

Article

On Virtue Epistemology and Artificial Intelligence in Education: Could AI be the 21st Century Transformation Machine of Nozick?

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Abstract: This paper aims to address the question of why no person should choose to be plugged into Nozick's experience machine to be instantly virtuous while touching on why the deceptive tendencies of AI tools in education looks inconsistent with education's epistemic aims. At the outset, I provide an account of virtue and what it means to acquire it. Following this, I discuss the concept of education from the perspective of virtue epistemology and its implications. In effect, I would argue that no rightly motivated virtuous agent would choose to attach oneself to a machine that will alter one's character and implant a desirable trait in the flick of a switch. Similarly, no person aware of the virtue epistemic aims of education will depend on the deceptive use of AI to achieve success in education. Essentially, human intuition disposes one to reject any action involving deception and a comprehensive understanding of virtue and education contradicts acceding to a machine-like transformation procedure. This paper tackles the idea that although the ultimate *telos* of acquiring virtue (and education, by inference) is to possess one successfully, attaining such an excellent state must also be consistent with significant virtue-epistemic motivations.

Keywords: artificial intelligence, virtue epistemology, education, epistemology of education

The Experience Machine and Artificial Intelligence

Nozick's Experience and Transformation Machines

In 1974, Robert Nozick wrote one of the most thought-provoking thought experiments in ethics challenging the foundations of pleasure-based consequentialist theories such as hedonism and utilitarianism:

What matters other than how people's experiences feel "from the inside"? Suppose there were an experience machine that would give you any experience that you desired. Superduper neuropsychologists could stimulate your brain so that you would think and feel you were writing a great novel, or making a friend, or reading an interesting book. All the time you would be floating in a tank, with electrodes attached to your brain. Should you plug into this machine for life, pre-programming your life's experiences? If you are worried about missing out on desirable experiences, we can suppose that business enterprises have researched thoroughly the lives of many others. You can pick and choose from their large library or smorgasbord of such experiences, selecting your life's experiences for, say, the next two years. After two years have passed, you will have ten minutes or ten hours out of the tank, to select the experiences of your next two years. Of course, while in the tank you won't know that you're there; you'll think it's all actually happening. Others can also plug in to have the experiences they want, so there's no need to stay unplugged to serve them. (Ignore problems such as who will service the machines if everyone plugs in.) Would you plug in? What else can matter to us, other than how our lives feel from the inside? Nor should you refrain because of the few moments of distress between the moment you've decided and the moment you're plugged. What's a few moments of distress compared to a lifetime of bliss (if that's what you choose), and why feel any distress at all if your decision is the best one?¹

¹ Robert Nozick, *Anarchy, State, and Utopia* (Oxford: Blackwell Publishers, 1974), 646.

The 1999 movie *The Matrix* introduced the same dilemma of Nozick's experience machine. In one of the scenes, Cypher, an antagonist in the story, said, "I don't want to remember nothing. Nothing. You understand? And I want to be rich. You know, someone important. Like an actor. You get my body back in a power plant, reinsert me into the Matrix. I'll get you what you want."² At that time, he was closing a deal with an agent of the make-believe world created by the machines. Cypher has now acceded to the ill plans of the agent of the Matrix against Morpheus, the protagonist and the hero who has once freed Cypher himself. What Cypher asked the agent to do in exchange for his loyalty is simple: He wanted his body to be plugged back into the Matrix—a simulated world that creates a fake yet enticing version of reality in the minds of the people attached to the supercomputer. The Matrix is like a prison cell, but it is not a mere correctional facility that detains a person. It is a prison for the mind. Cypher wants to return to the simulated power plant and be the person he wants to be. He gave up his freedom for the promise of the comforts of living a lie and the bliss of ignorance albeit in captivity. The Matrix, particularly the mechanism that creates the illusion of this simulated world, is fundamentally similar to Nozick's experience machine. The process works by completely altering one's experiences while inside the machine. Essentially, the person who enters suddenly gets new experiences, all in the flick of a switch.

In discussing how virtues are acquired, Linda Zagzebski discussed the process alongside one version of the experience machine of Nozick—the transformation machine.³ Nozick's "imaginary transformation machine"⁴ operates in a similar manner: it subjects one to a process that transforms one into the kind of person one aims to be without the need to suffer from the toils and the taxes involved in natural acquisition. A person who is motivated to be virtuous, especially if the only goal is to successfully acquire virtues, may be tempted to enter the machine in full dependence to alter one's character, renounce bad habits and vices, and replace them with desirable

² *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Los Angeles: Warner Bros. and Village Roadshow Pictures., 1999).

³ See Linda Trinkaus Zagzebski, *Virtues of the Mind: An Inquiry into the Nature of Virtue and the Ethical Foundations of Knowledge* (Cambridge: Cambridge University Press, 1996).

⁴ "We learn that something matters to us in addition to experience by imagining an experience machine and then realizing that we would not use it. We can continue to imagine a sequence of machines each designed to fill lacks suggested for the earlier machines. For example, since the experience machine doesn't meet our desire to be a certain way, imagine a transformation machine which transforms us into whatever sort of person we'd like to be (compatible with our staying us). Surely one would not use the transformation machine to become as one would wish and therefore plug into the experience machine!" (Nozick, *Anarchy, State, and Utopia*, 42).

character traits and attributes of excellence. Don't the ends justify the means of doing them?

If the machine, like the Matrix, employs deception to attain a desirable end, why is someone like Cypher attracted to it? Like the Matrix, the machine can make somebody different in one press without undergoing rigorous procedures. It creates a different person out of the individual who chooses to attach oneself to it instantly. As opposed to naturally acquiring virtues through habituation, the transformation machine helps any person who wants to be virtuous instantly by providing one with a means that requires less time and comparatively small individual effort. The only thing needed is to attach the wirings of the transformation machine to the body of the person. At the flick of the switch, the wires begin to transmit electric signals or something of that sort which cause the person to suddenly transform to possess skills, abilities, or, in this case, virtues while keeping intact the other aspects of the self. In contrast with the experience machine, the transformation machine only needs the person to be plugged to it once for a short amount of time, and it will do the job of imprinting the character traits or skills to the customer. After unplugging from the transformation machine, completely transformed by the process, the now-virtuous person begins to perform actions driven by the trait imprinted on him.⁵

AI Tools in Education

Artificial intelligence or AI is a very powerful machine that has vast fields of application. Akin to the transformation machine, it is very efficient while at the same time user-friendly. Its products are equally interesting. The machine does not necessarily produce internal characteristics and altered mental states; its products vary and the effects of using them are incalculable. This machine has now permeated every aspect of human experience. It has been there for quite a number of years now and has turned us into defenseless, dependent creatures under our noses. At this moment, it continues to evolve, reproduce, and dominate.

There are many fields where AI has dominated, but, specifically, in the field of education one can see how polar and ambiguous its effects are. AI use in education has been there for a long time, and its presence has drastically transformed the educational landscape. For example, undertaking research nowadays no longer requires scouring through physical libraries for

⁵ Although a different topic, there is a third machine conceptualized by Nozick - the result machine. While plugged to the result machine, whatever the person accomplishes in the virtual world the machine produces results successfully in the real world. See Robert Nozick, *Anarchy, State, and Utopia*, 44.

weeks and months to finish a short manuscript. Paid subscriptions to online databases of information that offer wide-ranging access to any type of data on the web supplanted purchasing bulky sets of encyclopedias, dictionaries, thesauruses, and many other books to gain access to up-to-date information. Complementing the digitalized resources, generative AI tools shorten the process of developing a manuscript as they do the work of producing text in one click in our stead. Indeed, AI has made the academic experience more manageable, time-efficient, and resource-friendly. To a certain extent, AI simplified the learning process but at the expense of genuine education and holistic learner growth.

During the COVID-19 pandemic, the pernicious and terrifying effects of AI use in education became obvious. Burdened by the paralyzing effects of school shutdowns and prohibitions of in-person classroom meetings, teaching and learning shifted to online modalities. These online modes of learning delivery led to prolonged exposure to AI tools which offer the advantages of efficiency and convenience. The online systems run by AI suddenly became the only portal to learning and the only means by which one gets access to education. However, due to fast-paced developments of AI technologies, these tools were eventually wielded for unethical, deceptive purposes. AI use exposed humanity to threats of AI hallucinations and machine-learning biases, infringement of data privacy and truth manipulation resulting from deepfake technology and, from the epistemic point of view, to risks of being subjected to epistemic bubbles and epistemic chambers,⁶ and epistemic and hermeneutic injustice.⁷ Nowadays, AI technologies are no longer used solely for assistive purposes, such as helping one get access to online journals, soft copies of books, and supplementary learning materials like YouTube videos. Generative AI tools such ChatGPT, Nova-AI Chatbot, and Google Gemini, DALL-E, as well as assistive AI tools like Quillbot, Grammarly, and Otter can help in producing academic papers, thesis and dissertation manuscripts for degree completions and create digital artworks for class requirements. These are few of the ways in which AI misuse makes learners “deceitful” and “ignorant.”⁸ Even report presentations that one meticulously does in the past for prolonged hours can now be produced in one click of the mouse. Subsequently, because the internet holds boundless data from all available sources, what AI technologies can produce seem to share the same boundlessness and variety.

⁶ See C. Thi Nguyen, “Echo Chambers and Epistemic Bubbles,” in *Episteme*, 17 (2020).

⁷ See Miranda Fricker, *Epistemic Injustice: Power and the Ethics of Knowing* (New York: Oxford University Press, 2007).

⁸ Benito Teehankee, “AI Misuse Is Making Our Youth Ignorant and Deceitful,” in *Inquirer.net* (17 June 2024), <<https://business.inquirer.net/464083/ai-misuse-is-making-our-youth-ignorant-and-deceitful>>.

Instead of augmenting academic work, AI dependence takes over responsible student agency.

To an alarming extent, like Nozick's transformation machine, AI has the capability to transform one from an ignorant, clueless, unengaged learner to one who earns exceptional scores even without going through the traditional, laborious, and taxing experience of learning that leads to academic achievement and success. Today, a student who extensively uses AI can easily produce an academic paper or even an entire thesis and receive the same outcome (a good grade or a degree) without going through the same rigorous process that many researchers and degree holders went through. The recent phenomenon of "grade inflation" is argued to be directly related to the increasing use of AI tools.⁹ Nozick would have been surprised to know that a machine he conceptualized in his famous thought experiment to elucidate on the concepts of pleasure and virtue has now manifested in the field of education changing its landscape continuously at expeditious rates.

Notwithstanding the benefits of AI use in the field of education such as improved efficiency, personalization of learning experience, and accessibility, among many others,¹⁰ AI is a tool that is prone to exploitation and mishandling. While experts in the field of education recognize the good results brought about by AI use,¹¹ can it transform the student to become more curious, creative, and critical? AI use has many advantages in education especially when seen as assistive, complementary devices to aid and reinforce learning and comprehension among students of the current generation. All these advantages of AI use, however, carry with them a hefty price tag.

Zagzebski on the Nature of Virtues

Virtue Epistemology and the Concept of Virtue

Gettier complications have plagued the field of epistemology for the longest time.¹² The Gettier cases challenged the Platonic conception of knowledge loosely captured by the JTB (justification, truth, belief) components explored in the dialogue *Theatetus*. Being justified in believing in a true proposition (which is the fundamental account of propositional knowledge) no longer satisfies the requirement for knowledge as Gettier

⁹ See Daniel Lannin, Taylor Flinn, Alexandra Ilie, & Dan Ispas, "Unmonitored Online Exams: Valid Assessment or Score Inflation?" in *Teaching of Psychology*, (2025).

¹⁰ "The Benefits of AI in Education," in *The College for International Studies* (3 October 2023), <<https://www.cis-spain.com/en/blog/the-benefits-of-ai-in-education>>.

¹¹ See Aniella Mihaela Vieriu and Gabriel Petrea, "The Impact of Artificial Intelligence (AI) on Students' Academic Development" in *Education Sciences*, 3 (2025).

¹² See Edmund Gettier, "Is Justified True Belief Knowledge?," in *Analysis*, 23 (1963).

argued and successfully demonstrated that the conflation of the three components is not immune to threats of epistemic luck.¹³ In other words, it is possible for a person who has a justified true belief (JTB) to be without knowledge because the possession of a JTB may have been a direct or indirect result of the interference of luck in the process of knowing. The lack of immunity to and defense against Gettierized cases left epistemologists scratching the surface once again for a more robust account of knowledge.

To a certain extent, Gettier dug a lacuna for nontraditional epistemologists to fill. Epistemologists began to turn their attention to the pursuit of a possible fourth requirement that can fill the JTB gap (JTB + x). The search also entailed a closer look at the justification component of the traditional account and the possibility of abandoning the concept of justification to accommodate other alternatives.¹⁴ This is the space filled in by virtue epistemologists as they call themselves. In fact, they turned away from the traditional components which meant that the issue of justification no longer became too big of a deal for them. An exception is Linda Zagzebski who faced the challenge of reinterpreting the justification component and answering the Gettier cases head on through a comprehensive account of virtues.¹⁵

Virtue epistemologists focus on the importance of treating epistemology as a normative discipline particularly tasked to evaluate knowledge acquisition rather than describe it as opposed to the Quinean proposal of naturalization, thus presenting the “value turn” in epistemology.¹⁶ In virtue epistemology, tables turned in favor of understanding traditional epistemology notions like justification and true belief, using the vocabulary of intellectual and/or epistemic virtues.¹⁷

What is a virtue and what is its nature? What does it mean to possess virtue? In the literature of virtue epistemology, Zagzebski’s account of virtue stands out as the most comprehensive. While virtue epistemologists such as

¹³ It is noteworthy to say that some philosophers in epistemology do not agree that Gettier successfully supplanted the Platonic account of knowledge. See Moti Mizrahi, “Why Gettier Cases Are Misleading,” in *Logos & Episteme*, 7 (2016) and Peter Hawke and Tom Schoonen, “Are Gettier Cases Disturbing?,” in *Philosophical Studies*, 78 (2021).

¹⁴ See Fernando Broncano-Berrocal, “A Robust Enough Virtue Epistemology,” in *Synthese*, 194 (2016).

¹⁵ Zagzebski, *Virtues of the Mind*, 397.

¹⁶ John Turri, Mark Alfano, and John Greco, “Virtue Epistemology,” in *Stanford Encyclopedia of Philosophy* (26 October 2021), <<https://plato.stanford.edu/entries/epistemology-virtue>>.

¹⁷ See Heather Battaly, “Virtue Epistemology,” in *Philosophy Compass*, 3 (2008).

Ernest Sosa¹⁸ and John Greco¹⁹ present virtues as similar to skills and low-grade perceptive abilities thereby offering a somewhat simplistic account of epistemic virtues, Zagzebski presented virtue as a complex, holistic concept that can quell the threats to the traditional conception of knowledge. In *Virtues of the Mind*, she offered a comprehensive account of virtue, examining it thoroughly, thus providing a virtue-theoretic approach in epistemology.

Zagzebski identifies several components of virtue, comparing it with many other items. First, virtue is a kind of excellence.²⁰ The word virtue originated from the Greek term *arête*, meaning excellence. Virtues are excellences in the soul. The soul develops these character traits through exposure, engagement, invigoration, prompting, and doing. It is in this sense that Zagzebski mentions that a virtue is “a property that we attribute to the person in a deep and important sense.”²¹ We do not morally evaluate persons according to their actions but in reference to their being virtuous. Zagzebski noted as well that virtues are those that are exhibited by great-souled persons, closely capturing the Aristotelian account.²² Though excellences include nonhuman excellences (e.g., even knives have excellences), it still captures one of the essential features of a virtue, i.e., the excellence involved in one’s being reliable in achieving the good of the motivational component of virtue.

Second, Zagzebski quotes St. Thomas Aquinas in that a *virtue* “is what makes its possessor good and his work good likewise.”²³ A virtue is always worth having, and someone who possesses such is of higher moral status as compared to others who lack it. “Virtue is, then, both a good-making quality of a person and a quality that cannot lead to bad use. Presumably ‘bad use’ means wrongful behavior.”²⁴ Because of the presence of virtues in the soul and their connection with the good, one is praised for having them. Virtues, thus, make the person and his acts praiseworthy.

Third, virtues are distinguished from natural capacities, and they are “acquired excellences” just as how vices are deemed as “acquired defects.”²⁵ To argue in favor of this, Zagzebski said, “An animal acting on instinct alone does not have virtue, even if the instinct is a good one, and the same goes for the human. We do not praise the natural capacity or blame the natural defect

¹⁸ See Ernest Sosa, *A Virtue Epistemology: Apt Belief and Reflective Knowledge, Volume I* (Oxford: Oxford University Press, 2007).

¹⁹ See John Greco, “Virtues and Vices of Virtue Epistemology,” in *Canadian Journal of Philosophy*, 23 (1993).

²⁰ Zagzebski, *Virtues of the Mind*, 116.

²¹ *Ibid.*, 85.

²² *Ibid.*

²³ *Ibid.*, 91.

²⁴ *Ibid.*

²⁵ *Ibid.*, 102–106.

since they are involuntary.”²⁶ A virtue is a deeply entrenched quality of a person—a character trait—that one has acquired through training, or through habituation, as proposed by Aristotle. The agent himself is responsible for it, and as such, is creditable for it. This is what makes a possessor of virtue worth emulating: out of one’s volition, one chooses to develop such a virtue for a long period of time, in view of mundane temptations and as against one’s akratic tendencies. To an end, virtues involve the will and the resistance to temptations. They are states of excellences developed and acquired over time by a person who could have chosen to develop a contrary state.

Zagzebski distinguished virtues from skills which Aristotle failed to do.²⁷ According to Zagzebski, “Skills have many of the same features as virtues in their manner of acquisition and in their area of application, and virtuous persons are expected to have the correlative skills in order to be effective in action, but skills do not have the intrinsic value of virtues.”²⁸ To explain this further, she illustrated the case of a person skilled in speaking Japanese.²⁹ Speaking a language is a skill. A person may choose not to speak one’s language when called for, yet this does not mean one does not have the skill. This is where skill differs from virtue. Virtues need to be exercised when a situation yearns for it, and the non-exercise of it shows that the person who was believed to possess it does not in reality. Also, virtues are not skills: some skills are not worth having, but all virtues are.³⁰

Additionally, virtues are different from emotions or feelings.³¹ Virtues are different from the Aristotelian “*pathe*.”³² This is so since we are not praised or blamed for having these emotions; one is to blame for the manner by which one feels them. We are not to blame for being “emotional,” we are to blame because of how we let it get the better of us at times when we could have controlled them. Emotions spill out of us involuntarily, but virtues seek the involvement of choice. Nonetheless, emotions fuel our wanting to attain the end of our motivations, which is relevantly instrumental to the exercise of virtues.

Zagzebski also writes that virtues have motivational and success components:

A virtue, then, can be defined as a deep and enduring acquired excellence of a person, involving a

²⁶ *Ibid.*, 103.

²⁷ *Ibid.*

²⁸ *Ibid.*, 116.

²⁹ *Ibid.*, 107.

³⁰ *Ibid.*

³¹ *Ibid.*

³² *Ibid.*, 126.

characteristic motivation to produce a certain desired end and reliable success in bringing about that end... a motivation is a disposition to have a motive; a motive is an action-guiding emotion with a certain end, either internal or external.³³

A virtuous person has a motivation, a disposition to have a distinct motive, and this motive is an emotion that instigates and directs action to produce the desired end. As virtues are deeply entrenched, motivations are but deep parts of a person's character as well that provide one with a set of orientations to do what has to be done to reach the pursued end. And this is where the notion of the success component of virtues rests on.

Lastly, virtue is a success term.³⁴ A person is said to not possess a virtue unless he is reliable at bringing about the end that is aimed at by his motivation. A virtuous person is reliably successful in always producing the end of his motivation. This is so since virtue is strictly tied up with the notion of excellence. One cannot be considered excellent if there are cases when he is not successful in bringing about the end of his endeavor, unless the person is matter-of-factly not virtuous.

The Self-Directed Cultivation of Virtues

Virtues are developed capacities of the will and the mind to accomplish a moral or an intellectual good. They spring from habits (moral virtues) or mimicked through instruction (intellectual virtues)—they are learned dispositions to act in a certain way. Since learning a virtue is done through habituating oneself to acting in a particular way and training oneself to act virtuously in all relevant circumstances, virtues, when acquired properly, create deep entrenchment in character. This is why Zagzebski said in her account of virtues that a virtuous person could forget how to be virtuous if one no longer exercises it but still could regain it upon exercising it again.³⁵ The virtuous person simply has rusted, but he still is capable of being cleaned of the rust.

It takes a ton of effort and a considerable amount of time for a person to be virtuous. Here, I argue that virtuous individuals are like quality samurai swords. Like the samurai sword that went through a lot, a virtuous person has reached such a remarkable state of character excellence by undergoing

³³ *Ibid.*, 137.

³⁴ *Ibid.*

³⁵ See Zagzebski, *Virtues of the Mind*, 109. Here, she discusses her accounts of virtue and skill and the notion of forgetting the two.

rigorous training and by painstakingly going through, in a manner of speaking, the hottest beds of fire. The virtuous person has toiled through all temptations to be otherwise and has been successful in achieving the *telos* of one's training. Like the samurai sword that braved through the smelting furnaces with the help of a skilled swordsmith, the virtuous individual is praiseworthy not only because one possesses a virtue but more than that, one is responsible and creditable for it. First, it is self-will that led to one's choosing to be a virtuous person, and one toiled hard and endured so many internal battles to be one. A virtuous person could have abandoned one's desire to be virtuous along the way, but one successfully achieved one's end by not turning back or looking away.

To further understand how a person acquires virtues, continuing on with the analogy of a samurai sword may prove helpful. How samurai swords stand the test of time is an interesting topic, and it involves several complicated procedures done by a skillful swordsmith. Mike Notis, a samurai sword expert, revealed how intricate the process of creating samurai swords is. He said that looking at the blade itself is simply looking at the surface appearance which underlies structural levels—the whole sword is a bed of malleable metals (the steel is iron, which is enhanced by a little bit of carbon, and whatnot).³⁶ Several metals have all been carefully mixed to achieve one strong blade. The process requires the excellent craftsmanship and technical know-how of the swordsmith.³⁷ Yet, the creation of a samurai sword does not only stop with knowing the right metals to use. It also requires the knowledge of the two types of blade weaponry: on one hand, a piercing instrument and, on the other, the saber or Japanese sword where the samurai, with all might, slashes.³⁸ And interestingly, as revealed by Notis, to complete the whole sword, the craftsman must be “able to put the right materials in the right place to get optimum properties for the entire object.”³⁹ The whole procedure is so complex that it requires expert formulation to be able to achieve a quality samurai sword. Indeed, it takes several nights and days, the right materials, and the expertise of a swordsmith who molds the sword to be able to produce such a masterpiece.

The same sophistication is involved in developing virtues within us. Learning virtues consists in using the appropriate methods and processes applicable to virtues. Let us take as an example the virtue of courage. You cannot learn virtues in a haste. Virtues develop for a long time and become a part of one's identity because of the time and effort spent. Either you learn by

³⁶ El Cid Gallery, “Secrets of the Samurai Sword,” YouTube video, 54:56, 25 November 2014, <<https://www.youtube.com/watch?v=YfgIM9UMpXE>>.

³⁷ *Ibid.*

³⁸ *Ibid.*

³⁹ *Ibid.*

being trained by someone who exudes a similar virtue or by emulating the actions of a virtuous man for a very long time. However, it must also be pointed out that being trained to be courageous not only involves mimesis or playing a role. One also has to know how a courageous person would act in all circumstances that require the exercise of courage. Just as in the creation of a samurai sword, pertinent materials and ingredients are also involved in the acquisition of virtues. These materials include the knowledge of what it means to have the virtue of courage and the circumstances where the virtue has to be acted upon. Anyone who wants to be courageous should not just be courageous in the face of a hurtling vehicle ready to run over a weakling elderly passing by a street, one also has to be mindful of the other occasions that require the exercise of courage, like standing one's ground to fight for a belief, jumping from the second floor of a burning building to save a baby out of it, or defending a traumatized schoolboy from his bullies. While it appears as if it simply involves conscious learning of facts about a courageous man and courage itself, in time, through repetition and habituation, these would all be deeply embedded into the person's character. In time, all these will form part of the person's character before that person knows it, as virtue is self-effacing. Habits come into play whenever one learns a virtue since habits serve as the bed of fire that molds the virtuous person and creates an alloy of the metals required in being able to act out a virtue in every relevant circumstance. Proper motivations for exercising a virtue also have to be learned by someone who wants to be virtuous, for having the right motivation in acting upon a virtue is important to be considered virtuous. To achieve excellence in bringing about the good of virtue, which is of utmost importance in the exercise of virtues, one has to learn everything about the virtue in question through training and habituation whether consciously or implicitly.

Interestingly, acquiring virtues is a form of learning. As learning involves complicated mental and physical processes, acquiring virtues is also deemed as complex. We know that learning a story does not only take place when one reads through the words and the pages of the book. Learning also happens subconsciously. You learn a story not only by understanding words and sentences used but also by the aid of tactile sense and the other correlative senses, e.g., olfactory, proprioception, spatial, etc. Similarly, there are people who learn more when a song is playing while they read or understand better if they walk around the room while reading a text. From a broader perspective, too, one learns through experiences of making mistakes and improving one's understanding or actions thereafter. Much of learning takes place in us while we are not aware of it. The same thing happens to us when we acquire virtues.

The Incompatibility of the Transformation Machine and Virtues

A sound-minded individual would intuitively reject the transformation machine. Even Nozick himself, as intimated by Zagzebski, said that no one would use the transformation machine to be someone one wishes to be: “Someone wouldn’t use the transformation machine at all; it seems like cheating.”⁴⁰ In a way, becoming virtuous by plugging into the machine is like cheating on an entrance exam to enter a university and pretending to have acquired it through the proper means. Though nobody knows you have cheated, you cannot fool yourself into believing that you passed the exam—you know deep down you have cheated your way into the university. Engaging in the thought, however, Nozick quipped:

If the transformation could be used indefinitely often, so that we could accomplish anything by pushing a button to transform ourselves into someone who could do it easily, there would remain no limits we need to restrain against or try to transcend. Would there be anything left to do?⁴¹

Think of the effects of having a machine in the first place. Say the transformation machine is real, that is, it is available to anyone who desires to be someone one is not. Who would then keep the procedure at bay? Who would facilitate the procedure and control the whole thing? Would its results be controllable? Nozick also thinks that the existence of the machine itself is problematic because nobody will be able to control anybody who wants to undergo the procedure given that, ultimately, everyone would choose to undergo the procedure, and there is nothing left for human beings to do for the machine can do it all.⁴²

Yes, the transformation machine can ease our way into acquiring the virtue we like to have. But it really is counterintuitive to even think of acceding to such a procedure. The whole machine and the mechanism that runs it are not compatible with the way we understand virtue acquisition and virtue per se. This is due to the following reasons.

First, if a person desires to be virtuous and is properly motivated to acquire the virtue one wishes to have, one already could be said to possess a component feature of that virtue responsible for desiring to be virtuous. That component needs further exploration, but certainly, desiring to be a virtuous

⁴⁰ Zagzebski, *Virtues of the Mind*, 117.

⁴¹ *Ibid.*, 118.

⁴² *Ibid.*, 117.

person speaks of something within that person that is already worth praising. At the very least, this person is virtuous, though not fully and completely because this person only has the motivation to be virtuous (the motivation component). It is in accordance with this line of thinking that one could say that no person who is properly motivated to have a distinct virtue, would want to undergo a procedure that could alter one's character traits and the ill motivations that come with them in a flip of a switch because it is still cheating. Either that person who wants to be virtuous does not really want to acquire virtue but only wants to be able to appear virtuous whenever one wants to, or that person does not possess the component features of virtue that are responsible for desiring to be someone of higher moral status compared to others.⁴³ If the person is the former, that is, the person doesn't really want to acquire a virtue, why attach oneself to the machine? One simply could just make it appear as if one is virtuous by mimicking the actions of virtuous individuals. But what should motivate one in wanting to possess a virtue must not be the acquisition of virtue, but the virtue itself. What would plugging into the machine be for then? Subsequently, if the person is the latter, that is, the person really has no tincture of the virtue responsible for making one want to be virtuous, it is arguable if one really wants to be virtuous and one would be willing to plug oneself into the machine that could make one virtuous. As in the previous person, what good would plugging oneself into a machine bring oneself, if one really doesn't want to be virtuous after all? Hence, ultimately, not any single individual, virtuous or unvirtuous, would have oneself attached to a machine of that sort.

Second, not only is the machine unfit to make us completely virtuous, but it also ruins the element of voluntariness of habits and virtues. There is something in the machine that involves fakery; it is a procedure that involves deception. A person who is virtuous is responsible for achieving the virtue that one has; one is creditable for having the virtue that one has. One has agreed to have such a virtue. That is why we confer praise to someone who exudes intellectual or moral excellence. Virtuous individuals are praiseworthy. We salute them since we, ourselves, know that human's *telos* is the attainment of a virtuous state. We, as it were, upon knowing our *telos*, would want to have a higher moral status than we currently have. It is human's *telos* to be virtuous—to have a healthy soul whose parts are in harmony with one another, as Plato put it in the *Republic*. But how would one be considered virtuous, if one has a character defect, which is a vice, in the words of Zagzebski? To have a character defect is to have a vice. And clearly, someone who would choose to attach oneself to any machine to acquire the

⁴³ See Roger Crisp, "Virtue Ethics and Virtue Epistemology," in *Metaphilosophy*, 41 (2010). Here, Crisp discusses how virtue epistemology draws from virtue ethics.

results one would have acquired through ways that have not passed ethical deliberation, has in one's soul a character defect—a vice. You wouldn't praise someone you knew had just undergone a procedure to become instantly virtuous. One press of a button to transform will never compare to the struggles of the person who went through the painstaking process of natural acquisition to achieve a virtuous state. One would not only have deceived us but also oneself. No individual who truly wants to be virtuous must undergo such a procedure which involves a deception of some sort. It is indeed hard to even think of such a person as a great-souled individual if one has undergone such a procedure.

Third, virtues are deeply entrenched character traits. In a way, virtues are like permanent markings on one's character. They are acquired through time and often take pains. Let's say some person entertains the possibility of learning a virtue quickly through attaching oneself to a machine, how then would we react towards it? While there are chances that a person ends up being admirably virtuous, it would still be arguable whether deep embedding on the person's character really has occurred. Deep entrenchment and embedding into one's character are important in acquiring virtues. Although, hypothetically, the transformation machine might evolve through time to allow for deep and authentic imprinting of character, the effort to improve can never be fully credited to the person, which ties the discussion up with the praiseworthiness criterion of virtue acquisition. The machine could never replace the human aspect involved in virtue acquisition. Additionally, going back to our analogy that features the parallels between learning virtues and making samurai swords, learning virtues through attaching oneself to the transformation machine is like hastening the process of creating a quality sword. Though you would have a samurai sword in your hands in no time, one would not be able to attest to the weapon's effectiveness and strength. The process was hastened—you did shortcuts which are detrimental to the creation of a sword that will stand the test of time.

Next, virtues involve motivation. Virtues have motivational components, but it is not enough to simply be motivated to possess a virtue to be considered virtuous. According to Zagzebski, "motivations are persistent tendencies to be moved by a motive of a certain kind."⁴⁴ Nozick said, as intimated by Zagzebski, that the spirit of the transformation machine lies in its capacity to give a person who undergoes the procedure a motivational shot, so to speak, "a dose of motivational power which is primarily what is lacking in an akratic person. The transformation could then make such a person morally strong."⁴⁵ But, as pointed out by Zagzebski, to

⁴⁴ *Ibid.*, 132.

⁴⁵ *Ibid.*, 119.

have a motivational power to resist temptations and akratic tendencies is one thing, but to have a virtue is different. Having a virtue does not only consist in having the will and the motivation to have one (though virtues employ motivations in their being acted upon). A morally strong and a virtuous individual are two different beings. In effect, what Zagzebski is saying is that one of the two only knows the right thing to do and is motivated by it, but the other has acquired “a habit of feeling as well as acting, a habit of being motivated in a certain way, and that person is just not subject to the temptations of the morally strong individual” because of the virtue one has.⁴⁶

Moreover, since acquiring a virtue involves learning of some sort, the transformation machine is unfit for the acquisition of virtues. It is to be noted that the transformation machine, instead of facilitating virtue acquisition, replaces the complexities and rigor involved in natural, manual learning of virtues. Let’s use the example of the virtue of honesty. To be able to know it, one should get to experience what it means to be honest. And one can only have a feel of it if one is confronted with an experience where the need to exercise honesty arises. Say, it is during an exam that one felt the need to be honest. If one has answered the exam without cheating and has done so perfectly, one will not only have the feeling of what it means to be honest, one would also have the feeling of how gratifying it is to have succeeded in one’s attempt at acting out a virtue. As a critic of the transformation machine, I doubt whether the machine could provide the person with such experience of gratification and fulfillment from succeeding in acting out a virtue.

Virtue Epistemology of Education and Deceptive AI Use

A virtue-oriented account of educational aims is receiving attention in the convergent fields of epistemology and education in recent years.⁴⁷ One of the leading philosophers in the field is Duncan Pritchard, who asserts that cognitive agency, not only cognitive success (and in another way of putting it, understanding and not only knowledge) is a significant epistemic aim of education.⁴⁸ A virtue account of the epistemology of education places a premium on the development of cognitive character in the learners as an epistemic good in education, not only the acquisition or possession of

⁴⁶ *Ibid.*

⁴⁷ See the following: James Macallister, “Virtue Epistemology and the Philosophy of Education,” in *Journal of Philosophy of Education*, 46 (2012); Michel Croce and Duncan Pritchard, “Education as the Social Cultivation of Intellectual Virtue,” in *Social Virtue Epistemology*, ed. by Mark Alfano, Colin Klein, Jeroen de Ridder (New York: Routledge, 2022); Jason Baehr, *Intellectual Virtues and Education* (New York: Routledge, 2016).

⁴⁸ Duncan Pritchard, “Epistemic Virtue and the Epistemology of Education,” in *Journal of Philosophy of Education*, 47 (2013).

knowledge or skills, but the development of the cognitive character or the cultivation of epistemic virtues in the child.⁴⁹ Also, Ka Ya Lee highlighted the cultivation of epistemic virtues like understanding as an epistemic aim of education.⁵⁰ A virtue-epistemic account of educational aims supports the idea that education should not only be producing a competent workforce in the society but intellectually virtuous individuals. Such an account gives the education sector a weighty responsibility to train citizens for virtues and make people aspire for high intellectual and moral character. The pursuit of education is in effect a pursuit of virtues.

The following sections present the different ways in which the virtue-epistemic aims of education shows the incoherence and contradictoriness of the deceptive use of AI tools in education.

No genuine learning and education in the deceptive use of AI

First, at face value, deceptive AI use in education is plagiarism, which is, in and of itself, a clear violation of academic policies of truth, integrity, and accountability. In a profound sense, the ownership of the learning experience becomes questionable in the deceptive use of AI. Irresponsible and indiscriminate use of AI tools in education obliterates learning. Additionally, deceptive AI use is surrounded by ethical issues concerning data theft and compromise which are some ways in which data are exploited.

AI tools are supposedly designed to assist and not replace the role of learning in education. When one uses AI, one compromises learning to a very alarming degree. If education is taken as a pursuit of virtues, the learning process leading to it must be personal, active, reflective, and fruitful. Virtue acquisition involves the voluntariness and personalization of the process. What AI dependence does is to saturate the learning process and take away important elements that are central to the whole educative pursuit. For example, the use of ChatGPT or the Nova chatbot eases the process of producing an excellent academic paper, but what the whole process actually does is to strip off the important “educative” experience of writing a paper and robs one of the invaluable fruits of hard work. No wonder, when one gets an excellent grade from an AI-plagiarized paper, a deep sense of fulfillment and satisfaction no longer accompanies it. The experience is questionably

⁴⁹ See Duncan Pritchard, “Virtue Epistemology, Extended Cognition, and the Epistemology of Education,” in *Universitas: Monthly Review of Philosophy and Culture*, 478 (2014); Croce and Pritchard, “Education as the Social Cultivation of Intellectual Virtue”; Gabe Avakian Orona et al., “Epistemic Virtue in Higher Education: Testing the Mechanisms of Intellectual Character Development” in *Current Psychology*, 43 (2024).

⁵⁰ See Ka Ya Lee, “Invitation to Virtue Epistemologists,” in *Philosophy of Education*, 74 (2018).

gratifying. Academic achievement no longer feels delectable, worthwhile, and satisfying.

One may also argue that AI abuse in education hardly leads to educational achievement and success. Can one be called a successful completer of a course when one solely depended on the use of AI in the production and completion of a course requirement? Virtue is what makes its possessor good and one's work good likewise. A virtue is always worth having, and someone who possesses such is of higher moral status compared to others who lack it. Also, virtue is a success term. A person is said to not possess a virtue unless one is reliable at bringing about the end that is aimed at. A virtuous person is reliably successful in always producing the end-product of one's motivation for virtue is strictly entwined with the notion of excellence. Going back to the phenomenon of AI plagiarism in education, can the student successfully produce the same quality of essay if no tool was used?

At this juncture, one may ask, can the student even be called "educated" at all if what they have turned into after completing a course is worse than the state from which they started? The learner cannot even be thought to be virtuous from any point of view because instead of becoming virtuous and being motivated by virtue, it was vice that engulfed their motivations, making themselves vicious beyond repair. Hence, those who graduate without academic distinctions are even more praiseworthy compared to those who graduated with enviable accolades but who did it through deceptive AI tool usage. It is the character of the learner that matters more in education not the beholding of medals and acquisition of academic distinctions. Educational success does not merely equate to academic achievement. The latter is easily measured through numeric scales and objective metrics; the former involves poking through the surface and deep-diving into one's character growth and development.

Education as a virtue-epistemic pursuit that has intrinsic and extrinsic values

Zagzebski explains that all acts of intellectual virtue are motivated by the truth.⁵¹ How could this be true of deceptive AI use in the attempt to be educated? A genuine education motivation is not equivalent simplistically to a motivation to pass or ace a course. A genuine motivation for education is a persistent desire to learn through the process, in spite of the pains and the challenges that accompany it. Academic success and achievement, albeit a component of education in contemporary times, is not the sole and the most

⁵¹ Zagzebski, *Virtues of the Mind*, 186.

important marker of it. Deceptive practices of AI use in education might lead to academic success and achievement but not genuine education.

To a certain extent, the desire to get educated is already a reflection of possessing virtue—the aspiration to be better, to know, to be wise. This is where one can argue that education is both an intrinsic and an instrumental good. Why do you want to earn a degree? Because you want to acquire the benefits of acquiring one. You could have earned it in another way, for example, fake a degree. Why enroll in an educational institution? You know deep down that there is something that makes undergoing the whole process worth every dime. You may have been forced by your parents to study but there are other options you could have taken out of rebellion against parental pressure. This highlights the component of voluntariness in the education process which bears on responsibility and accountability. A person who might have been forced to take up classes could, by all means, dodge class attendance right after the school enrolment. Quitting and taking the exit door are available options. Yet, staying in academia, attending classes, heeding the instructions of the teachers—all of these are also part of one's options. In effect, the choice to enroll and the choice to stay enrolled are reflections of being motivated in the right direction which is an aspect of virtue acquisition.

The discussion brings attention to the twofold values of education: the intrinsic and extrinsic values of education. Using the terminology of epistemology of education would help here. Some epistemologists of education engage in unpacking and identifying the epistemic value of education. It is commonplace to think that education has an epistemic value, but what makes it epistemically valuable and, thus, a meaningful epistemological pursuit? Does education have an intrinsic value or is it only extrinsically valuable? Indubitably, education offers a plethora of benefits and services to humanity. For humanity in general, improvements in different industries and major technological innovations that benefit people's lives are offshoots of educational activities. For the individual, an academic degree earned opens many doors for professional growth and economic development. In both cases, we see the extrinsic value of education. But is there value in education that is done for its own sake? I argue that the intrinsic value of education is seen in how it builds one's character. Although the notion of studying for the sake of studying sounds vague, there is a sense in which education done for its own sake simultaneously cultivates the intellectual and moral character of the individual. Gaining skill proficiency, although it has extrinsic benefits for the learner in, say, qualifying for a professional license and degree, still makes the person better off than lacking it. The person can still use the skill in many other ways. Education does not only afford people platforms for skill development and technical competence; when done effectively, it affords one with other equally valuable human

gains such as intellectual dispositions to learn more, the desire to understand more, and other attitudes that make living more meaningful. Jason Baehr offers an insight into how intellectual virtues tie up with the “love for epistemic goods.”⁵² Education as a virtuous pursuit also entitles the learner to having dispositions and a strong desire for epistemic goods like love for learning and the appreciation of the value of learning and education achieved for their own sake.

Character-building as a paramount aim in education

Education as virtue-motivated may have been a strange idea in the past due to the saturated meanings people attach to education, but at the very core, education is more than a pursuit to possess technical and practical skills or amass information and learn about perennial ideas. Education goes beyond indoctrination (either of skills or perennial ideas); its influence is ubiquitous, and it involves holistic growth and development in the learner.

To illustrate, the history of education shows how indoctrination historically motivated the institutionalization of education. We see traces of indoctrination in the way teaching was done back in the time of the Greeks when people started to hire poets and orators to tutor their young to preserve culture and traditions. It did not come as a surprise that the great Socrates, who was accused of corrupting the minds of the youth and promoting impiety when he introduced the dialectic method of inquiry, a cornerstone thinking pedagogy which exposes one to truth and the understanding of virtues, paid the price of dispelling indoctrination with his death. In the Scholastic period, too, the time when teaching was formalized, the specific agenda of introducing dogmas and preserving dominant religious beliefs were the main concern. Although the idea of building a university where teaching and learning were structured also came in the time of Scholasticism and became a clear indicator of progress at that time, the main agenda still was the transference of traditional ideas through the translation of core texts from the Greek language to the Latin language. During this time, teaching was instrumentalized as a way of preaching; education became the primary means of indoctrination and preservation of beliefs.

However, the current general climate of thought in education is that it is geared towards character-building, not just amassing information and acquiring skills. Twenty-first century education goals are no longer limited to the acquisition of skills and abilities like critical thinking and other literacies. The list now includes character traits, attitudes, work habits, and values.

⁵² Jason Baehr, “Educating for Intellectual Virtues: From Theory to Practice,” in *Journal of Philosophy of Education*, 47 (2013), 248.

Caring thinking, collaboration, cooperation, among others, are terms that are now being looked at. What this suggests is that having knowledge or perfecting skills no longer suffices, and students must have character traits that would help them become good, conscientious, thinking, and responsible individuals. This shift makes one think that, perhaps, educationists are now becoming more open to the idea that education must after all be primarily concerned with virtue acquisition and not really so much focused on the production of unthinking, uninhibited automatons.

In the information age more specifically, one virtue that learners must be equipped with is intellectual autonomy. Because of the pandemic, learners were forced to be the captains of their own ship as the online modality of learning compelled them to find ways to understand and process information without guidance, and they still are at the moment. Possessing intellectual autonomy helps students in a lot of ways. From filtering the things they see online and sifting through the information generated by AI, students must be equipped with skills that characterize responsible and reasonable thinking. Zagzebski defines intellectual autonomy as “rational self-governance” and “epistemic self-reliance.”⁵³ Elizabeth Fricker describes intellectual autonomy as relying “on no one else for any of her knowledge” and taking “no one else’s word for anything..., relying only on her own cognitive faculties and investigative and inferential powers.”⁵⁴ Zagzebski believes, however, that self-reliance is too narrow a concept to encompass intellectual autonomy; intellectual autonomy is much more related to conscientious self-reflection.⁵⁵ Zagzebski argues that there is a connection between “rationality” and “one’s reflective judgment of what produces harmony in the self.”⁵⁶

Independent and responsible thinking, which are component parts of intellectual autonomy, will help students develop values that make for good study habits which are definitely helpful in veering away from AI dependence thereby protecting them from being exposed to the dangers of AI technology use. If children are trained and taught to manage their own time, do research on their own, and develop their own learning strategies, adapting to changes will not become a difficulty. Again, intellectual autonomy extends far beyond being critical—it is a virtue or a disposition.

Now more than ever, there is a need to see education in general as a virtuous activity—an endeavor that is directed towards a good—a good that

⁵³ Linda Zagzebski, “Intellectual Autonomy,” in *Philosophical Issues*, 23 (2013), 244–245.

⁵⁴ Elizabeth Fricker, “Testimony and Epistemic Authority,” in *The Epistemology of Testimony*, ed. by Jennifer Lackey and Ernest Sosa (New York: Oxford University Press, 2006). Quoted in *ibid.*, 245.

⁵⁵ *Ibid.*

⁵⁶ *Ibid.*, 250.

has epistemic and moral import. Incontestably, teaching and learning are virtuous activities aimed at the acquisition of virtues such as understanding, wisdom, rational belief, and intellectual autonomy as mentioned. Likewise, teaching is motivated by the desire to make another individual good or in possession of a certain kind of good, whether in the form of true belief, or a virtuous disposition like understanding and wisdom. In the same way, learning also involves the desire to earn a “good.” From this, one can surmise that the whole of education is educating or training for virtue. If the aim of education is social progress and nation building, all of education should be seen as an avenue to strengthen the character of individuals regardless of the subject area. This cements the primacy of establishing a virtue epistemology in education for the proper understanding of concepts of virtue directly linked with educational concepts.

Going back to deceptive AI use, it is noteworthy to mention that it does not develop positive attitudes and good character; in fact, it gets in the way of it. Knowledge and skills can get one a job, but it is one’s attitudes and character that make one survive. Integrity, intellectual autonomy, truth-drivenness are character traits that are pivotal for professional growth even in industries outside education. Although hard skills are learned in deceptive AI use, soft skills are not developed through AI dependence. Design thinking and thinking out of the box are soft skills developed through rigorous exposure to the tedious processes of educational assessment and learning. Although hard skills like tech-savviness and expertise in AI tool and systems development are highly-valued proficiencies, the ability to regulate their use, intelligently and ethically employ them without compromising human values should accompany the competence. For Zagzebski, skill differs from virtue in the sense that some skills are not worth having, especially when they are used isolated from the exercise of acts of virtues.⁵⁷ Skills and expertise in deceptive AI use is one of them. They are simply not worth having when possessed in isolation, not like virtues that have intrinsic and timeless values.

Conclusion

The birth of AI technology and its widespread use, especially in the field of education, shows a case of Pandora’s box. AI dependence in education opened the door to countless possibilities of misuse, abuse, and exploitation. Instead of technology assisting us, it has run us over and has dominated educational systems, leaving learners to fend for themselves to an uncontrollable extent. Because AI use is voluntary and personal, a naïve learner is subject to seemingly harmless temptations of maximizing the use

⁵⁷ Zagzebski, *Virtues of the Mind*, 106.

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of technology-driven tools in learning and education. The learner, thus, bears the overwhelming brunt of protecting oneself from completely being manipulated by this 21st-century “transformation machine” that has the potential to stifle human values such as autonomy and malign one’s character in effect.

People in the field of education are not without hope. AI may have dominated educational systems in ways that are difficult to comprehend, but it is also through transformative and effective education that learners can be equipped to regain their agency and assert their superiority over the machine. If education would be deemed as a virtue-epistemic pursuit such that the focus of teaching and learning shall now be character development and virtue acquisition, education can close this Pandora’s box and recover what humanity lost to AI domination.

In conclusion, I am reminded that although a machine assisted me in the writing process, i.e., I am using a computer in typing my words down, relying on my own rigorous intellectual processes and subjecting my intellectual output to critique and evaluation proves that I am not a helpless slave to the machine, but a rightful and virtuous master in the process. A true master dictates the extent to which the slave could influence one’s behavior. The same attitude should be applied to AI use.

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