Robot Music and Resonance: Towards a Relational Utilitarianism

An alternative formulation of utilitarianism applied as an ethics of AI music

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Summary

The emerging development of artificial intelligence (AI) in the music scene is challenging our relationship with music. Scholars and engineers are pointing to numerous ethical concerns that need to be addressed with urgency. In this thesis, I inquire whether we can formulate a promising new type of utilitarianism that can be applied as an ethics of AI music. I call this "relational utilitarianism" because on this account, utility is expressed in terms of the quality of the relationship between subjects and 'the world' (object). I depart from the position of sociologist Hartmut Rosa: he holds that a successful, good or desirable life is dependent on the quality of one's relationship to the world. He identifies a resonant relation as the good type of relation. This brings me to the main questions: how and to what extent can resonance provide the metric of utility? And how and to what extent can this relational utilitarianism be applied as an ethics of AI music?

Resonance and utilitarianism turn out to be a peculiar combination. Once we 'install' resonance into utilitarianism as the metric of utility, we have to adopt a different understanding of 'maximizing' the good. Resonance does not let itself be maximized, in the sense of 'capturing' or 'conquering' it. By "maximizing the good" on this conception, we must intend that the conditions that favour resonance are supported. This type of utilitarianism turns out to be no less operationalizable. To the contrary, I argue that it is less vulnerable to Robert Nozick's "experience machine" objection than hedonism is. Even though a life in the machine would be very pleasurable (and low in pain), resonance theory does not entail that plugging in would be best for one because some of our axes of resonance would structurally turn 'mute', and the world would lose its own voice by being too accessible.

A similar argument comes up when we return to AI music: we should not strive for bespoke AI music that creates songs based on one's mood because it would be an attempt to make aesthetic resonance too accessible. I further argue that AI music might be less valuable in its resonating-qualities to the extent that it is unable to express a relationship to the world in a song. Lastly, I suggest that AI music must be labeled as such and not played in public spaces where it is not possible to inform listeners. If AI music is popular, widespread and indistinguishable from human music, one always has to take into account the possibility that new or unfamiliar music is AI music – causing one to adopt a less favourable attitude towards music in terms of resonance.

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1. Introduction

Music is a source of great happiness. Recently, it seems to be becoming even greater with the usage of artificial intelligence (AI). The emerging development of AI is rapidly opening up new possibilities for music creation as well as the experience of listening to it. Already in 2018, an album was created in full collaboration between human and AI (Avdeeff, 2019).[1] While AI-composed music at this point still sounds a bit robotic and uneasy, the technology develops so fast that scholars anticipate that popular and maybe even 'good' AI music will soon become commercially available (Cole, 2020; Hong et al., 2020, p. 1921). What is more, it has even been anticipated that companies will soon be able to manufacture bespoke AI music that is adjusted to an individual's mood at a given moment (Cole, 2020, p. 337). A personal algorithm could simply 'get to know' your cognitive functions and create an exclusive tailor-made song for you that makes you feel whatever it is you want to feel.[2]

However, such technological advancements are giving rise to numerous ethical concerns (Cole, 2020; Holzapfel, 2018; Morreale, 2021; Sturm et al., 2019). For instance, Ross Cole worries that corporations will "hijack" our personal experience in order to predict our consumerist behaviour with ever-more precision (2020, p. 336)[3]. This ultimate commodification could turn music into nothing more than the sound of a "competitive frenzy" – driven by profit for AI companies (Ibid.). Furthermore, concerns have been raised about artist exploitation, the ending of human creativity, listener disinformation and the effect on the broader music industry (Cole, 2020; Holzapfel, 2018; Morreale, 2021; Sturm et al., 2019). Scholars from different angles – as well as engineers themselves – are stressing the urgency to address these ethical issues (Ibid.). Yet a systematic, moral-philosophical approach appears to be missing.

I aim to address some of these issues with an alternative utilitarian approach. My thesis is that utilitarianism can be improved if we express utility not in terms of pleasure (and disutility in pain), but in terms of the quality of the relationship between subjects and object. I further hope to show how this novel type of utilitarianism can be applied as an ethics of AI music. Following sociologist Hartmut Rosa (2019), I will defend that his notions of

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[1] The album is called "*Hello World*" and was released by AI compnay SKYGGE. Particularly the song "*Magic Man*" gained a lot of attention because of the AI-generated lyrics that are almost-yet-not-quite English (Avdeeff, 2019). See: https://www.youtube.com/watch?v=C3lJqi72yt0
[2] See also Yuval Noah Harari's (2018) "*21 Lessons for the 21ˢᵗ century*"
[3] Shoshana Zuboff (2019) has called this phenomenon "surveillance capitalism".

"resonance" is a suitable yardstick – or measure – of the quality of the relationship between subject and object. Thus, the metric of utility in this "relational utilitarianism" is resonance. This thesis is driven by the main question: *how and to what extent can resonance provide the metric of utility; and how and to what extent can this type of utilitarianism be applied as an ethics of AI music?*

  I will tackle this question in the following structure. First I position my approach in relation to existing traditions. Then I defend that it makes sense to express utility in terms of the relation between subject and object, by building on Husserl's intentionality. After that, I explain resonance as being in line with the phenomenological debate that emerged from Husserl's intentionality. Then I discuss the "maximization objection" to my approach, holding that resonance does not lend itself to utilitarianism because it cannot be maximized. After dealing with that, I argue that relational utilitarianism has a theoretical advantage over classical utilitarianism: my approach is less vulnerable to Robert Nozick's (1989) "experience machine" objection. From that point, my theoretical apparatus will be sufficiently developed to return to some of the ethical issues surrounding AI music. I identify two respects in which AI music could be less valuable in terms of its resonating-qualities: 1) by attempting to make aesthetic experience too accessible, and 2) by not being able to express a relationship to the world in a song (to the same extent as human music). Finally, I make a normative claim that AI music must be labeled as such, and that it should not be played in public spaces where it is not possible to inform listeners. My approach is thus deductive. The basic idea is to develop a novel type of utilitarianism. AI music serves as a case study to 'test' and illustrate whether and how this theory could be applied.

2. Relational utilitarianism

2.1 Positioning of relational utilitarianism

In this thesis I aim to make three contributions to academic literatures: 1) to the literature on AI music[4], this thesis adds a normative ethical framework to morally judge new technologies such as the ones described. 2) To the literature on utilitarianism, this thesis adds an alternative formulation of utilitarianism. 3) To the literature on resonance theory, this thesis extends the application of Rosa's work to two fields – AI music and utilitarianism. How does my approach relate to these fields?

Relational utilitarianism and ethics of AI music

My approach is associated with an ethics of AI music in three respects. First, at a surface level, a utilitarian approach is somewhat 'obvious', simply because AI music is only recently calling for an ethics and even the most popular ethical theories have not been introduced into this field yet.

On a utilitarian account, these technologies should be developed, regulated and implemented in such a way that they support the greatest amount of total happiness of the ones affected by them. If these technologies enhance the overall happiness they should be welcomed, if they diminish it they should be rejected. Bentham (1996, pp. 11-12) famously formulates "the principle of utility":

> By the principle of utility is meant that principle that approves or disapproves of every action whatsoever, according to the tendency which it appears to have to augment or diminish the happiness of the party whose interest is in question… I say of every action whatsoever; and therefore not only of every action of a private individual, but of every measure of government.[5]

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[4] By "AI music" I mean music that is for a significant part created by an AI machine. My discussions are further restricted to industry-driven innovations that aim to commodify AI music (thus, a musician's exploration of AI for new creative possibilities is not included). This is in accordance with the scope of ethical concerns that have been raised by scholars and engineers (Morreale, 2021, p. 105). I will mention some of these technologies more specifically in the applied-part of this thesis (part 3).

[5] Henry Sidgwick (1981) sharply notes that this principle fails to tell us whether we should be concerned with the total amount of happiness or rather the average amount of happiness per person. Depending on which interpretation one takes, the implications can differ a great deal (Driver, 2006, pp. 58-59; Parfit, 1984, p. 388).

The consideration of happiness is fairly straightforward, yet undeniable relevant. This is a general characteristic of utilitarianism that makes it attractive (Driver, 2006, p. 40). Specifically for an ethics of AI music, the concern for happiness is particularly apparent. Music is of course a 'good' that brings joy to many lives. Alterations in the sphere of music could well be judged based on their effect on the joy music brings us.

About the nature of the moral judgements and claims that I bring forth in this thesis, I wish to make a distinction between two kinds of ethics. The one kind of ethics is more strict and narrow and tells us whether we are really morally obligated to perform an act, or morally forbidden to do so. If someone acts unmoral in this sense, we have grounds to say that this person really did something *wrong* and – depending of the severity – should be punished. Think about violence, stealing or most kinds of illegal acts as being morally forbidden; and positively, about the moral obligation to save a drowning toddler in just a small pool of water. The other kind of ethics is more 'loose' and concerns 'what is good' in a broad sense. This has more to do with the way we should act or live so that it is in accordance with the 'good life'. Utilitarianism often deals with this second kind of ethics as well. For example when Fred Feldman (1997, p. 41) considers a man who is faced with the decision to give a bone to an Irish Wolfhound, give it to a Cocker Spaniel or keep the bone to himself – depending on what will maximize utility. The first two claims about AI music that I will develop are of this second kind. They hold that AI music might not be so desirable, or suggest that we should not put our trust in AI music in order to live the good life because it seems less valuable in terms of its resonating-qualities. The third claim about AI music that I will develop – that it should be labeled as AI music and not played in public spaces where it is not possible to inform listeners – is leaning more to this first kind of ethics. A failure to do so would be morally wrong. People could be harmed in the sense that music in general becomes less of a "sphere of resonance" for them.

The second way in which my approach relates to an ethics of AI music is by being a type of *postphenomenology*. In order to understand a technology, postphenomenology always analyzes the character of the relation that humans have with this technology and how it affects relationships between us and the world in general (Rosenberger and Verbeek, 2015, p. 13). It would be fair to say that Heidegger (1927; 1954) laid the groundwork for a systematic analysis of the way technologies shape our "being-in-the-world". Others have picked up on

However, this is not the case for present purposes. The issue does not particularly arise for an ethics of AI music. Whether it forms an issue for relational utilitarianism in general is a question for another day.

his work to further evaluate technologies and the way they shape our being-in-the-world. As I will demonstrate in a later section, Rosa's (2019) notion of resonance can be understood as a type of being-in-the-world. As such, my approach can be placed in line with other post-phenomenological approaches to ethics of technology. For example, Hans Jonas (1984), a student of Heidegger's, suggested that being-in-the-world in our times means being-in-the-technological-world, and argues that we need a new ethics that takes into account the considerable role of technology in our existence. Or the notion of technological mediation, according to which technologies are not mere objects but rather already mediate and shape the way in which we experience 'world' (Verbeek, 2005). While postphenomenology is well represented in ethics of technology in general[6], it has not yet made its way to the ethics of AI music. I aim to do so by placing resonance in line with phenomenology and applying it to AI music.

Thirdly, it is convenient that Rosa himself specifically analyzes music in terms of its resonating-qualities (2019, pp. 280-296). This makes resonance theory a sensible starting point for an ethics of AI music. I will build on Rosa's (Ibid.) analyses to identify two elements that make music so enjoyable on his account – that might be undermined by or lacking in AI music.

Relational utilitarianism and classical utilitarianism

Why go for an alternative formulation of utilitarianism? And how does my approach relate to classical utilitarianism? The classical and perhaps most popular notion of happiness (in moral philosophy) is a *hedonistic* one, for instance put forward by Mill (2014, p. 10): "By happiness is intended pleasure, and the absence of pain; by unhappiness, pain, and the privation of pleasure". This is not the only notion of happiness. Other notions of happiness include meaning-making (Alma, 2020; Schneider, 2007) *eudaimonia*, desire satisfaction, human excellence, pluralism – and many others (Feldman, 1997, p. 79). There seems to be little agreement about what the 'correct' notion of happiness is or should be. Even a determined hedonist still needs to decide whether to go with Mill's "qualified hedonism" or with Bentham's view where only the quantity of pleasure matters.

Moreover, classical utilitarianism is often criticized for being simplistic, reductionistic and unable to account for the complexity of human life (Monsó & Grimm, 2019, p. 12).

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[6] In particular, see the work of Don Ihde (1979) and Peter-Paul Verbeek (2005; 2011)

Particularly in this respect do I wish to improve utilitarianism. I will attempt to do so by showing that a resonance perspective on happiness is less vulnerable to Robert Nozick's (1974; 1987) "experience machine" objection than hedonism is.

Initially, the only 'adjustment' of utilitarianism that I argue for is a different axiology of intrinsic value. Any type of consequentialism can be deconstructed in two parts (Driver, 2006, p. 44). The first part indicates the approach we are to take vis-à-vis value. For consequentialist theories, it is to *maximize* value. The second part specifies what has intrinsic value – *what* ought to be maximized (Ibid). If this metric revolves around happiness or wellbeing, then the consequentialist theory can be called utilitarianism. In this thesis, I will restrict my discussion to utilitarianism; I am concerned with happiness – or, the good life – as having intrinsic value. Concerning the second part of a utilitarian theory: I shall argue that resonance has intrinsic value. This will lead to a possible objection in regard of the first part: it holds that resonance cannot be maximized and that it therefore does not lend itself to utilitarianism

This type of utilitarianism would be "relational utilitarianism" in the sense that utility is expressed in terms of the quality of a relationship. This relationship concerns the relation between us and the world; between subject and object and will be elaborated on in the next section. Resonance – and alienation[7] – are then the yardsticks that indicate the quality of this relation. It is the view of Hartmut Rosa (2019) that indeed "real happiness" means having a good relationship with the world, and that resonance is the positive yardstick to express the quality of this relation – and alienation its negative counterpart. As Rosa writes:

> Intense moments of subjective happiness can be understood as forms of resonant experience, while feelings of unhappiness arise particularly when and where we find the world unexpectedly indifferent or even *repulsive*, though we had counted on its responsive accommodation (2019, p. 30).

Lastly, I wish to acknowledge that the combination of utilitarianism and resonance theory is quite unorthodox. Within the conventional academic world, there is no earlier work known

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[7]I have chosen to dedicate the most detailed discussions to resonance instead of alienation (and pleasure instead of pain) because space does not allow for both, and happiness seems more natural to the subject of music than suffering does.

that combines utilitarianism with resonance theory.[8] Furthermore, relational approaches to ethics are often *in opposition* to utilitarianism. For example, within animal ethics, utilitarianism is known for ascribing moral status to animals by virtue of their capacity to experience pain and pleasure (Driver, 2006, p. 46). It is thus the characteristic of an individual that determines whether it warrants moral status – an approach known as "moral individualism" (Monsó & Grimm, 2019, p. 1). This approach has been fiercely attacked by Alice Crary and Cora Diamond in what is called the "Wittgensteinian critique" (Crary, 2010; Diamond, 1995; Ibid.). According to Crary (Ibid.), the grounds for morality do not stem from the respecting of an individual's interest, but rather have to do with a more fundamental "ethical orientation" that we have towards beings whose expressions elicit a moral response in us. She rather stresses the importance of the relations between humans and animals. Similarly, within robot ethics, there are two opposing dominant views on what the criterion or set of criteria should be to warrant robots moral status (in the future) (Harris & Anthis, 2021; Tavani, 2018). One is called the "property account" and holds – like moral individualism – that the relevant criterion lies in individual characteristics. These are particularly consciousness and sentience (Harris, 2021). In case robots are sentient, again, the moral axiom can come from a utilitarian viewpoint, holding that robots should have moral status by virtue of their capacity to suffer or to be happy. The other view is called the "relational approach" and holds that our treatment of robots should depend on the role that robots play or will play in our social lives (Tavani, 2018, p. 6). It seems fair to say that utilitarianism – in its rationale and moral force, as well as in its applications – is commonly opposed to relational approaches to ethics.

The argument I will develop in this respect fundamentally breaks with this opposition. Namely, I hold that consciousness *itself* is always-already relational. The very being of an individual *is* always-already relational. Therefore, also the happiness of an individual can best be expressed in relational terms.

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[8] Various philosophers endorse the "resonance constraint" to hedonism and objective list theories, but they mean resonance in another way. They hold that whatever is good for a particular person must in some way appeal to that person, or be in accordance with that person's taste (Bramble, 2016b; Railton, 1986). I speak of specifically Hartmut Rosa's conception of resonance, which has another meaning.

Relational utilitarianism and resonance theory

Rosa's (2016; 2019) resonance theory has gained a lot of attention and has been extended to a number of fields. For instance, humanist philosopher Hans Alma (2020) argues that the process of meaning making – of finding and giving meaning in and to life – is a resonant experience. She further builds on resonance to plead for a new type of humanism in which people are more 'open' to the world (Ibid.). This is in response to the anthropocentrism that classical humanism is associated with.

Furthermore, Rosa himself and other critical sociologists use resonance theory as a normative framework to criticize "late-modern" western societies (Masquelier, 2020; Rosa, 2016; 2019; Susen, 2019). Resonance has also been associated with the positive effect that meditation and mindfulness can have on wellbeing (Kristensen, 2018). Moreover, resonance has been established as a relevant criterion for successful implementation of "care robots" and other assistive technologies in health care, (Franke et al., 2021). Interestingly, in a residential care home in Norway, there was an intervention called the "Resonance Project" where researchers, artists, health-care professionals, people with dementia and family members came together in co-creative music sessions (Mittner, 2022).

Yet resonance theory has not yet made its way into the ethics of AI music nor into moral philosophy more generally. I think resonance is not yet a concept in moral philosophy because it lacks an underlying moral axiom – such as a utilitarian one – to really serve as a decision procedure or judgement criterion. Still, a lot of its applications are normative in the sense that the concept of resonance is used to strive towards the good life. Rosa (2019, p. 449) himself says that we can understand resonance both as a descriptive and a normative concept. Descriptively, Rosa (2019, p. 450) observes and asserts that human beings long for and in their actions strive toward resonance. Normatively, Rosa (Ibid.) aims to derive from that observation a normative criterion for assessing the quality of life and social relations. Furthermore, Rosa (2019, p. 451) establishes resonance as a "metacriterion of successful life", in the sense of a "normative monism". As such, a critique of resonance never has to be supplemented with a critique of recognition, distribution, understanding or anything else that might 'matter', because it necessarily integrates these (Ibid.). From such a position, it really only seems like a small stepping stone to a utilitarianism with resonance as its metric. The basic idea is to just follow Rosa in his establishment of resonance as a "normative monism", and see how well it works if we install it as such in a utilitarian system.

2.2 The rationale behind a *relational* utilitarianism

Why does it make sense to express utility in terms of the quality of the relationship between subject and object? My argument is that our existence is made up of this relationship – at least, that (subjective) part of our existence that concerns happiness. To express utility in terms of the quality of this relationship, then, is nothing more than to express utility in terms of the quality of our existence. This seems like a sensible conception of utility. In order for this argument to be successful, I will thus have to defend the claim that our existence is indeed made up of the relationship between subject and object. I attempt to do so by building on Husserl's (1913; 2001) notion of intentionality.

Intentionality and phenomenology

What is the one thing that all experiences – including all pleasures and all pains – have in common? They are all presented to consciousness. As Husserl (2001, p. 213) makes clear: "Nothing can be judged about, nothing can likewise be desired, nothing can be hoped or feared, if it is not presented". Husserl is saying here that, in order for there to be any experience at all, something must appear in consciousness.

Every state of consciousness is *a priori* conscious of *something*, so that there exists a relation between consciousness and this 'something' (Husserl, 2001). As Husserl (2001, p. 212) illustrates: "In perception something is perceived, in imagination something imagined, in a statement something stated, in love something loved, in hate hated, in desire desired etc." We could say that consciousness is thus always *directed* at the thing it's conscious of. This fundamental directedness is what Husserl (Ibid) calls the "intentionality". It allows us to formulate that every conscious state entails a relation between the *experiencer* and the *experienced*, between consciousness and existence, or – as I refer to it in this thesis – between subject and object.

This 'intentional relation' between subject and object is to be understood as an intrinsic relation, as opposed to a *reele* (loosely translated as 'real') relation (Husserl, 2001; Zhongwei, 2014, p. 116). A *reele* relation is a relation between two things that could also exist in separation of each other. Consider for example the relation between a steering wheel and the tires of a car. No matter how closely they are linked or how much interplay there is between them, it is both theoretically and physically possible to disconnect them from each

other, and use them as separate parts in two different cars, for instance. An intrinsic relation, on the other hand, entails that a) the one cannot exist without the other and b) if one exists, the other must necessarily exist as well (Ibid). It is thus not even theoretically or metaphysically possible to think of the subject and object in isolation from each other, since their relatedness is the very defining characteristic of both the subject (as experiencer) and object (as the experienced). In other words: the subject and object cannot be thought separately and their relation is a primary condition of possibility for our being.

This difference between a real relation and an intrinsic relation is also the difference between my relational utilitarianism and other relational approaches to ethics as mentioned earlier – to the extent that those approaches derive the grounds for morality from real relations. I am concerned with an intrinsic relation – the relation between subject and object. Rosa (2019) makes clear that resonance is a relation of this intrinsic sort. In determining the poles that form a resonant relationship, Rosa (2019, p. 32) says that he "radicalizes the very idea of relationship". He "precisely does not assume that subjects encounter a preformed world, but instead posits that both sides – subject and world – are first formed, shaped and in fact constituted in and through their mutual relatedness" (Rosa, 2019, pp. 32-33).

If we realize that consciousness consists of an intrinsic relation – the intentionality – we can switch from our everyday "natural attitude" to a "phenomenological attitude", according to Husserl (1913). In our natural attitude, we live our daily lives and presuppose the givenness of reality. The intentionality makes possible every moment of consciousness, as a type of fundamental framework, but we don't actively think about it – rather we take it for granted – in this attitude. This is not to say that there is anything wrong with it, but only once we switch to the phenomenological attitude, then the intentionality becomes exposed. Then we are in a state of reflection where reality is not 'just there', but it presents itself to our consciousness as 'phenomena'. If we focus our studies on the way these phenomena are presented to consciousness, then we adopt a phenomenological approach. In this regard, Moran (2000, p. 55) calls phenomenology the study of "pure consciousness".

To me it seems more than reasonable, at least *prima facie*, to define happiness from a phenomenological attitude. We can ask: what is happiness in pure consciousness? It is quite remarkable that utilitarianism, as an ethical theory revolving around happiness, has never made use of phenomenology to systematically analyze experience and consciousness.

One might argue that Bentham's detailed account of pleasures and pains can be read as a type of phenomenological investigation. In his "An Introduction to the Principles of Morals and Legislation" Bentham provides an elaborate account of sources, kinds and influential

circumstances of pleasures and pains, and what features of a pleasure determine its value (such as intensity and duration) (Bentham, 1996, pp. 34 – 72).[9] However, I argue that Bentham's account – while detailed and perhaps insightful – is not a phenomenological approach.

According to Duyndam (2019, p. 236), the best way to determine whether a theory can be understood as phenomenology is to ask how and to what extent it can be thought as a kind of intentionality. If it can be interpreted in light of the intentionality, then the theory can be regarded as phenomenology (Duyndam, 2019, p. 242). This entails that it gives an account or conception of our primary relatedness that precedes all of our acting, thinking, *et cetera*. It entails that the theory makes possible a reflection on our fundamental relatedness that is presupposed in the natural attitude (Duyndam, 2019, p. 251). That it provides insight into the condition of possibility that 'grounds' our whole existence (Ibid.).

I am not aware of a work that shows how Bentham's account can be interpreted in light of the intentionality. There also seems to be no *prima facie* reason for why this would be so. While it is true that Bentham (1996, p. 11) understands pain and pleasure as "sovereign masters" that govern mankind – and in that sense as fundamental to our nature – he does not address their ontology. He is concerned with pain and pleasure *as such* – as an experience, feeling or subjective or conscious state. Their occurrence, however, still presupposes a fundamental framework that makes it possible to have any experience. Bentham does not address this primary relatedness that underlies our experiences. Therefore, I am more inclined to say that Bentham was operating from the natural attitude rather than the phenomenological attitude.

As I hope to make clear in this thesis, if we do define happiness from a phenomenological attitude, it could benefit utilitarianism and its moral implications.

Resonance and alienation as the good and bad type of intentionality

To arrive at a relational utilitarianism, we need to be able to differentiate between a good and a bad type of intentional relation; viz., when does the intentional relation have utility or intrinsic value and when has it disutility or disvalue? It is not until we include Rosa's

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[9] One should also be aware that Bentham (1996, pp. 84 – 88) uses the word "intentionality" explicitly but in another meaning than Husserl's intentionality. Bentham means simply 'having the intention to', as in having the intention to perform an act

resonance and alienation in the phenomenological debate that this tradition offers concrete suggestions as to how this question can be answered.

As Paul Ricour (1975, p. 104) puts it, Husserl may be credited as the "(…) father of the phenomenology" because of his "(…) immense and unsurpassable discovery of the intentionality". Unfortunately, Husserl has weakened the significance of it by overlooking some crucial aspects (Duyndam, 2019; Ricour, 1975). In response to Husserl's intentionality, a rich phenomenological debate emerged, of which it can be said that various philosophers responded to Husserl by accepting the core premise of the intentionality, and at the same time rejecting or criticizing an interpretation, or supplementing it with additional insights (Duyndam, 2019). For example, Heidegger (1927) sharply notes that the subject itself is always-already primarily rooted in and interwoven with the world. Even prior to the subject's perception of an object, the way it perceives is already influenced by 'worldly' influences such as heritage, culture and tradition.

Heidegger's notion of "being-in-the-world" can be understood as a redefinition of the intentionality, with an added insight into the subject's ontological status. Duyndam (2019, p. 234) explains Heidegger's being-in-the-world as a 'worldly' intentionality. It is commonly said that Heidegger rediscovered the intentionality as being-in-the-world, and the philosophers that came after him mostly maintained a more Heideggerian conception of our primary relatedness (so too is the concept of resonance[10]) (Ibid.).

Another flaw of Husserl's intentionality, according to Merleau-Ponty (1954), is that Husserl didn't pay enough attention to the fact that a subject is always a *body*, and that we are therefore always bodily related to the world. We can perceive of us more as being bodily "charged" in and with the world; we are fundamentally drawn to or repelled towards the things around us (Ibid.). Merleau-Ponty calls his variant the "intentional bow", with the elegant metaphor of a bow and arrow that holds tension and energy.

Furthermore, Husserl's intentionality didn't sufficiently acknowledge that *other people* are also a subject, also-an-I, and that this otherness cannot be grasped by my intentionality (Levinas, 1961). In this regard, Levinas famously introduces the notion of the 'radical Other'.

Notably, in all these revisions and sharpened versions of the intentionality, there is a neutrality with regard to the *quality* of the intentional relation, and thus the quality of life. Perhaps this descriptive nature of the phenomenological debate is what has kept it separate

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[10] More on this in the next section

from utilitarianism. Looking a bit further than strict phenomenology, however, we can find a notion of a good and desirable – as well as a bad and undesirable – relation between subject and 'world' in Hartmut Rosa's (2019) work. As a sociologist, Rosa (2016; 2019) presents his notions of resonance and alienation as a novel Critical Theory, with the aim of criticizing what he sees as late-modernity's characteristic and pathological tendency to *accelerate* (Rosa, 2016; 2019). In a previous work[11], I have defended a view of resonance as a variant to Husserl's intentionality, placing it in line with the above-mentioned phenomenological debate. The *prima facie* reason for this is that Rosa "radicalizes the idea of relationship", as mentioned in the previous section, and that resonance can thus well be understood as an intrinsic relation. I further analyzed Husserl's intentionality and Rosa's resonance and identified some seemingly conceptual problems for regarding the latter as a variant to the former. Those problems turned out to be solvable, in my assessment. Some specific ways in which Rosa breaks with Husserl's intentionality yet remains phenomenologically sound will be highlighted in the next section. I concluded that resonance can indeed be regarded as a type of intentionality – perhaps a 'responsive intentionality' or 'dialectical intentionality'.

What is fruitful about this, as I see things, is that it adds a normative basis to phenomenology, with resonance as a kind of 'intentionality of the good life'. Now, if it is true that the intentionality (or being-in-the-world) is the most fundamental and central feature of consciousness, of the experience of life; and it is also true that resonance is the good type of intentionality (and alienation the bad type), then it seems reasonable to suggest that resonance and alienation should be the metric of utility – if utility means happiness. To the end of developing such a utilitarianism, let us elaborate on Rosa's notion of resonance and alienation.

2.3 Hartmut Rosa's resonance and alienation

Rosa (2016; 2019) 'discovers' resonance against the backdrop of its counterpart – alienation. He begins developing this latter concept by a critical sociological analysis of what he calls "late-modernity". Rosa observes that there are several mechanisms at play in late-modernity

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[11] "*De fenomenologie van resonantie: naar een intentionaliteit van het goede* leven", bachelor thesis, University for Humanistic Studies. Document available on request

(in particular in Western capitalist societies) that disconnect us from our surroundings, activities and other people.

Most notably, late-modernity is characterized by a constant *acceleration*; an acceleration of living speed, production speed, speed in which technology develops, speed of change and ultimately, the speed of time itself (as it is perceived) (Ibid.). To increase, expand, improve and to accelerate is the basic mode of being. This applies to societies, organizations, and companies, as well as it does to individuals (Ibid.). No matter how exciting our exotic trip to a far destination was this year, next year the trip has got to be even more exotic and far away. The newest smartphone you bought two months ago might already fade away in the light of the models of today. No matter how great the sales of a company were this year, next year they have got to be even greater – or get left behind. Rosa calls this tendency "dynamic stabilization": the only way to be 'stable' for an institution or individual is to be in a dynamic state of acceleration (or improvement, expansion, increasement, *et cetera*) (Rosa, 2016). To stand still is to move backwards. Because of this dynamic stabilization, people constantly have to re-establish their position in the world. Hereby, we are running the risk of losing a meaningful touch with the world, of becoming disconnected, of becoming what Rosa calls "alienated"[12] from the world (2016, p. 93).

A sense of alienation includes, for instance, the feeling that we often just do not have the time to 'do the things we actually want to do' (Rosa, 2019, p. 174). While we are doing something, we wish we would be doing something else; when we are somewhere, we wish we would be somewhere else. More generally, alienation means that nothing 'speaks to us'; that nothing touches or moves us; that the world has fallen cold, silent and 'mute' (Ibid.). The relationship remains 'unanswered'. If we are listening to a sad song and have to cry, for example, this does not point to alienation. Rather, alienation entails that we have 'no more tears to cry'. That we are indifferent or repulsive towards the world – or that the world we encounter is repulsive or indifferent towards us – and we are unable or unwilling to be affected. To illustrate, Rahel Jaeggi (2014) defines alienation as a "relation of relationlessness".

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[12] The concept of alienation is especially associated with the work of Karl Marx. Both for Marx and for Rosa, alienation is a social ill that includes a disconnectedness of subject and object. For present purposes, however, it is not needed to elaborate on the similarities and differences between Rosa's alienation and that of Marx. Rosa's account of alienation is complete by itself and does not explicitly or extensively build on that of Marx.

What, then, is the opposite of alienation? What is its positive antagonist? According to Rosa (2016; 2019) this is "resonance". Resonance is characteristically a dialectical relationship that involves a mutual 'answering' and affectedness (Rosa, 2019, p. 164).

Af←fect and e→motion

More specifically, a resonance relation is formed through af←fect and e →motion (Rosa, 2019, p. 174). The arrows aim to indicate the 'direction' of the act or movement; whether it is from object to subject (←) or from subject to object (→) (Rosa, 2019). Initially, a subject is affected by something. Something 'from outside' appears in consciousness. Without the subject asking for it or looking for it, something just 'breaks in' and addresses us. The act is thus from object to subject. Think about when you unexpectedly hear a song somewhere and you are completely captivated by it.

As a reaction, the subject is also able to respond to the incoming object. Where af←fect can be explained as the passive 'being touched by', e→motion can be explained as the active 'touching of' something. This second step in a relation of resonance indicates that the subject is not a passive spectator, nor a controller who is forging his own world and experience. Rather, resonance is a responsive relation of touching and being touched (Ibid.).

Now, keeping with the example of listening to music, one might wonder how it is possible to not only *be touched by* a song, but also *to touch* the song. Surely the song cannot be affected or changed in any way, one might say. Well, when I'm being affected – or moved/touched – by a song, I can evaluate it, I can apply the lyrics to a situation in my own life, I can talk about it with a friend, or decide to play it at my wedding. As a result, the song may never appear to me the same as before. The next time it may be 'ooh that's my song!' or 'our song!'

In this regard, resonance entails an aspect of mutual transformation. The subject transforms in the sense of being affected, touched or moved. The transformation for the object lies in the different way it appears to a subject or what it means to a subject. This is a successful act of "adaptive transformation" as Rosa (2019) calls it. The subject 'appropriates' something not in a material, economic, or exploitative way, but in a way of engaging with it and involving it in one's own life, causing it to transform in its appearance and meaning. In the very act of doing so, the subject itself 'changes' too (Ibid.).

It is interesting and important to note that Rosa, with these notions of af←fect and e→motion, breaks with Husserl's interpretation of the intentionality. For Husserl, the subject

is a "transcendental ego" that is somewhat 'at distance' from the world and makes connection by projecting objects in consciousness (Duyndam, 2019, p. 1). Moreover, the object only exists to the degree that consciousness allows it to exist: "The object would be nothing to consciousness if consciousness did not set it before itself as an object, and if it did not further permit the object to become an object of feeling, of desire etc." (Husserl, 2001, p. 243). Thus, for Husserl the act can only be from subject to object (→), and he would therefore most probably reject Rosa's notion of af←fect (and reject even fiercer that this act has primacy over e→motion).

However, exactly this interpretation of Husserl is fiercely attacked. Ricoeur (1975, p. 104) discredits this account of Husserl as an "idealistic interpretation" of the intentionality that diminishes its significance. Husserl's account presupposes what Duyndam (2019, p. 242) calls a "sovereign transcendental subject" that is the origin of all meaning. It would be fair to say that such lines of critique came first and most importantly from Heidegger (1927). According to Heidegger (1927), Husserl is forgetting to take into account the Being of the subject itself, its existence. And this Being is always-already rooted in and interwoven with the world, because it cannot exist in any other way. In other words than Heidegger's, we may put it shortly like this: because the subject could not project objects in consciousness unless the subject exists, it shares three ontological characteristics with the object. 1) They both are, 2) they both are at the same time and 3) they are of the same order to the extent that there is access to each other (because the subject perceives the object). Even prior to the 'transcendental' subject that projects objects in consciousness, is the fundamental interwovenness of subject with the world. Our being-in-the-world is prior to consciousness. Therefore, the *way* in which a subject perceives world is already influenced by this very world.

I suggest that this is how we could understand Rosa's notion of af←fect, and his position that this is prior to e→motion. With af←fect as the first step in a resonance relation, Rosa acknowledges that the subject is *primarily* interwoven with and rooted in the world, and that the world already influences the way a subject perceives. According to Rosa (2019, p. 27), the ways in which human beings relate to the world "(…) are controlled and determined only to a small extent – and in many respects not at all – by individuals themselves, and instead are shaped and predetermined by social conditions that all arise, solidify, and change behind their backs". On this account, the object pole of the intentional relation has more significance than on Husserl's account, and Rosa thus sides with Heidegger on this dispute with Husserl. As such, resonance can well be understood as a type of being-in-the-world.

"Speaking with one's own voice"

Another central feature of resonance is that both the subject and the object "speak with their own voice" (Rosa, 2019). This entails that both poles of the relation remain with some degree of closedness, individuality or separateness. They are not completely melting together or in perfect harmony. Time and time again, Rosa sharply distinguishes resonance from a mere echo. In an echo, the voice or 'frequency' of one entity just resounds in another one. Resonance, on the other hand, implies that this voice or frequency is reacted to by the own voice of the other pole of the relation. As such, resonance even implies moments of contradiction and dissonance; the own voice of the other is able to surprise us, affect us, contradict us, transform us and momentarily rearrange our being-in-the-world. In a resonance relation, the other can thus never be dominated, controlled, or grasped, but remains with a degree of separateness and authenticity to be able to speak with one's own voice – and exactly this own voice is what addresses us in a resonance relation.

Remarkably, when talking about the own voice of objects, Rosa (2019) consistently writes "the Other" with a capital "O", just like Levinas does to indicate the radical Otherness of other people. I think Rosa can be a little bit misleading because he does not differentiate between the own voice and the Otherness of subjects and objects. Levinas meant that other people are radically Other because of their being-a-subject – 'also-an-I' – while they only ever appear to my consciousness as objects (by virtue of their appearing in my consciousness). In this sense, it is also easy to imagine that a subject has an own voice that articulates in a resonance relation. For an object this of course does not and cannot apply in this way. We can, however, understand the Otherness and own voice of an object as the degree to which it is ungraspable or uncontrollable. Perhaps only 'the tip of the iceberg' of an object presents itself to my consciousness. By ascribing to objects an Otherness and own voice, Rosa ascribes considerably more significance to the object-pole or 'the world' than, for example, Husserl does.

Rosa (2019) argues that it is also desirable to be sensitive to this Otherness. Only when the world speaks to us with its own voice do we encounter it in a resonance relation. For example, a game of chess is more fun if you also loose every once in a while; or at least more fun than if you could predict every next move of your opponent (whether it is human or AI). It makes the game attractive that we can be surprised by a move of our opponent and forced to change our strategy, for instance. It is from this line of reasoning that Rosa (2019) criticizes

late-modern tendencies to make the world controllable and predictable, and to reduce the natural world to merely a source of resources.

Strong- and weak evaluations

According to Rosa (2019, pp. 132-138), it is only possible to speak with one's own voice where "strong evaluations" are affected. Rosa borrows the notion of strong evaluations – and the notion of "weak evaluations" – from Charles Taylor (2018), and they form a constitutive part of resonance. Both of these evaluations concern the human will or desire. Weak evaluations can be explained as a direct, often bodily desire. Something 'you feel like'. For example, the desire for a cigarette by a smoker, the desire for a soda on a warm sunny day, or wanting to lay on the couch and watch television when you're in a lazy mood. Strong evaluations, on the other hand, are cognitively developed desires that are not bound to a specific moment or mood. They are the things someone 'truly wants in life'. They are perceived by a subject as important, valuable and 'good in itself'. Think about losing weight, graduating from college, or visiting your grandmother.

A strong evaluation is judged as good in itself and is independent of momentary desires (Rosa, 2019, pp. 132-138). This degree of independence allows the source of strong evaluation to speak with its own voice. Their presence, however, is not sufficient for resonance. According to Rosa (Ibid.), resonance implies the combination of weak- and strong evaluations. In a resonance relation, they are both affected and they go together well. For Rosa, the presence of weak evaluations allows the subject to speak with its own voice. They emerge in a certain moment from the subject and are directed on something that the subject feels like. To heed weak evaluations is 'to take care of yourself', to listen to your body and to treat yourself. If they are completely ignored or repressed, the subject does not have the ability to speak with its own voice, according to Rosa (Ibid.).[13]

Strong evaluations and higher types of pleasure

With these notions of weak-and strong evaluations I would like to embark on a little intermezzo before explicating other aspects of resonance. Consider the question of whether

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[13] One might also identify here another shift away from Husserl's intentionality, this time towards Merleau-Ponty's "intentional bow"

Bentham was right that only the quantity of pleasure matters, or that Mill was right that there are different qualities of pleasure – higher and lower types of pleasure. Bentham famously said: "quantity of pleasure being equal, pushpin is as good as poetry" (Bentham, 1962, p. 253). But this seemed implausible, at least to Mill. Surely a life devoted to poetry is more valuable than a life devoted to pushpin (Feldman, 1997, p. 108).

To account for the complexity of a good human life, as opposed to, say, that of a swine, Mill suggested that there are 'higher' and 'lower' types of pleasure. Some pleasures are more desirable or valuable than others. According to Mill (1863, p. 12), we may judge one pleasure to be higher than another if (almost) everyone who has experienced both gives a decided preference to the one. Generally, the more desirable pleasures are those which require more complex forms of consciousness, e.g. intellectual pleasures. As Mill (1863, p. 12) affirms: "It is better to be a human being dissatisfied than a pig satisfied; better to be Socrates dissatisfied than a fool satisfied."

According to Moore, however, Mill is contradicting himself here:

(…) if you say, as Mill does, that quality of pleasure is to be taken into account, then you are no longer holding that pleasure *alone* is good as an end, since you imply that something else, something which is *not* present in all pleasures, is *also* good as an end… If we do really mean 'Pleasure alone is good as an end', then we must agree with Bentham that 'Quantity of pleasure being equal, pushpin is as good as poetry. (Moore, 1962, p. 90).

So Mill's hedonism that includes different qualities of pleasure (qualified hedonism) is inconsistent according to Moore, because, as a form of hedonism, it includes the view that pleasure alone is intrinsically good; yet because there are different qualities, it also includes the view that something else is intrinsically good (Feldman, 1997, p. 108).

Some commentators agreed with Moore[14], others with Mill[15]. It can matter a great deal which position one sides with for an ethics of AI music. Mill's qualified hedonism could, for instance, lead to the conclusion that pleasure from music is from a lower kind when the music is made by AI. On the other hand, if we would hold that quantity of pleasure alone matters, we could be led to the conclusion that it does not matter at all whether music is made by a human or an AI machine, as long as the amount of pleasure is equal.

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[14] For example A.C. Ewing, Raziel Abelson and Richard Taylor (Feldman, 1997, p. 109).
[15] Examples include Norman Dahl, William Frankena, Ernest Sosa and Fred Feldman (Ibid.).

Relational utilitarianism, however, avoids having to choose any side. Because of the notion of strong evaluations and their being a constitutive part of resonance, we can take a different position. I suggest that the difference between higher and lower types of pleasure is caused by the degree in which strong evaluations are affected. To regarded something as a higher type of pleasure is a cognitive evaluation. It is not that our bodies are more drawn to poetry than to pushpin, rather we cognitively evaluate that poetry 'matters', that it is important and is good in itself (NB: after the subject cognitively evaluated it as such). It seems reasonable to state, thus, that higher types of pleasure involve a higher degree of strong evaluations.

Since strong evaluations are a constitutive part of resonance, a higher degree of their involvement is logically associated with more[16] resonance. Yet, strong evaluations alone are not enough to constitute a resonance relation. The involvement of strong evaluations *correlates* with resonance, but is not *causally* responsible for it. So, things that are regarded as higher types of pleasure involve strong evaluations in a higher degree than lower types of pleasure. As such, higher types of pleasure generally contain a higher *potential* for resonance, but whether and to what extent resonance will actually emerge is dependent on the accompaniment of weak evaluations as well as the cognitive evaluation of an individual.

In principle, it is hypothetically possible for an individual to have cognitively evaluated pushpin as something extremely important, valuable and good in itself, causing pushpin to be a source of strong evaluations. The difference between higher and lower types of pleasure is thus that higher types of pleasure *generally* involve more strong evaluations, and therefore contain a greater potential for resonance. But this difference is not absolute nor is it promised that this potential will articulate.

In the context of AI music, the role of strong evaluations and their variation from individual to individual has arguably been supported by an empirical study. Hong et al (2020, p. 1962) found a significant positive correlation between participants' belief in AI's ability to be creative and how they enjoyed listening to AI music. With a degree of speculation that is not unreasonable, one could say that someone's belief in AI's ability to be creative is a reflection of the degree in which AI music is a source of strong evaluations for that person. The belief in AI's ability to be creative is a cognitive judgment. Perhaps it touches on their opinion on AI (music) more broadly. How welcoming they are towards this new technology;

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[16] A question at this point is: are there higher and lower types of resonance? I discuss here the difference between higher and lower types of pleasure in terms of strong evaluations, but if I take the basic good to be resonance instead of pleasure, the initial question for me becomes then about qualified resonance: are there higher and lower qualities of resonance? This, however, will have to be a question for another day.

how positive or negative they judge it to be; whether they see it as an exciting new technology or as something that spoils the art of music; whether they acknowledge it as genuine music; whether it's a good thing that it exists. And this correlated with how they enjoyed listening to it. If this interpretation is correct, participants for whom AI music is a source of strong evaluations were better positioned to resonate with the AI music and thus to have a better experience of listening to it.

Constitutive inaccessibility

After the brief intermezzo on strong evaluations and higher pleasures above, we can now return to the main central features of resonance. Lastly, one more central feature of resonance is "constitutive inaccessibility". Inaccessibility in resonance is present in two ways: first in the sense that subject and object remain inaccessible to each other, to the extent that both subject and object can speak with their own voice – as this is explicated above. Secondly, *resonance itself* is essentially inaccessible.

As subjects, we can never choose when we want to resonate or not. We also cannot maximize resonance. As a matter of fact, every attempt to do so would be the very thing that obstructs resonance. For example, if someone listens to her favourite song over and over again in an attempt to improve her quality of life, it will be a matter of time before she won't enjoy the song as much.

With this feature of constitutive inaccessibility, we have both concluded our explication of what resonance entails, as well as arrived at a complexity that resonance forms with regard to the first part of a utilitarian theory – the maximization of utility.

2.4 The maximization objection

Because of the inaccessible nature of resonance, relational utilitarianism seems to face a problem with regard to the first part of utilitarianism – the maximization of value. On the one hand, it aims to *maximize* 'the good' – whichever has intrinsic value, by virtue of it being a *utilitarian* theory. However, what relational utilitarianism defines as the good – resonance – can, by its very nature, not be maximized. It is uncontrollable and happens unexpectedly. Even stronger, every explicit attempt to directly maximize resonance just might be the very thing that obstructs it.

The problem with regard to the maximization of resonance even appears in a second way. Rosa (2019, p. 30) writes:

> But the good life is also more than just the maximization of the happy moments (or minimization of the unhappy experiences) that it permits. It is rather the result of a relationship to the world defined by the establishment and maintenance of stable *axes of resonance* that allow subjects to feel themselves *sustained* or even *secured* in a responsive, accommodating world.

What constitutes a good life on this account is thus not only a maximal amount of happy experiences (and a minimal amount of unhappy ones), but also something more robust, what Rosa calls "axes of resonance" (I'll explicate this later on in this section). A utilitarian theory based on this conception of the good life thus finds itself in a difficult position. On the one hand, it aims to support the good life by maximizing happiness. On the other hand, its very conception of the good life entails that it is not just constituted by the maximization of happy moments.

If this is not bad enough, a relational utilitarianist is even faced with a third problem with regard to maximization. According to Rosa (2019, p. 446), we have a "basic right to refuse resonance". For example, when your neighbour kindly smiles at you and wishes you a good day, one cannot be obligated to always answer this invitation in a responsive way (for example, if one is a teenager going to a rough time, or you know that your neighbor talks badly about you behind your back). Is resonance as a metric of utility then not in contradiction with this, since its moral axiom wouldn't allow the refusal of resonance because it needs to be maximized?

We can summarize the three problems with regard to maximization as follows:

a) Resonance itself is inaccessible and can therefore not be maximized. Even stronger, an explicit attempt to maximize resonance might be the very thing that obstructs it.

b) On this account, the good life is not just constituted by the maximization of happy moments (and the minimization of unhappy ones), and therefore does not lend itself to utilitarianism according to which happy moments should be maximized (and unhappy moments minimized).

c) On this account, people have a "basic right to refuse resonance" while relational utilitarianism appears to not allow the refusal of resonance because it needs to be maximized.

The problem appears to be insurmountable. Relational utilitarianism seems to be an internal contradiction. At this point, we would have to agree with a critic who asserts that resonance simply does not lend itself as a metric of utility, according to which it should be maximized. Maybe there is good reason that resonance theory and utilitarianism have never been combined before…

I think there are a few responses possible to this sort of objection. (Concerning a) First, roughly the same objection would apply to classical utilitarianism as well. Pleasure is also not completely maximizable or controllable. The well-known "pina colada effect" makes this clear. One pina colada would be very pleasurable, but the twentieth pina colada presumably provides way less pleasure (if not pain in the form of being sick). Furthermore, one could try to maximize pleasure by, say, cook her favourite food, listen to her favourite music and watch her favourite tv show, but whether and to what extent she would actually enjoy her evening cannot be predicted with certainty or even accuracy. It just might be that she just does not enjoy it as much, or that she worries about a meeting of next week, or melancholically starts reminiscing about her ex, for example.

It would be an uncharitable and simply wrong interpretation of "utility" to think of it as something easily controllable, such as the optimization of resources or the efficiency of a process. Mill already expressed his frustration with people's misunderstanding of "utility":

> A passing remark is all that needs be given to the ignorant blunder of supposing that those who stand up for utility as the test of right and wrong, use the term in that restricted and merely colloquial sense in which utility is opposed to pleasure. (Mill, 1863, p. 8)

Utility is never meant as that which is expedient, or practical, or convenient; but rather as that which is ultimately and intrinsically good in and by itself. Whether one's conception of the intrinsic good is pleasure or resonance, it is clear that it is not easily accessible or controllable; we also cannot just manufacture pleasure, or divide it amongst a group, or convert resources to pleasure at a certain rate.

Furthermore, the maximization objection only objects to relational utilitarianism for being *conceptually difficult*, not for being *false*. Consider a person who believes that resonance is the most plausible account of what is intrinsically good, and he also believes that the aim of morality is to bring about the greatest good. It would be rather silly if this person adopts a different conception of the intrinsic good – one that he does not believe in – when it is installed into utilitarianism, simply to avoid a conceptual problem. Perhaps resonance is a more complex conception of utility because it explicitly incorporates the insight that it cannot be directly maximized. But if the arguments at hand have made it plausible that resonance is the intrinsic good, there is no reason why one cannot bite the bullet and just accept that utilitarianism will have to become a bit more complex. Whether simplicity of a theory can be regarded as a strength is not at all agreed upon (Midgley, 1998, p. 30; Monsó & Grimm, 2019, p. 12).

In acknowledgement that also pleasure is not completely maximizable, a classical utilitarian could of course still hold that pleasure should be maximized (and pain minimized) to the extent that this is possible. For example, in the trolley problem (Thomson, 1976), it is clear that saving net four lives would maximize pleasure and minimize pain. This is regardless of the fact that an individual could not control or maximize her pleasure on a given moment. The same reply is equally available for relational utilitarianism.

Resonance requires a lot of conditions (e.g. that both poles of the relation speak with their own voice, that the subject is affected by something and in turn is able to adaptively transform the object). The moral rightness of an action can then be assessed by how it affects the conditions that make resonance or alienation likely to happen. All acts of oppression, for example, necessarily invoke alienation rather than resonance because someone is obstructed from speaking with her own voice.

(Concerning b) Why does Rosa (2019, p. 30) maintain that the good life is not just constituted by the maximization of happy moments (and minimization of unhappy ones)? Put bluntly, Rosa incorporates the simple folk wisdom that 'there is no light without darkness'. He acknowledges that our relationship to the world can never be fully resonant, and that resonance is partly constituted by the complex and existential dialectic with alienation (2019, pp. 184 – 195). For Rosa, to conceive of the good life as just a maximization of happy moments would be too 'flat' because there can never be only resonance.

The best way to strive towards the good life, then, is not by focusing on momentary experiences, but rather on the way we are structurally situated in the world. Subjects have more or less well established "axes of resonance", according to Rosa (2019, p. 195). As if we

are 'wired' in and with the world, and each wire constitutes a segment of life that we stand in relation to. These wires or axes could be shaped in a favourable or unfavourable way; they determine the likeliness of a subject to encounter the world in a relation of resonance. Rosa suggests that there are three categories of axes of resonance: horizontal, diagonal and vertical axes of resonance. Horizontal axes of resonance are particularly inter-subjective; they concern our resonances with other people. Examples include family, friendship and politics (Rosa, 2019, pp. 202-226). Diagonal axes of resonance are segments of life that 'we can be good at'; they provide a platform for our abilities, skills and challenges. Examples include work, school and sports (Rosa, 2019, pp. 233-258). Vertical axes of resonance characteristically contain an element of transcendence; a vertical resonance brings us in connection with 'something bigger than ourselves' or with existence as a whole. Examples include religion, nature, art and history (Rosa, 2019, pp. 258-296).

Whether someone has stable axes of resonance at her disposal determines the likeliness of a subject to encounter the world in a relation of resonance, on Rosa's (Ibid.) view. As such, subjects can be *dispositioned* to resonance or alienation. According to relational utilitarianism, the moral rightness of an action can thus also be assessed in terms of how it affects the establishment or maintenance of axes of resonance. This indeed shifts the focus of the utilitarian calculus away from pleasures and pains as episodes to the ways in which we are structurally situated in the world. But this does not necessarily make happiness less operationalizable.

Lastly, concerning c), this is a paradox. If relational utilitarianism would hold that I cannot refuse resonance because that is what relational utilitarianism requires, then my openness to resonance would be (at least partly) involuntary, or even forced. The forcing of resonance, however, is the very thing that obstructs it. If we sophisticatedly understand resonance as the metric of utility, then we must allow a basic right to refuse resonance on an individual level in order to support the greatest amount of resonance in total.

Alternatively, one could simply disagree with Rosa that we should have a basic right to refuse resonance. It is not a constitutive part of relational utilitarianism and the theory would be fully intact without it. For the reason mentioned above, however, I would not recommend it.

I have argued that, even though resonance cannot be directly maximized, it is no less suitable for the metric of utility than pleasure. Resonance can still be maximized in the sense that the conditions that favour resonance should be supported, and the conditions that favour alienation should be avoided. Furthermore, we could still support the establishment and

maintenance of axes of resonance so that subjects are more dispositioned to resonate than to be alienated. As such, relational utilitarianism would still respect the core principle of utilitarianism that we ought to "make the world as good as we can make it" – as Feldman (1997, p. 1) puts it. Or, more precise, that we ought to make our relationship to the world as good as we can make it. On this account of utilitarianism, it might be more adequate to replace the word "maximization" for "optimization" – we ought to optimize our relationship to the world.

Admittedly, relational utilitarianism seems more complex than the classical variant. Those that regard the loss of simplicity as a loss indeed, I hope to compensate in the next section by giving in return greater explanatory power. Namely, relational utilitarianism is less vulnerable to Robert Nozick's "experience machine" objection.

2.5 The experience machine

Consider Robert Nozick's thought experiment:

> Imagine a machine that could give you any experience (or sequence of experiences) you might desire. When connected to this experience machine, you can have the experience of writing a great poem or bringing about world peace or loving someone and being loved in return. You can experience the felt pleasures of these things, how they feel "from the inside." You can program your experiences for…the rest of your life. If your imagination is impoverished, you can use the library of suggestions extracted from biographies and enhanced by novelists and psychologists. You can live your fondest dreams "from the inside." Would you choose to do this for the rest of your life?…Upon entering, you will not remember having done this; so no pleasures will get ruined by realizing they are machine-produced. (Nozick, 1989, p. 104)

The intuition that appears to be universally shared is that it would *not* be best for one to be plugged into the machine, even though we could have a maximum amount of pleasure and a minimal amount of pain (Bramble, 2016). This is regarded as a central problem for classical utilitarianism (Ibid.). However, it would be naïve to assume that the experience machine only poses a problem for hedonism and not for other theories of wellbeing. Bramble (2016, p. 143) argues that we should think of the experience machine as posing an objection to desire-based

theories as well, for instance. It would be fair to place the burden of proof on the relational utilitarian: unless convincingly argued otherwise, the experience machine poses a problem for resonance as the axiology of intrinsic value as well. If we replace the word "hedonism" for "resonance theory" in Bramble's (2016, p. 137) statement of the problem, it looks like this:

(1) Plugging in would not be best for one.
(2) Resonance theory entails that plugging in would be best for one.
Therefore,
(3) Resonance theory is false.

Either (1) or (2) must be refuted in order to avoid conclusion (3). I shall attempt to refute (2) instead of (1), first, because I am not convinced (1) can be refuted and, second, because refuting (1) would also clear hedonism from the objection, so that my argument collapses that relational utilitarianism has a theoretical advantage over classical utilitarianism.

I suggest that resonance theory does not entail that plugging in would be best for one because a life in the machine lacks the encounter with a genuine Other. I mean this in the same two ways as distinguished in section 2.3. It lacks both other people as well as the Otherness of the object-pole of the intentional relation in the sense of an own voice that remains inaccessible.

Concerning the first way, I build on Ben Bramble (2016a; 2016b) who discusses the lack of other people in the experience machine as a possible way in which hedonism could be cleared from the objection. He suggests that a life in the experience machine does not give us the full range of pleasures from love and friendship. No matter how convincing the machine could make it seem that we have a loving partner and genuine friends, we can only experience the full range of pleasures from love and friendship if someone in fact does love us or is our friend. Thus, the fact that it would not be real people we encounter necessarily has an effect on our experienced-life (Bramble, 2016a, p. 142).

Why would the lack of other people have experiential consequences even though one is under the impression that he does share his life with other people? Bramble (Ibid.) provides the following explanation:

The pleasures of love and friendship may require a certain subtlety in the language, facial expressions, bodily gestures, and actions of those around one that is beyond the

capability of AIs (or at least AIs that fall short of real conscious selves – the sort that would populate Nozick's machine).

I think Bramble is interpreting the 'rules of the game' a little loosely to his advantage here. Nozick asks us to imagine that we can really experience loving someone and being loved in return. Appealing to a limit to AI's capability for subtle love-and-friendship-related behaviour seems a bit too 'easy' then.[17] However, for argument's sake, I wish to explore this possibility further.

There would then still be one problem remaining, as Bramble (Ibid.) acknowledges:

(…) whatever pleasures one would be unable to get in the machine (whether of free action, love and friendship, etc.), these pleasures would have to be so very valuable for one that their absence could not possibly be compensated for by the very many pleasures that one surely *could* get in the machine.

I think resonance theory has a plausible reply to this remaining problem.[18] The pleasures from love and friendship can be translated to horizontal axes of resonance (as explained in the previous section). If indeed the limits to AI's capabilities has experiential consequences, then one's horizontal axes of resonance would be impoverished – obstructed from 'vibrating'. Our horizontal axes of resonance make up a significant part of how we are structurally situated in the world. If we are completely cut off from other people, a significant part of how we are 'wired' in and with the world is *structurally* obstructed from vibrating. This is not just the deprivation of some moments or episodes of pleasure that could be compensated for with other pleasures, by means of some kind of aggregation principle. According to resonance theory, the good life also consists of having stable axes of resonance at one's disposal. The impoverishment of our horizontal axes of resonance seems significant enough that resonance theory would not entail that it would be best for one to be plugged in.

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[17] Prompted by an anonymous reviewer, Bramble (2016b, p. 104) acknowledges that people might object to him for being unimaginative. Because of that, he briefly explores the possibility that a machine could give us the full range of pleasure from love and friendship. In that case he says it would in fact be best for one to be plugged in (Ibid.). A discussion of his view on that possibility, however, falls outside of the scope of this thesis.
[18]. Bramble also has a response to this remaining worry. He appeals to a type of hedonism in which the full range of pleasure from love and friendship is so diverse and intense that it cannot be compensated for (2016b, p. 103). Unfortunately, space does not allow me to discuss this account in detail and compare it with my response. For present purposes, my argument will be sufficiently successful if I 'just' show that resonance theory can be compatible with (1).

More speculatively, if our horizontal axes of resonance are impoverished, maybe other 'wires' that situate us in the world are obstructed from vibrating as well. Following Heidegger's being-in-the-world, we are interwoven with the world pre-experiential. Perhaps we are situated in the world in the world along certain axes that are pre-experiential and therefore 'fall outside of the scope' of the experience machine. If that is so, they would also structurally be unable to vibrate if we are plugged in.

In the second way, a life in the machine lacks an encounter with a genuine Other because there would be nothing that remains essentially *inaccessible* and thus speaks with its own voice. The machine can give you *any experience you might desire*. This would mean that every experience and every segment of world would be completely accessible. About such a scenario, Rosa writes the following:

> A relation to the world that knows and allows no interruptions or disturbances, no encounters with the foreign or unfamiliar, no periods of estrangement from oneself and the world, would not only tend to be flat and, in its suppression of anything non-identical or non-harmonious, potentially totalitarian, but would ultimately fall *mute.* Nothing in the world would remain *inaccessible;* the world would lose its own voice and thus its responsive quality, while the subject would in turn lose his or her capacity to adaptively transform the unfamiliar, and thus his or her capacity to change. (2019, pp. 30-31).

Now, one might say that, if it is needed that the world is at moments inaccessible to some extent in order to facilitate resonance, you can simply program the machine to make you experience a sense of inaccessibility so that all the criteria for resonance are met. This would, however, be a form of artificial inaccessibility rather than essential inaccessibility. Paradoxically, it would make inaccessibility *itself* accessible. It seems plausible that this artificial, self-made inaccessibility is not the same as the inaccessibility of the real world, and that therefore we are more likely to resonate with the real world.

Furthermore, As Nozick (1989, p. 104) presents the thought experiment, it is me myself that programs the experiences for the rest of my life. The own voice of the Other, however, can by definition not come from myself. If my own voice just resounds in the other, this would be a mere echo. Resonance entails being addressed by the own voice of an inaccessible Other. It seems reasonable that this aspect would be missing in the experience machine since I programmed the experiences myself for the rest of my life.

A supporter of (2) can have two responses to this. First, she might remind us that I will not have any memory of programming the experiences upon entering, so that I am not aware the experiences are machine-made nor that I programmed them myself – so I can still encounter the own voice of an Other in the sense that I don't know that my world-encounters are designed by myself. Second, she might go along with my argument and say "okay, then the experiences will be programmed by *someone else* who chooses your experiences for you". Then there would be an 'Other' that speaks with its own voice. I shall counter these responses in turn.

Assuming that erasing my memory would not literally *kill* me from a disruption in psychological continuity, so that I am being replaced by a numerically distinct successor; it would still be *me* who programmed the experiences and the very same *me* who experiences them. I could never encounter the own voice of an Other in a sequence of experiences that I programmed myself. Exactly because the own voice of an Other can, by its very nature, not be produced by anything other than that entity itself. I could thus only encounter the own voice of myself.

Second, if the thought experiment would be modified so that someone else programs the experiences for me, the scenario loses the very appeal that it meant to have. There is a reason that Nozick presented the thought experiment the way he did. To live a life that is not only artificial, but also created by someone else seems terrible. We would be living someone else's life. In terms of resonance theory, we could say that I would be obstructed from speaking with my own voice, since all my experiences would be the product of someone else's decision. So if I program it myself, there would be no encounter with the own voice of an Other (in the sense of an inaccessible own voice); and if someone else programmed it, I would be obstructed from speaking with my own voice. In the real world, resonant experiences emerge from the responsive relation of my own voice as well as the own voice of an inaccessible Other.

For these reasons, it seems reasonable that (2) can be rejected: resonance theory does not tell us to plug in. Therefore, resonance theory is in accordance with the strong intuition that it would not be best for one to plug in. As far as this is true, and as far as hedonism is not in accordance with that intuition, relational utilitarianism holds a theoretical advantage over classical utilitarianism in that respect. We now turn to the practical application of relational utilitarianism.

3. Applied relational utilitarianism: AI music

Can this relational utilitarianism be coherently applied? How can we apply it to some of the ethical issues surrounding AI music? The points I make in the following sections should not be considered as an exhaustive ethical guideline but rather as points of departure for relational utilitarianism as an ethics of AI music. These points are that AI music might be less valuable in terms of its resonating-qualities because 1) it attempts to make aesthetic resonance too accessible and 2) it cannot express a relationship to the world in a song (to the same extent as human music). Thirdly, AI music must be labeled as such and it should not be played in public spaces where it is not possible to inform listeners.

3.1 (AI) music in terms of resonance

To evaluate AI music in terms of resonance, it is helpful to have an account of what it is we enjoy about music according to resonance theory. Is there anything that we enjoy about music that might get undermined or enhanced by the involvement of AI; or that might be lacking in AI music – or is especially present?

For Rosa (2019, p. 280-296), music constitutes a "sphere of resonance". A sphere of resonance is a segment of life that people generally tend to resonate with. He analyzes music in terms of its resonating qualities and concludes that it holds the potential for a: "(…) precarious responsive relationship between two independent voices that are constantly contradicting, often diverging from, and transforming each other in creative struggle, meeting all the criteria of a resonant relationship" (Rosa 2019, p. 283). I would like to discuss specifically the feature of the "independent voice", and suggest that some of the applications of AI music might be an attempt to make aesthetic experience too accessible.

Music's inaccessible own voice

The inaccessible own voice of music is present in both the creation of music as well as in its reception. I want to focus here on the resonant experience of the listener. According to Rosa (2019, p. 284), resonating with music is an aesthetic encounter that entails being addressed or spoken to by a song. When that happens we experience vertical resonance in the sense of the

inaccessible but meaningful voice of the Other (Ibid.). That this voice is inaccessible is illustrated by Rosa as follows:

> (…) the development of a resonant relationship can always fail on both sides, as every music lover well knows. Even if we have previously experienced the most profound existential shock when listening to a piece of music – say, the magnificent finale of the fourth movement of Anton Bruckner's fifth symphony – we may not feel the same shock or any effect at all when we listen to the same recording at a different time, even just a day later, if we are dispositionally alienated. Similarly, we may not feel anything when we listen to a different recording. Even though it is the same material, the same work, and may even be performed masterfully by great artists and with excellent sound quality, our resonant wire may fail to vibrate. Resonance is constitutively inaccessible. (2019, p. 486)

Yet music is a great sphere of resonance precisely because a resonant encounter with it is inaccessible. According to Rosa (2019, p. 284), the awareness that aesthetic resonance cannot be manufactured, guaranteed, or forced, that it is inaccessible, rare and unlikely, seems to be a fundamental aspect of music's appeal (and art in general). Although he was not talking about AI music, Rosa already identified a growing tendency to make the resonating power of music commodified and institutionalized (2019, p. 293). By doing so, he says, we are making it limitlessly accessible (Rosa, 2019, p. 294). And this act of making it limitlessly accessible is the very thing that undermines the resonating power of music (Ibid.). We are undermining the encounter with a fundamentally inaccessible Other, and thus of genuine resonance. All the while, we remain on a "(…) quest for an experience beyond mere entertainment, in which one is addressed authoritatively by a strange power and transformed by the encounter (…)" (Rosa, 2019, p. 284).

    I think that some anticipated applications of AI music quite clearly seem to be an extension of this "commodifying institutionalization" that, on Rosa's view, attempts to make the resonating power of music limitlessly accessible. Consider the bespoke AI music that I mentioned in the introduction; a personal algorithm that is adjusted to your mood and creates and plays songs that make you feel whatever it is you want to feel.[19] It already seemed quite

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[19] It requires some degree of speculation to talk about such technologies since they do not exist. However, it is far from an unrealistic prospect that they will soon. It is talked about in an academic paper of Ross Cole (2020), in Harari's "*21 lessons for the 21th century*" and in a music magazine by Nick Cave in response to a question of

intuitive that there is something 'off' about that. We can explain and support this intuition at this point: if a personal algorithm could create a song for you at any moment, adjusted to your particular mood at that moment, designed with mathematical precision and accuracy to produce the feelings you want to feel from music, we would have completely 'captured' or 'mastered' or 'conquered' music. It thus loses its own voice and turns mute. (I gave a similar argument about a life in the experience machine; that the world would be completely accessible and loses its own voice.)

The resonant experience of listening to music entails that music speaks to us with its own voice, and this own voice cannot be 'summoned' or manufactured. Such technologies are bound to produce nothing other than the *simulation of resonance* rather than actual resonance precisely by this explicit attempt to directly maximize it. Therefore, they should be rejected according to relational utilitarianism.

A similar worry about similar technologies is expressed by Fabio Morreale (2021). He comments on AI-generated soundtracks that commercial AI companies are currently working on.[20] By collecting personal data, an AI machine could create music for you based on your personality and the things you've been through in your life. Morreale (2021, p. 109) worries (amongst other things) that this "soundtrack to your life" could become the only music you will ever need to listen to, thereby amplifying the "echo chamber effect", meaning that people will be more and more isolated in their own personalized 'world'. I support this worry with the argument I developed in this section. This attempt to 'master' the resonant experience of listening to music is more likely to silence the own voice of music and thus creating nothing but a simulation of resonance. It requires no more than a little imagination to see this creation of a personalized 'music-world' as a gradual step into a life just like in Nozick's experience machine.

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a fan about it. They all consider it as something that is not unlikely to appear soon. Considering human imagination the last piece of wilderness, do you think AI will ever be able to write a good song? - The Red Hand Files : The Red Hand Files

[20] See for example (2018). *How AI could compose a personalized soundtrack to your life*. How AI could compose a personalized soundtrack to your life | Pierre Barreau - YouTube
Or: (2021). *Composing the Soundtrack to Your Life*. https://www.lifescoremusic.com

The relationship to the world expressed in a song

The second suggestion I want to make is that AI music holds less potential for resonance because it cannot express a relationship to the world in a song (to the same extent as human music). I build on the position of both musician Nick Cave and scholar Ross Cole: they argue that AI music can never replicate what "real" music does to us, because of its inability to put emotion and expression of feelings into music (Cole, 2020, p. 337). Nick Cave puts it like this:

> It is perfectly conceivable that AI could produce a song as good as Nirvana's 'Smells Like Teen Spirit', for example, and that it ticked all the boxes required to make us feel what a song like that should make us feel – in this case, excited and rebellious, let's say ... But, I don't feel that when we listen to 'Smells Like Teen Spirit' it is only the song that we are listening to. It feels to me, that what we are actually listening to is a withdrawn and alienated young man's journey out of the small American town of Aberdeen[21]

According to this passage of Nick Cave, "what we are actually listening to" is something more than just the song. What he seems to be hinting at, is that particularly human music is able to express a relationship to the world in a song. Rosa (2019, pp. 285-288) identifies this as a central aspect of music's resonating potential. It may be part of music's appeal that we can identify with an existential longing for resonance. Rosa (Ibid.) observes that longing for a resonant relationship with the world is a main element in the content of music. Particularly in the lyrics but also in the "plot" of an instrumental song. Often, a song expresses a relationship with the world that is dominantly mute or alienated. At the same time, there is a strong desire for resonance that remains an illusion. The shining forth of the possibility of a resonant relationship with the world that does not correspond to one's actual relationship becomes the song's theme (Rosa, 2019, p. 287). And since the listener is necessarily familiar with an existential longing for resonance, it touches her in that way.

It seems like a reasonable possibility that we resonate with music at least partly because the song expresses a relationship to the world that addresses us in our own existential longing for resonance – while one's relation to the world can never be fully resonant. But

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[21] Link in previous note

Rosa proceeds with a more speculative suggestion that I do not endorse. According to Rosa (Ibid.), the experience of listening to music has the same structure as the relation to the world that is expressed in the song – its content.

In other words, we 'go along' with the alienation and desire for resonance that is described in the song, in the sense that we experience it ourselves at the moment of listening to it. This, in turn, generates resonance: there is a responsive relationship between what the listener hears thematically and what she experiences aesthetically (Ibid.). I think Rosa interprets the link between the song's content (in terms of the expressed relationship to the world) and the experience of listening to it a little bit too literally. Consider his following analyses:

> When Leonard Cohen and Jeff Buckley, each of whose recordings of the former's "Hallelujah" has by now deeply moved multiple generations of listeners, arouse the desire for mysterious deep resonance in the song's very first line – "I heard there was a secret chord/ That David played and it pleased the Lord"- only to immediately follow this with a repudiation "But you don't really care for music, do you?"- the disclaimer only serves to intensify the resonating listener's longing. *Yes, yes, I do,* they want to reply. And as the song reaches its climax – "And it's not a cry that you hear at night./ It's not somebody who's seen the light/ It's a cold and it's a broken Hallelujah" – it arouses in them both resonance and alienation simultaneously.

Rosa is saying here that each particular line is able to directly arouse (a longing for) resonance or a sense of alienation, in accordance with the content of the line. This, in turn, constitutes a responsive relation between the aesthetic experience and the content of the song, which generates resonance, so that the listener both experiences resonance and alienation at the same time. Specifically, that the first line, about "the secret cord", arouses a desire for mysterious deep resonance. Or that the climax arouses alienation because the content expresses a sense of alienation: "It's a cold and it's a broken Hallelujah".

This seems questionable. Surely the lyrics of a song do not necessarily produce or arouse resonance or alienation in accordance with the content of the lyrics. It is perfectly possible to resonate with a song without even being aware of its specific content (e.g. the song is in Spanish but we don't understand Spanish). How often do we only later find out that a song we've been listening to for years is actually expressing some dark, gruesome practices.

Our resonance with such a song is not necessarily caused by an interplay between the content of the song and our experience of listening to it.

Often, we simply do not pay attention to the content of the song. At a house party, for example, it is perfectly conceivable that I'm resonating with a hip-hop song that is expressing an alienated relationship with the world, full of murder and poverty, without this content appealing to me – I might even be unaware of the content and simply just bob my head to the beat, or get inspired to make some dance moves.

Moreover, Rosa's analysis could only possibly apply to someone who speaks the same language as the lyrics of the song. This would imply that someone who does not speak the same language as the lyrics of a song are fundamentally differently positioned to experience the song. This seems questionable, as many people like songs in another language, relevantly similar to songs with lyrics they do understand.

What is more, by interpreting the link between the content of a song and the experience of listening to it so literally, Rosa is contradicting himself. Rosa himself stresses that resonance is inaccessible and happens unexpectedly. How, then, can he say that one particular line of lyrics produces resonance or alienation in such and such a way, directly in accordance with the content of the line?

While I thus reject this particular way in which the expressed relationship in a song produces resonance according to Rosa, I do think that the ability to identify with an existential longing for resonance is part of music's resonating potential. To be fair to Rosa, he does point out that the resonance structures of such aesthetic experiences are extremely complex, and he provides another suggestion than the one criticized above (Rosa, 2019, p. 287).

Rosa suggests that the relationship to the world that is expressed in a song allows us to adaptively transform different modes of relating to the world. Music, amongst other aesthetic expressions, is capable of making palpable different possible ways of relating to the world. Art is an expression of a particular relationship to the world. According to Rosa (2019, p. 285), music allows us to test out and rehearse different modes of relating to the world in a playful and explorative way.

In line with Nick Cave's description that we are actually listening to something more than just the song, Rosa says that when we listen to music, people actually hear "(…) solitude and abandonment, melancholy, attachment, exuberance, anger and rage, hate and love – and thereby moderate and modify their own relationships to the world" (Rosa, 2019, p. 286). By presenting a spectrum of different possible ways of relating to the world, the subject is able to adaptively transform different models of relating to the world.

I would add to that, that a relationship to the world expressed in a song facilitates our ability of e→motion towards the song more generally. Remember that resonance is characteristically defined by a responsive relation of af←fect and e→motion. When listening to music, e→motion can well be understood as identifying with the artist, or applying the meaning of the lyrics to your own life, talking about it with a friend, making a playlists for different occasions, *et cetera*. These are all acts from the subject towards the song. If a song, then, expresses a relationship to the world, it helps to make possible such acts towards the song. We can better identify with an artist or the content of a song if it expresses a relationship to the world. The expression of a relationship to the world is an 'invitation' that facilitates e→motion, this includes but is not limited to exploring different modes of relating to the world.

The question, then, becomes whether AI music could express a relationship to the world in a song, in such a way that it allows us to adaptively transform different modes of relating to the world and express e→motion towards the song. The most straight-forward answer would be 'no', as it would require the AI musician to in fact have a relation to the world, and this would require it to be a subject. As far as we are now with the development of AI, there are no robots that have in fact consciousness. But I wish to remain agnostic on the precise extent in which AI music could perhaps simulate an expression of a relationship to the world. However, it does seem safe to say that it could never do so to the same extent as humans can. AI music would therefore be lesser in its potential for resonance, to the extent that it does not express a relationship to the world and thereby facilitate e→motion as much as human music does.

3.2 Informing the listener

Lastly, I wish to address a specific ethical concern with AI music. Should listeners be made aware of the usage of AI in the music they're listening to? Intuitively, it seems like companies and artists who release AI music have a *prima facie* duty to exactly inform the listener on how AI is used in music. Just like food is required to be labeled with the ingredients, so that people can make informed decisions and keep in mind their allergies (Sturm et al, 2019). However, Sturm et al (2019, pp. 7-8) identify significant difficulties to such transparency. According to them, it is very likely that AI music will not always be labeled as such (2019, p. 8). They stress that research should now be conducted to establish exactly the harms that can result if listeners are not informed on the usage of AI (Ibid.).

I wish to suggest one way in which harm can result. This will be equivalent to a normative argument for why listeners should always be informed. Namely, if listeners are not informed, people might position themselves differently when engaging with (new) music in general, in a way that they are less susceptible for resonance. The argument rests on two premises. First, if listeners are not always made aware, then it becomes unclear for all new music whether it is made with AI or not – every piece of new music *might* be AI music. If AI music would be popular, widespread, and indistinguishable from human music, people cannot undo the knowledge that the music might be AI, for instance when they are in a public space or come across new music on Spotify.

The second premise rests on the empirical study referred to in the section of weak- and strong evaluations. If my interpretation there is correct, it shows two important things: there are people with an unfavourable or unwelcoming attitude towards AI music, and people who have such an attitude are less likely to resonate with AI music.

Now, combining these two premises, it becomes clear that AI music that is not labeled as such could very well change the disposition we have towards new or unfamiliar music in general. Imagine you are one of those people who does not believe in the ability of AI to be genuinely creative, that you are overall unwelcoming towards AI music. If AI music is then popular, widespread and indistinguishable from human music, you must take into account the possibility that you are listening to AI music – something you do not evaluate as 'good' – when you hear new or unfamiliar music. This applies to all unfamiliar music you hear in a public space or new music you come across on the internet or Spotify's "discover weekly", for instance. The empirical study already showed that the degree in which strong evaluations are affected correlates with the tendency to resonate with AI music, on my interpretation.

If AI music is less of source of strong evaluations (or not at all) for someone, and she must always take into account that the new and unfamiliar music she comes across might be AI music, then it seems likely that all new and unfamiliar music will become less of source of strong evaluations for here. People who have an unwelcoming attitude towards AI music must always be a bit 'cautious' of all unfamiliar music since it *might* be AI. Music might become less of a sphere of resonance for them. Therefore, according to relational utilitarianism, this should be prevented. AI music must always be labeled as such and it should not be played in public spaces where it is not possible to inform listeners.

4. Conclusion

I have investigated whether we can formulate a promising new type of utilitarianism by expressing utility in terms of resonance. I ultimately 'tested' whether this relational utilitarianism can be coherently applied to some ethical issues surrounding AI music.

Relational utilitarianism turns out to be quite a peculiar combination of, on the one hand, 'maximizing' the good by its utilitarian nature; and, on the other hand, not allowing its value – resonance – to be maximized in a direct sense. But if we adopt such a conception of the good life, the concept of happiness turns out to be no less operationalizable in normative and applied ethics. To the contrary, relational utilitarianism coherently holds that the establishment and maintenance of stable axes of resonance should be supported, that the conditions that favour resonance should be supported and those that inhibit resonance avoided. This implies quite a radical break with, for instance, the exact calculations of value as the sum of pleasure- and pain episodes that we find in classical utilitarianism. I hope to have shown that this break is not unwelcome, and that relational utilitarianism still respects the core principle of utilitarianism that we should make (our relationship with) the world as good as we can make.

With resonance as the metric of utility we can avoid the question of higher and lower types of pleasures as well as be in accordance with the intuition that it would not be best for one to be plugged in to Nozick's experience machine. Relational utilitarianism also seems coherently applicable as an ethics of AI music. I made the claim that we should not be pursuing tailored songs by a personal algorithms because this would silence the own voice of music by attempting to make it limitlessly accessible. I further suggested that AI music holds less potential for resonance because it is unable to express a relationship to the world and thereby facilitate e→motion, to the same extent as human music. Finally, I argued that AI music must always be labeled as such and that it should not be played in public spaces where it is not possible to inform listeners. If we always have to take into account that new and unfamiliar music we come across might be AI music, we might position ourselves differently towards music. Particularly people for whom AI music is less of a source of strong evaluations would be harmed: all new and unfamiliar music could become less of a source of strong evaluations, thereby diminishing music as a sphere of resonance. This ought to be prevented according to relational utilitarianism.

Possibilities for future research are numerous on both the theoretical and the practical side. Theoretically, it would be interesting to see whether relational utilitarianism could stand scrutiny when it is exposed to common criticisms of (classical) utilitarianism. Practically, relational utilitarianism could be applied to other ethical issues surrounding AI music, other ethical issues surrounding technology more generally or just other ethical issues in general.

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