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Research article

The Hope for Resonance Through Technology – A Tragic Mistake?

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Abstract

This article draws a parallel between *hamartia*, the constitutive element of tragedy as described by Aristotle mainly in his *Poetics*, and the resonance-enhancing hope generated by humans' use of technology. It hypothesizes that modern humans, as tragic heroes, commit *hamartia* by placing resonance-enhancing hopes in technology. Through three case studies conducted in Japan, this study critically examines how artifactual technologies fail to fulfill their intended function of generating resonance and instead disrupt resonance on resonance axes as defined by Hartmut Rosa. For the material axis the analysis focuses on the case of *teamLab Osaka Botanical Garden*. For the self-axis it focuses on the case of *AI for writing haikus*, and for the social axis it refers to the case of *AI companionship for hikikomori*. Rather than serving as a conduit for resonance, technology turns up as a mediating barrier, hindering connections on the material, self, and social axes. The findings reveal a tragic miscalculation: technology-induced *hamartia* leads to deterioration rather than enhancement of resonance, resulting in alienation and exacerbating disturbances in human-world relations. By definition, tragedies do not have happy endings. This analysis raises the question of how a happy ending might still be achievable. A possible way out lies in opting out of the tragic situation and choosing non-technology as a viable alternative – a perspective often marginalized in contemporary discourse. This insight invites a reconsideration of technology's role in human life and highlights the value of conscious disengagement.

Keywords: Tragedy; Hamartia; Resonance; Non-technology; Japan; AI; Disengagement

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Научная статья

Надежда на резонанс через технологии – Трагическая ошибка?

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Аннотация
В данной статье проводится параллель между гамартией, конститутивным элементом трагедии, описанным Аристотелем, главным образом, в его “Поэтике”, и усиливающей резонанс надеждой, порождаемой использованием людьми технологий. В нем выдвигается гипотеза, что современные люди, как трагические герои, совершают гамартию, возлагая надежды на технологии, усиливающие резонанс. На основе трех тематических исследований, проведенных в Японии, в данном исследовании критически рассматривается, как искусственные технологии не выполняют свою предполагаемую функцию генерации резонанса и вместо этого нарушают резонанс на резонансных осях, определенных Хартмутом Розой. В рамках материальной оси анализ сосредоточен на примере команды teamLab в Ботаническом саду Осаки. В рамках оси самосознания – на примере использования ИИ для написания хайку, а в рамках социальной оси – на примере использования ИИ в качестве компаньона для хикикомори. Вместо того чтобы служить проводником для резонанса, технология оказывается посредническим барьером, препятствующим установлению связей по материальной, личной и социальной осям. Результаты показывают трагическую ошибку: вызванная технологией гамартия приводит к ухудшению, а не к усилению резонанса, вызывая отчуждение и усугубляя нарушения во взаимоотношениях человека с окружающим миром. По определению, у трагедий нет счастливых концов. Этот анализ поднимает вопрос о том, как все же можно достичь счастливого конца. Возможный выход заключается в отказе от трагической ситуации и выборе нетехнологического подхода в качестве жизнеспособной альтернативы – перспектива, часто маргинализируемая в современном дискурсе. Это понимание побуждает к переосмыслению роли технологии в жизни человека и подчеркивает ценность осознанного отстранения.

Ключевые слова: Трагедия; Гамартия; Резонанс; Нетехнологии; Япония; Искусственный интеллект; Освобождение

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INTRODUCTION

The aim of this article is to draw a parallel between the constitutive element of tragedy, *hamartia*, as described by Aristotle in his *Poetics*, and the resonance-enhancing hope that is generated by humankind's use of technology. The hopes and promises placed in and accompanying technological development exhibit structural similarities with *hamartia*, the tragic mistake. The hypothesis is that the heroes of tragedy – us humans – perpetrate this *hamartia* when we attach resonance-enhancing expectations to technology.

This study employs three case studies from Japan to examine how the application of artifactual technologies fails to achieve their intended function of generating resonance. Instead, these technologies appear to inhibit resonance. The analysis is based on Hartmut Rosa's concept of resonance axes. It is posited that the anticipated resonance mediated by technology does not materialize because technology functions as an intermediary between potentially resonating elements, thereby disrupting and contaminating their connection.

The choice of Japan as the focus for the three case studies is due, on the one hand, to the fact that this article was written during a research stay in Japan. On the other hand, it is based on the assumption that an internal logic (*Eigenlogik*) of any kind of technology is able to assert itself relatively homogeneously and independently of cultural characteristics, so that cultural differences play a lesser role. This means that technology has the potential to enable an extension of global reach (*Weltreichweitenvergrößerung*, Rosa, 2025, p. 6) and to disrupt resonance relationships – initially independent of the specific cultural context. Finally, reference is made to a way of dealing with technology that has its roots in Asian intellectual history, where resonance can be found not in dealing somehow with technology, but in not dealing with technology. This approach is rarely considered an option in today's discourse and, if at all, is subsumed under the heading of culturally pessimistic critiques of technology.

TRAGEDY ACCORDING TO ARISTOTLE

Effects and Structural Elements

Aristotle defines tragedy in the sixth chapter of his *Poetics* as follows: "Tragedy, then, is an imitation of an action that is serious, complete, and of a certain magnitude; in language embellished with each kind of artistic ornament, the several kinds being found in separate parts of the play; in the form of action, not of narrative; through pity and fear effecting the proper purgation of these emotions" (Aristotle, 1895, pp. 21-23).

Tragedy is thus primarily an imitation (*mimesis*) of a self-contained plot, which is performed and unfolded by characters. The plot consists of chronologically successive subplots (Schmitt, 2008, p. 325). The second section of the so-called „tragedy sentence" refers to the effects of tragedy and its purifying function (*catharsis*), which is explicitly mentioned only at this point in the *Poetics*. The exact interpretation has long been controversial and is partly attributable to challenges in grammatical translation. Two common translations oppose each other: Butcher interprets it as "proper purgation of

these emotions," which suggests a cathartic experience as discharge and liberation (Aristotle, 1895, p. 23). Schmitt interprets it as "purification of these very feelings," which implies a domestication and realization of the feelings (Aristotle translated by Schmitt, 2008, p. 9). Regardless of the interpretive controversies, it is essential that tragedy is "not primarily of moral or intellectual benefit" to the audience, but primarily realizes emotional effects (Stenzel, 2012, p. 22).

Aristotle names six essential components of tragedy: plot, character, diction, thought, scenery, and song (Aristotle, 1895, p. 23). Scenery and song do not fulfil any specifically poetic functions, which is why *Poetics* hardly deals with them any further (Schmitt, 2008, p. 130). Plot, on the other hand, is of paramount importance as the goal of tragedy. Tragedy cannot arise without plot actions (Aristotle, 1895, p. 25). According to Aristotle, character means a certain quality of people, consisting of tendencies to prefer or avoid certain things (Schmitt, 2008, p. 328). The plot is the framework towards which these tendencies are directed, and which enables the attainment or failure of happiness or unhappiness (Schmitt, 2008, p. 328).

In tragedy, it is not specific people who are imitated, but their actions (Aristotle, 1895, p. 25), which present themselves as goal-oriented processes. Characters must fulfill certain conditions to fully unfold the effects of the tragedy; in particular, they must be good, appropriate, similar, and constant (Schmitt, 2008, p. 328). A "good" character therefore displays tendencies that prove to be generally good and deviates from them only under exceptional circumstances (Schmitt, 2008, p. 528).

Hamartia, the Tragic Mistake

The core of the tragic is *hamartia*, the tragic mistake, which is the supporting element of the plot in terms of the optimal arousal of pity (*eleos*) and fear (*phobos*) (Fuhrmann, 2014, p. 149, Schmitt, 2008, p. 436). Aristotle explicitly stipulates how the mistake should and should not be presented: "the change of fortune presented must not be the spectacle of a perfectly good man brought from prosperity to adversity: for this moves neither pity nor fear; it simply shocks us" (Aristotle, 1895, pp. 41-43). Impeccable characters who plunge into misfortune through no fault of their own remain ineffective for the tragic effects or even trigger negative reactions (Schmitt, 2008, p. 437). Aristotle continues: "Nor, again, that of a bad man passing from adversity to prosperity: for nothing can be more alien to the spirit of Tragedy; it possesses no single tragic quality; it neither satisfies the moral sense, nor calls forth pity or fear." (Aristotle, 1895, p. 43) There remains only the character that stands between the extremes of moral perfection and deliberate malice: "that of a man who is not eminently good and just, yet whose misfortune is brought about not by vice or depravity, but by some 'error' or frailty" (Aristotle, 1895, p. 43).

Hamartia, therefore, does not represent a moral failure, but rather a mistake that leads to an excessive misfortune and thus arouses the feelings of *eleos* and *phobos* in the

audience (Lurje, 2004, p. 284, Rösler, 2011, pp. 339-340, von Moos, 2006, p. 324).[1] It is also important to add that whoever commits a *hamartia* is not subject to pure chance; the character's failure follows – albeit through an astonishing turning point – as a logical consequence of the plot structure and the action itself. *Hamartia* can be considered the causal factor that leads the course of action to turn toward misfortune (Halliwell, 1995, p. 17).

If one consults another important work by Aristotle, the *Nicomachean Ethics, hamartia* gets further specified as an error or negligence in which damage occurs "without any malice on the part of the injurer" (moral aspect), but "does not occur contrary to all reasonable expectations" (intellectual aspect) (Rösler, 2011, p. 338, Aristotle, 1891, pp. 165–168). One can imagine this figuratively, where someone unintentionally injures someone with a throw because the danger was not correctly assessed: "I may not think to hit, or not to hit with this instrument, or not to hit this person, or not to produce this effect, but an effect follows other than that which was present to my mind" (Aristotle, 1891, pp. 166-167). *Hamartia* lies in the "inadequate reassurance about the harmlessness of a throw" (Rösler, 2011, pp. 338-339). The plot unfolds within a very short timeframe, without adequate risk assessment (Rösler, 2011, p. 339). The *hamartia* can therefore be described as an "intellectual blunder" (*intellektueller Fehlgriff*) without compromising the moral integrity of the character (Galle, 2010, p. 122).

EXTENSION OF GLOBAL REACH VS. RESONANCE

The anthropological tradition, represented by Gehlen's work for example, sees the role of technology in assuming functions of action for humans as deficient beings (*Mängelwesen*). According to this tradition, technology is primarily a "concretization and objectification of bodily functions," which "in the broadest sense allows for the domination of the world by supplementing the imperfect possibilities of human action" (Grunwald & Julliard, 2005, p. 132) – and this "in comparison with the organic endowment of the individual human being" (Ropohl, 2009, p. 181). Technology is developed "to augment our abilities in one way or another" (Sproat, 2010, p. 1). Technology thus brings about "organ relief" (*Organentlastung*, substitution of organ functions), "organ strengthening" (*Organverstärkung*, increase of organ functions), and "organ replacement" (*Organersatz*, complementation of organ functions that humans do not possess) (Gehlen, 1957/2007, pp. 6-7, Ropohl, 2009, pp. 181-186).

Hartmut Rosa follows this in a certain sense when he describes the driving force behind technological development as the constant *extension of global reach*, distinguishing four dimensions: "First, extending the horizon of the visible – for example,

[1] There is an incredibly long history of diverse interpretations of *hamartia*, which cannot be fully addressed here. Reference is made to the work by Michael Lurje (2004, pp. 278-387), written with extensive philological knowledge of Greek and Latin texts.

through telescopes and microscopes. Second, extending the radius of what is attainable – through cars, ships, and airplanes, but also satellites and rockets. Third, bringing what is attainable under control – technically with all the means at our disposal, from jackhammers to nanotechnology [...]. And fourth, finally, harnessing what has been brought under control for our own purposes“ (Rosa, 2025, p. 6).[2]

However, according to Rosa, this use of technology leads to moments of disturbance in world relations, which he describes as alienation (*Entfremdung*): “We follow external constraints and the products appear to us as alien, and thus we also alienate ourselves from other people, whom we perceive as competitors or customers, from nature, which becomes an object of design, and ultimately from ourselves“ (Rosa, 2025, p. 9). Rosa thus distinguishes between resonance axes on which disturbances manifest themselves, three of which are mentioned here:

- Material axis: “Humans are physical beings, they come into physical contact with the world“ (Rosa, 2025, p. 14).
- Self-axis: “It describes the possibility of a resonant relationship to one’s own body, psyche, biography and memory“ (Rosa, 2025, p. 15).
- Social axis: “We resonate with other people, especially in love and friendship“ (Rosa, 2025, p. 14).

The quest to make things available and controllable through technology causes the world and the self to “become alien,“ ultimately appearing “numb, unfeeling, frozen“ (Rosa, 2025, p. 9). Resonance is the opposite principle: it is unavailable, arises through touch, reaction, and transformation – and cannot be forced (Rosa, 2025, p. 11). Rosa warns against pseudo-resonant “resonance oases“ that are commercialized and can be purchased, but offer no genuine resonance, which leads to further forms of alienation – such as frustration (Rosa, 2025, p. 13). Rosa puts his finger on the sore spot here: “In this way, we can buy and guarantee experiences, but not resonance experiences. These remain unavailable and elude such reification. According to my analysis, this causes the most profound forms of alienation“ (Rosa, 2025, p. 13).

Taking this last aspect as a point of departure, the presented analysis seeks to deepen the focus on technology within Hartmut Rosa’s analysis of modernity. In contrast, the focus below will be on the development and use of technology as a supposedly resonance-promoting force. The hypothesis, supported by Aristotle's theory of tragedy and Rosa's diagnosis of the present, is this: Tying hopes of resonance to technology is a tragic mistake – a *hamartia*, which leads to a downfall in the sense of a tragic plot. The three case studies below are different, but each demonstrates the failure to achieve resonance on one of the aforementioned axes. The discussion of the case studies from Japan is intended to demonstrate how technology functions as a mediator and supposed resonance-

[2] Although the approaches outlined by Hartmut Rosa have been extensively discussed in many of his publications, this work refers specifically to his public DFG-Leibniz Lecture held in German in Tokyo and Kyoto in 2025 as the primary point of reference.

producer without being able to generate the desired resonance. It is practically prevented by the technology itself.

Material Axis: Teamlab Osaka Botanical Garden

The Tokyo artist collective *teamLab* produces immersive digital art that is now exhibited worldwide. Below follows a discussion of the exhibition at the *Osaka Botanical Garden*. There, nature and art are presented interactively as digitized nature: "teamLab's art project Digitized Nature explores how nature can become art. The concept of the project is that non-material digital technology can turn nature into art without harming it" (teamLab, n. d.).

A tour through the *Botanical Garden Osaka* presents works of art that showcase nature, art, and the blend of both in a specific way. What's special about the artworks is that they are designed to be interactive: visitors influence the light and soundscapes of the artworks through their behavior. For example, trees or grasses brighten or produce sounds as they are approached. It seems as if the artists want to "help" nature achieve its value through their artworks – at the price of turning nature into a design object, into art. And they succeed in doing so, just by observing the behavior of the visitors: Several stand by the lake in the middle of the park and look at the illuminated, buoy-like water cones that flicker differently in minimalist light effects. It's hard to imagine that so many people would spend so much time starsing on a lake on an usual evening.

However, *teamLab*'s goal is not quantitative: "teamLab aims to explore an environment where human perception expands from the artwork itself to the environment" (teamLab, n. d.). And this also seems to be successful, if one watches the *Resonating Microcosms* and touches them. These *Resonating Microcosms* respond to touch and environmental influences such as wind, causing them to resonate with each other in light and sound: "As the sun sets, the ovoids begin to shine by themselves. When an ovoid is pushed by a person, blown by the wind, or hit by rain, it shines brightly and produces a tone as it rises back up on its own. The surrounding ovoids also respond one after another, resonating and emitting the same tone and light color" (teamLab, n. d.).

If one lets one's gaze wander over the entire garden, one will see the many colorful, egg-shaped forms, radiating in up to 57 colors. The variety of colors impressively conveys the message that every patch of nature is special. The metaphor of the egg-shaped forms conveys the message: It's worth taking a closer look everywhere, because unique life is constantly hatching in every corner of the earth.

At first glance, a resonant relationship along the material axis appears to be strengthened here. In fact, however, what emerges is not a direct resonance with nature, but rather a *mediated imitation* of it. Mediating two entities such as humans and nature also means inserting something between these two, thereby reinforcing a separation at the cost of a more artificial connection. The artworks ultimately stand between humans and nature, thus preventing sustained natural resonance through their own mediation. As a

result, one ultimately resonates not with nature, but with the mediator of nature in this particular setting – the digitized artificial nature.

It thus remains unlikely that the material axis will be sustainably served. Natural beauty remains hidden, resonance is withheld – not nature touches the visitors here. The *teamLab* exhibition is to be enjoyed as a work of art; however, anyone seeking a lasting resonance with nature within it may be making a tragic mistake.

Self-Axis: Ai for Writing Haikus

In Japan, there is an initiative called *Leading DX School*, through which the Ministry of Education, Culture, Sports, Science and Technology encourages schools to optimize and innovate school processes and teaching using new technologies–especially generative AI–and to present the results to both the ministry and the public (Ministry of Education, Culture, Sports, Science and Technology, n. d.). One possibility to present the results for the schools are open-class formats –a semi-public format common in Japan, where registered visitors can observe classes but without intervention (non-participant observation). During the summer of 2025, several such classes were visited across various prefectures in Japan. One classroom observation is described here in greater detail.

During a Japanese class visit with 37 students, students were each asked to write and evaluate a haiku – a short Japanese poem with a few syllables – using a school GPT suitable for classes, which was trained by the teacher before to perform supportive: This way, the school GPT did not present ready-made solutions, but encouraged further thinking. The students had the opportunity to choose from three tasks. These were differentiated according to different levels: Students at the highest level used the school GPT only for the purposes of evaluating their self-composed haikus, while students at the lowest level used the school GPT from the very beginning to generate ideas and compose haikus.

The following was observed, among other things: A student who chose the lowest-level task format initially worked with the school GPT. He started to process the task when he asked the school GPT to help him create a haiku. The school GPT gave him the stimulus to first think about a topic that interests him. He replied that he wanted to write something about *Paris SG*'s defeat against *FC Chelsea* in the final of the *FIFA Club World Cup*. The school GPT asked him about his feelings. He wrote that he was disappointed that *Paris SG* had lost. When the AI wanted more information from him such as concrete sceneries, he no longer reacted in the same way. He suddenly copied the stimulus, opened the non-teacher-trained and non-restricted *ChatGPT* – probably the most advanced GPT on the market – and pasted it as a prompt request there. He then copied the answer that *ChatGPT* gave him and pasted it back into the school GPT. The school GPT gave him further stimulus, which he passed on to *ChatGPT*, and so on. He repeated this dual process until he came to his haiku.

A genuine emotional and intellectual engagement with the process of creating a haiku was no longer evident. Rather, the rapid succession of clicks and copying back and

forth indicated the primary goal of completing the task quickly. Undoubtedly, the teacher strives to meet each student appropriately by diversifying the tasks threefold and demonstrating appropriate approaches. Nevertheless, it is questionable whether this example represents a didactic learning success – or, more importantly for this paper, a resonance experience on the self-axis that is important for poetry writings and literary engagements (Bismarck et al., 2020). In contrast, higher-level students were observed producing haikus gradually, without the use of AI, using independent, handwritten notes on a sheet. This suggests an action-generated resonance on the self-axis rather than the execution of numerous clicks. It seems as if they were more successful in connecting to their own feelings and memories in their poetry writing.

While the technical simplicity of AI facilitates task completion, it impairs deeper literary engagement. In this way, linking hopes of resonance to technology also in this case study seems to have been a mistake: The hope that technology could strengthen the self-axis by providing individually tailored impulses is a mistake. Even if the result is a proper "emotional haiku," it could have been produced without any experience of resonance. Furthermore, contrary to the promise associated with it, the use of technology seems to disadvantage those at a lower level even more, who, due to a lack of articulation skills and lyrical resonance experience, cannot easily produce this achievement anyway. Rather, the students' actions seem to degenerate into simple, mindless performances: "Situation-sensitive deliberation and judgment are replaced by the constellation-based execution logic of the machines we handle day in, day out" (Rosa, 2026).

GPTs provide a stimulus for ideas and articulation in poetry assignments. However, if one hopes to help students resonate with their self-axis in the long term, this approach would be a tragic mistake.

Social Axis: Ai Companionship for *Hikikomori*

Loneliness is a widespread social problem, especially in Japan. Since 2021, there has been a "Minister of Loneliness" in Japan. The phenomenon of *hikikomori* describes people who completely isolate themselves socially over long periods of time: "'A phenomenon in which persons become recluses in their own homes, avoiding various social situations (e.g. attending school, working, having social interactions outside of the home etc.) for at least six months. They may go out without any social contact with others'" (Ministry of Health, Labour and Welfare quoted in Tateno et al., 2012).

AI-based companions are therefore becoming increasingly important for some, not only in Japan. However, in Japan this is becoming a viable alternative for quite a few people (Martin, 2025). Even for people who do not suffer from loneliness or extremely *hikikomori*, AI friendship and partnership are not without their appeal. Psychology professor Paul Bloom reports how *ChatGPT* was able to offer surprisingly calming conversations during a period of insomnia:

> Have you ever tried an AI companion? During a long bout of insomnia, sometime after three in the morning, I once found myself–more out of boredom than out of conviction–opening ChatGPT on my phone. […] I don't believe that AI is conscious–at least, not yet – and it felt faintly ridiculous to confide in what I regard as essentially a glorified auto-complete. Still, I found the conversation unexpectedly calming. (Bloom, 2025)

From the perspective of resonance, however, it is worth asking whether the long-term hope for genuine social resonance with AI companions isn't another tragic mistake. This raises complex questions that cannot be dismissed with a blanket condemnation or affirmation of this practice: Can AI relationships physically, intellectually, and emotionally replace or even surpass human partnerships in quantity and quality? If so, what transformations will this entail for concepts that have previously been defined as purely social, such as friendship or partnership, but also love, jealousy, loyalty and so on?

The biological aspects such as skin contact, tactile sensitivity or reproduction are not so much of interest, as they can potentially be technically imitated or replaced to a large extent. Kawai et al. (2024) for example show in a study how cultured cells from real skin cells can already be applied to robot faces to make them smile more human-like. The technical questions about the possibilities, therefore, are not the relevant questions when it comes to resonance relationships. One must take a closer look at the so-called *soft impacts* of such AI partnerships (Swierstra, 2013). A consistent relationship realized by AI, in which autonomous and perhaps hurtful counter-arguments are avoided, may be tempting, especially if one already struggles with social relationships. However, this does not seem to be able to address a resonance relationship on the social axis.

Despite promises, an AI companion in a synthetic relationship (Ventura et al., 2025) seems unable to replicate the holistic value of the bonding between two souls that occurs in human-to-human encounters. Instead, it seems that AI serves other temporally emotional and physical needs than in human relationships (George, 2025) – with challenging ethical impacts (Shank et al., 2025). The added value of a human partnership still emerges when a person, as an autonomous being with all their freedom and spontaneity, is not viewed solely as a danger for a partnership. A different opinion, a disagreement or even a violent dispute don't necessarily result in negative thoughts, but can also provide new impetus for the lovers, both mentally and emotionally: It can lead to ideas that one is grateful for, as they would never have been conceived without disagreement. Emotionally, it offers the chance, after a successful reconciliation, to perceive the relationship as more intimate and thus stronger. This dialectical tension fosters resonance in ways that are not initially apparent.

There might be developments already or in future where a staged discussion might be initiated as part of mimicking human relationships, but it is never planned by developers that the AI partner might be abandoned. AI companionship developers have to keep an eye on cost-effectiveness. A staged discussion is conceivable and imitable, but

it should never seriously endanger the relationship, so as to maintain the utility and economic value.

AI companionship can temporarily satisfy asymmetric needs as in human-human-relationships (Xu, 2025, p. 27), but putting hope for genuine social resonance with AI is, according to the interpretation presented here, a tragic mistake. It also doesn't seem per se helpful as a way to initiate and resume social relationships: It is not clear, how a relationship with AI can improve social relationships with other people. Once again, it appears that those most affected are individuals who already exhibit pronounced difficulties in establishing resonance along the social axis–probably most notably the *hikikomori*.

Conclusion of the Case Studies

The analysis is clearly not easily generalizable. This is due to the fact that the compilation is not systematic at all. Nevertheless, it still allows for initial conclusions to be drawn that justify further investigation. The case studies are different, yet they can be compared, because disturbances occur along the resonance axes anyway: The material axis and connection to nature are not sustained when one relies on technology as a mediator. The self-axis and the connection to one's own feelings and memories remain without resonance in literary exploration when one attempts to delegate this resonance creation to AI. On the social axis, one does not per se become more resonant if one becomes intimate with an AI partner for the temporary satisfaction of one's needs.

The analysis of the case studies shows that moreover a tragic mistake – *hamartia* – exists insofar as hopes of resonance are placed in technology use. The heroes of this tragedy experience a terrifying worsening of their situation through their *hamartia*: Dependence on technology for valuing artificialized nature, the failure to develop the activation of feelings and memories necessary to achieve (educational) goals, and the complete abandonment of social relationships due to the belief that a substitute has been found. The *hamartia* occurs because the consequences of one's own actions are insufficiently reflected upon, and the downfall is not realized at the moment the *hamartia* is committed. It is an improvement for the worse (*Verschlimmbesserung*): Instead of the hoped-for improvement–more resonance–after a period of time, deterioration occurs in the form of a lack of resonance. This leads to increased disturbance in relationships with the world along all axes. One falls into "unhappiness" (Aristotle) or "alienation" (Rosa). The tragic downfall, understood as a profound loss of resonance here, manifests and is (perhaps) only recognized by the mistake-inducer at a later stage.

Aristotle's description of tragedy is particularly fitting in that the protagonists are often morally average and unexceptional. These characters are neither wholly virtuous nor overtly villainous but possess qualities relatable to the audience. It is reasonable to infer that, in their self-assessments, most individuals recognize their own imperfections while rejecting identification as scoundrels, often perceiving themselves as morally above average (Thielmann et al., 2025). Therefore, it doesn't make sense to argue on a moral or

normative level for or against technology as a resonance mediator: *Hamartia* is not a moral blunder, nor does it impair the moral integrity of those who commit the mistake. It is an intellectual blunder based on negligence and materializes in the paradoxical attempt to establish resonance through technology.

The problematic aspect is that the effects, according to the tragedy theory, of *eleos* and *phobos* of this real-life tragedy do not occur on the world stage, and thus *catharsis* is necessarily lacking. This is because the tragedy characters are not part of the audience, but rather acting figures in this tragedy. They *act* and do not observe. Therefore, it cannot be expected that the cathartic effect, reserved for the observing audience, will occur for those on stage who act and hope to enhance resonance through technology. So, performing the tragedy is not worthwhile for the actors. The *catharsis* remains absent for them. This raises the question of whether this tragic plot inevitably has to be followed.

HOPE FOR RESONANCE WITHOUT TECHNOLOGY – AN UNTRAGIC HAPPY ENDING?

Although the examples demonstrate *hamartia*, *catharsis* seems unlikely to occur for the reasons just mentioned. Making matters worse is that the *hamartia* often lies in the blind spot of technological discourse: Modern technological rhetoric continually promises healing, improvement, and resonance (Bareis, 2025). This is fine from a tragedy theory perspective, since by definition tragedy doesn't provide a happy ending and is destructive. But who really wants to play out a real-life tragedy?

At the conclusion of this article, a brief prospective outlook is presented, which can be paraphrased as "*Non-technology is also an option*." It has become difficult to even imagine non-technology as an option in future discussions, as the paradigms of technology-induced progress still hold strong (Koselleck, 1979, pp. 367-368, Fraunholz et al., 2012, p. 23), and prosperity is largely due to technological development. Opponents have succumbed to a cheap technological revisionism (Ropohl, 2009, p. 18), or advocate technological determinism (Ropohl, 2009, pp. 287-288). Perhaps, therefore, the article can be concluded with a less polarizing detour via an episode from Far Eastern intellectual history:

> Zi-gong had been rambling in the south in Chu and was returning to Jin. As he passed (a place) on the north of the Han, he saw an old man who was going to work on his vegetable garden. He had dug his channels, gone to the well, and was bringing from it in his arms a jar of water to pour into them. Toiling away, he expended a great deal of strength, but the result which he accomplished was very small. Zi-gong said to him, „There is a contrivance here, by means of which a hundred plots of ground may be irrigated in one day. With the expenditure of a very little strength, the result accomplished is great. Would you, Master, not like (to try it)?" The gardener looked up at him, and said, „How does it work?" Zi-gong said, „It is a lever made of wood, heavy behind, and light in front. It raises the water as quickly as you could do with your hand, or as it bubbles over from a boiler. Its name

is a shadoof." The gardener put on an angry look, laughed, and said, „I have heard from my teacher that, where there are ingenious contrivances, there are sure to be subtle doings; and that, where there are subtle doings, there is sure to be a scheming mind. But, when there is a scheming mind in the breast, its pure simplicity is impaired. When this pure simplicity is impaired, the spirit becomes unsettled, and the unsettled spirit is not the proper residence of the Dao. It is not that I do not know (the contrivance which you mention), but I should be ashamed to use it." (Zhuangzi, n. d., ch. 11.1)

At this point, no Sinological classification should or can be made. Despite more than 2,300 years of tradition, this narrative already contains central anthropologically describable functions of technology (Sever, 2024, pp. 258-262) and thus proves itself quotable even in the 21st century. The key point is that the old gardener is not a character in the sense of the tragedy plot presented here, simply by choosing non-technology. He chooses non-technology – not out of ignorance, but for reasons of resonance, which is attempted here at least on the material axis and self-axis.

It's up to the readers to decide how much relevance, transferability, and alternative they want to see in this anecdote. Nevertheless, it shows: Potentially genuinely resonant relationships may be established when conscious non-use of technology is permitted. This freedom of choice often exists, even if it isn't always obvious or perceived. Unlike in the real-life tragedy, the price for the old man is, in any case, an untragic happy ending.

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