri tracking Cinder and calling her a runaway cyborg (267-277). It also seems that Cinder is seen as a property by Adri that she can command. This is also highlighted by Little (97-98) as he explains that slaves were property and when harmed or killed by others (e.g.: government) the "masters were to be compensated" (98). Comparing Cinder to such a slave, as she is owned by her stepmother and, as exemplified in some instances, seen as a property, one could assume that this is the only reason that Cinder is not hurt by others, as it is up to Adri to punish her.

In a very short passage a second cyborg is introduced to the reader. This, however, shows that there are cyborgs who have children, but there is no information on the cyborg's relationship status (69). Concerning the rules cyborgs have to live by in this universe, one can only say that apparently they have less rights than normal humans. They are not allowed to possess things and in Cinder's case, Adri is the one who has power over her. There is no information given, if the male cyborg described in the novel has a kind of master, or if he lives a normal life. The person who is assisting Dr. Erland while looking at that cyborg who also

volunteered for the cyborg draft states, after Dr. Erland refuses him as a test subject, that “it’s better than testing on people” (70). In this very short sentence one can see how people see cyborgs, thus concluding that they are generally seen as lesser creatures in this universe, not only in Cinder’s case.

In the novels and movies, one can also see that rules are needed to control the robots and cyborgs; showing them (and the audience) that they are inferior to humans. These rules are not the same as the ones in IR and are not stated as clearly as in IR’s case.

In BR and DAES the feeling is created that there is the need for control as the androids strongly resemble humans and only their incapability of empathy shows their robot nature. Thus, the notion of passing, as described by Portelli (152), is very high increasing the fear of androids. However, it is stated how the androids or Replicants can be differentiated from humans, but the only rule that is mentioned is that the robots are not allowed to leave the colonies. Furthermore, it is mentioned that they have to work for the humans, apparently not being able to decide on their own what they want to do. This again shows that they are controlled by these two simple rules of having to perform and not being able to run away. Furthermore, these robots have a limited life span, probably to control them even more and not granting them their wish (as shown in BR) of living a full life, which would mean that they could develop certain emotions, memories and so forth, as this would make them more human.

In EM no clear rules are stated for the robots. However, one simple rule, that does also apply to Caleb, is that one is not allowed to enter certain rooms, or leave the grounds. Caleb is as a human, of course allowed to leave the house, but the robots are restricted to the inside of the house, thus not being granted their freedom. It also seems as if certain chores like cooking should occupy Kyoko’s thoughts, thus not trying to flee.

As it is possible to see, robots and cyborgs are depicted as inferior creatures, even though their abilities might be superior to the humans’. Using the definitions of Young and

Cudd, cyborgs and robots can be identified as an oppressed social group, if they are seen as creatures that have a free will, intelligence and are not a mere mechanical creature running a program.

Slaves and robots or cyborgs also have some features in common as has been shown in this chapter. They have to obey certain rules, have to perform similar tasks as slaves had to and are apparently driven by the very human urge to live and be free. Buchen explains this by saying that “humans cannot accept an inferior position” and continues to explain that “[i]f we have to choose between ruling and serving, even if the path is noble and stirring, we will choose to remain in charge of our limitations” (4). Therefore, it can be argued that the interaction between mechanical creatures and humans in the selected novels and movies for this thesis, reflect this superiority complex humans allegedly inherit, thus putting themselves in the ruling position.

## **5. Conclusion**

This thesis has tried to show that in order to talk about power relations between humans and mechanical creatures, it has to be ascertained whether these creatures can be called artificially intelligent. This has to be done, as only a machine that can be elevated to the same level as a human, can be compared to a social group that is being oppressed.

With the help of Harnad’s other minds problem (Harnad 45-46) it is possible to ascribe artificial intelligence to robots, due to the doubt of humans not being able to feel and experience the same things as I do. Harnad (45-46) simply states that one can only be sure about themselves, but not about others.

While analyzing the various robots depicted in the novels and movies, it can be seen that it is difficult to distinguish them from the humans, if in some cases the metallic exterior of the robot is ignored. Their behavior however, is in general very human like, and in some cases (DAES and BR) it is the humans who seem emotionless and cold like a machine. All

the novels and movies about robots and also Cinder the cyborg, show the reader that there is a constant questioning of identity and humans trying to find traits or characteristics in which they differ from the mechanical men and women. However, there are always a few people who understand what robots and cyborgs, in these works of fiction, are going through and that they, besides being made of metal or other artificially created substances, are full of life and have the same needs as humans do. Therefore, as has been established in the second part of this thesis, these robots and cyborgs can be called an oppressed social group, as is also depicted in the novels and movies. As explained by Buchen (21), this might be due to the general superiority complex, which humans inherit, resulting in not wanting to be surpassed by the conscious machine and not wanting to grant it rights as humans have. Therefore, these robots and cyborgs, which are depicted in the novels, reflect an issue that was and is important over the last years, namely the oppression of groups of people that are different from the heterosexual white person. As has been explained before, science fiction often mirrors reality (Parrinder 4) and thus uses the robot as an agent to represent minorities, people struggling with their identity and in general people who want to be accepted.

This thesis has tried to show one of the many ways this idea could be discussed and by being only able to look at a selection of novels that are specifically concerned with this topic, only a partial analysis was possible. It has to be highlighted that especially the robots and cyborgs in these novels and movies were designed in order to ask these questions about identity. However, as a final remark, it has to be stated that there are many more novels and movies belonging to the genre of science fiction which treat the robot or cyborg differently. Thus, it is not possible to say that all robots in science fiction literature or movies can be called an oppressed social group, which can be compared to slaves and which reflect real-life minorities.

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# 7. Appendix

## 7.1 Abstract

In dieser Diplomarbeit wird die Darstellung von Robotern und Cyborgs in Science-Fiction Literatur und Film untersucht. Um diese aufzuzeigen, werden ausgewählte Werke - *I, Robot*, *Do Androids Dream of Electric Sheep?*, *Blade Runner*, *Cinder* und *Ex\_Machina* - aus diesem Genre analysiert.

Nachdem wichtige Begriffe für diese Arbeit, wie künstliche Intelligenz, definiert wurden, werden im ersten Schritt Charakteristika aus den Werken aufgestellt, welche den Unterschied zwischen den Menschen und den Maschinen aufzeigen sollen. Hier wird die Frage gestellt ob diese Unterschiede tatsächlich so groß sind, oder ob die Grenze zwischen Mensch, Roboter und Cyborg, welche in den Werken dargestellt wird, vielleicht doch gar nicht existiert.

In dem zweiten Abschnitt, werden die Machtverhältnisse zwischen Mensch und Maschinen analysiert. Die doch sehr menschenähnlichen Maschinen, wie im ersten Schritt etabliert wurde, werden als unterdrückte Soziale Gruppe wahrgenommen und es wird untersucht ob das Genre Science-Fiction, zumindest in den ausgewählten Werken, die Roboter und Cyborgs nutzt um Parallelen zwischen ethnischen Minderheiten (in der realen Welt) herzustellen.