

Local synthesis of 1st and 2nd waves of societal discussions

US - Education

In 2023, discussions on what it means to be human in the time of neuroscience (NS) and AI have been facilitated by NHNAI partners in 9 different countries. In each country, 3 lines of discussions have been opened to explore this question in the **3 thematic fields of education, health, and democracy**. Each partner then produced **3 local syntheses** reporting on the content of discussions in these 3 fields in the corresponding countries.¹

This document presents **ideas of the local synthesis in US**, about discussions on **education**, organized by Santa Clara University.



¹ For an exact total of 8*3 + 2 local syntheses. In Canada (Québec), Cégep Sainte-Foy organized discussions focused on Democracy and Education, but not on Health.

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Part 1: Salient ideas of 2023

The human purpose of education and how AI aligns (8 extracts)

Description of the idea: In order to know what AI should do with respect to education, we need to be aware of the context of what humans should do with their lives, and what education should do. This is teleological, considering how three areas - humanity, education, and AI – do or do not align.

In tension with:

- Salient idea: Competition between Human Teachers and AI in the Field of Education
- Salient idea: Cheating in Education by Using AI
- Undesirable: Using AI to “Gamify” Education

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. [Perhaps, the purpose of education is to process the natural intelligence in humans so that they are equipped to learn \(all through life\)? And that the degree of goodness or quality of a form of education depends on how it is able to extend the natural intelligence?](#)
2. [Can one then conclude that the purpose of education is to be able to learn \(all through life\)?](#)
3. [the primary issue with, e.g., students who plagiarize a paper or an essay. The misrepresentation is a bad thing, but the real issue is that they defeat the purpose of the essay, the subsequent conversations, and the course.](#)
4. [The purpose of education limited to the economy is narrow. I would argue that the purpose of education is to prepare a human to become a learner. A good education will equip humans with the ability to transform knowledge into information beneficial to self, others, and society. Hence, the economy, being a part of society, is one tiny bit of what a good education should be designed to do. The nature of education is comprised of those elements or building blocks required to achieve the purpose of a good education. And yes, AI will change those building blocks. We may no longer need to teach humans how to read the alphabet. An AI system may be designed to make that process of learning, reading, writing etc. more fun. However, it will still be the responsibility of humans to critically analyze the outputs of an AI system and own the use of the outcome of that analysis.](#)
5. [When students go home for breaks, it is unlikely that the first question their parents ask is, "Are you discovering who you are as a person?" or even "Are you passionate about what you are learning?" No, my guess is the first question is "How are you doing in school" or "How are your grades?" Parents are paying for a degree because they understand their responsibility to set their kids up for success in life.](#)
6. [Issue 4: I suspect that most AI learning systems are explicitly or implicitly gamified; it might not even be possible to make a non-gamified AI learning system. Studying for the sake of grades is bad \(and gamified\) enough. Studying for direct gamification reasons is even worse. At least with grades one might be considering one's future prospects and thereby internally link \(albeit loosely\) what one is learning to one's future. With gamification, one learns the content for reasons entirely extrinsic to the learned content. Now, one might ask, "Who cares why you're learning something as long as you learn it?" There are at least two responses to this: * Why you learn something will effect what knowledge you retain and what other concepts you relate it to. Thus what you learn and why you learn it are not cleanly separable. * More importantly, gamifying education tells students that what they are learning is not valuable to know for its own sake but is purely valuable for something it gives you \(e.g. game points, emojis, future career dollars, etc.\). This cuts against the important non-economic "leisure" reasons to learn that I discussed under the purpose-of-education bubble in CartoDebat.](#)

7. [I would argue that some aspects of education are most properly work-oriented whereas some should be leisure. That is, academic activities can be split into the following three groups: 1. Enabling or enhancing work \(this is work\). This might include things like learning arithmetic, grammar, how to use tools, etc. 2. Enabling academic forms of leisure \(this is still work\). This would include much of the student formation we discussed. 3. Studying the cosmos simply for the sake of knowing, wondering, appreciating, etc. \(this is leisure\). Each of these three are important in their own way, but item 3 is the height or crown of education. I suspect that AI is most relevant and/or useful for item 1 both in terms of what is studied and how we study it. I suspect that AI is most problematic when we attempt to use it for item 3.](#)
8. [Our current understanding of nature and the purpose of human education is limited to our understanding of what it means to be human. Hence, we may first need to understand the impact of AI on our definition of "human" as that may drastically change how we approach the intersection of AI, and nature and education.](#)
9. [When AI is used as a *tool* in education, it can cause problems like the ones I mentioned before. It can also interfere with the student-teacher connection and the student-student connection. Those connections are a form of education in itself - learning to participate in hierarchical and peer relationships. That education is a crucial aspect of human development. Furthermore, those connections say something about what is important and where knowledge comes from. That is to say, human-to-human education as a medium sends the message that the knowledge we are learning is by humans and for humans. We do not learn arbitrary "facts" in an arbitrary, abstract language; rather, we learn the facts discernible to humans understood from an angle intelligible to humans. If we replace human interaction in education with machine interaction, we may subtly imply that the knowledge which is most "relevant" is not specifically relevant to us *as humans* but simply "relevant" via some abstract notion of progress or via an illusion of having utter, god-like objectivity. This in turn, I suspect, will lead to a devaluation of our unique status on earth and an overvaluation of further machine use.](#)

Education is instrumentally for work and intrinsically for leisure (18 extracts)

Description of the idea: If AI is likely to dramatically change the work environment of the future, changing or eliminating many jobs, then the role of education would seem to be likely to shift away from educating for work and towards educating for leisure – i.e., perhaps away from the “practical” and towards the “non-practical” or “theoretical.”

In tension with:

- Salient idea: Competition between Human Teachers and AI in the Field of Education
- Salient idea: Cheating in Education by Using AI
- Undesirable: Using AI to “Gamify” Education

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. [as a practical matter, formal education does have a different intended end than learning. When students go home for breaks, it is unlikely that the first question their parents ask is, "Are you discovering who you are as a person?" or even "Are you passionate about what you are learning?" No, my guess is the first question is "How are you doing in school?" or "How are your grades?" Parents are paying for a degree because they understand their responsibility to set their kids up for success in life.](#)
2. [studying the cosmos *simply for the sake of* knowing, wonder, appreciating, etc. is leisure. If someone studies the cosmos for some other reason, then under the distinction I mentioned, their studying would not be leisure. Also it's possible that you study X for one reason while a businessman pays you to study X for a different reason. If you do an activity partly for its own sake and partly for money, then perhaps you are somewhere on a spectrum between working and resting.](#)

3. As a point of clarification, I don't mean to say that anything with a goal is work, but rather that doing an activity with a goal other than doing that activity is work. I certainly agree that fulfilling that command is a form of work. Both work and rest are essential. However, I don't think we should understand the role of humanity solely in terms of that one command, even though it is given at a special place in Genesis. Consider another important command for Israel recorded in Exodus 20:8-11: ... Even though more days are allocated for work than for rest, the most special and holy day is for rest (leisure). This practice of the Sabbath rest is then taken in the New Testament as an image for the age to come. Consider for example Hebrews chapter 4, especially verses 8-11: ...
4. If humans were to comply with the request of "... fill the earth and govern it ..." (Genesis 1:28a, NLT), would that be considered work or leisure? Using your comment about the difference between leisure and work, I would argue that it should be considered as work given that the goal is clearly specified. Hence, it seems to me that life should be ultimately work-oriented.
5. The purpose of education limited to the economy is narrow. I would argue that the purpose of education is to prepare a human to become a learner. A good education will equip humans with the ability to transform knowledge into information beneficial to self, others, and society. Hence, the economy, being a part of society, is one tiny bit of what a good education should be designed to do. The nature of education is comprised of those elements or building blocks required to achieve the purpose of a good education. And yes, AI will change those building blocks. We may no longer need to teach humans how to read the alphabet. An AI system may be designed to make that process of learning, reading, writing etc. more fun. However, it will still be the responsibility of humans to critically analyze the outputs of an AI system and own the use of the outcome of that analysis.
6. gamifying education tells students that what they are learning is not valuable to know for its own sake but is purely valuable for something it gives you (e.g. game points, emojis, future career dollars, etc.). This cuts against the important non-economic "leisure" reasons to learn that I discussed under the purpose-of-education bubble in CartoDebat.
7. there are many good non-economic activities that directly require education (or even consist of the activity of education). For instance, reading great poetry requires education. Playing music requires education. Appreciating a math proof requires education. Philosophical and theological dialogue require education. Marveling at biochemistry requires education. Etc.
8. I think it is *crucial* to believe that there are other essential purposes of education. After all, what is the economy for, anyways? It produces material wealth and services which in turn offer sustenance and safety to humanity. However, once we have obtained sufficient sustenance and safety for ourselves and others, what should we want to do with our time? We should often want to engage in non-economic activities, like resting and participating in culture.
9. You can achieve both ends in a university setting (or even in a trade craft school), but once you have completed your course work you have achieved the "end" of education: the degree. And it's the degree that matters for your future employability.
10. I would argue that some aspects of education are most properly work-oriented whereas some should be leisure. That is, academic activities can be split into the following three groups: 1. Enabling or enhancing work (this is work). This might include things like learning arithmetic, grammar, how to use tools, etc. 2. Enabling academic forms of leisure (this is still work). This would include much of the student formation we discussed. 3. Studying the cosmos simply for the sake of knowing, wondering, appreciating, etc. (this is leisure). Each of these three are important in their own way, but item 3 is the height or crown of education. I suspect that AI is most relevant and/or useful for item 1 both in terms of what is studied and how we study it. I suspect that AI is most problematic when we attempt to use it for item 3.
11. I think we need to make a distinction between education and learning. Education, as I argued above, is designed to prepare people to enter the workforce. I do not mean this as a criticism. It is vitally important that when we push our children out into the world as adults they can (minimally) read, write, and do some math. In this way, employers only have to focus on job-specific training. For certain professions, we may also require additional, specialized education (law, medicine, architecture, etc). Learning is closely tied to education, of course. The venn diagram would show quite a lot of overlap. But we humans do pursue learning for its own sake. We learn to play chess, for example, for the satisfaction of it, not because we need to know how in order to get a job (there are exceptions to everything, of course, but in general). The same may be said of learning to paint or play an instrument or surf. I make this distinction because when I talk to my students about their education we are always talking about what they need to know to get the job they want (or get into the master's program they want). But

- when I pivot to how they are developing a mind that can think critically and passionately about the world - a mind that is curious - then the conversation gets more interesting. There may be different ways in which AI will impact both education and learning.
12. Should a generative AI like ChatGPT with access to almost all human knowledge and unmatched compute power be allowed to compete unevenly with human lecturers or professors trained with limited or partial human knowledge?
 13. The example of word processor replacing typing pool is very instructional. Humans are still in charge of using the technology, i.e. word processor. The case of generative AI like ChatGPT is dangerous because their lack of transparency can lead to censorship of knowledge.
 14. I have been reading Josef Pieper's book, "Leisure, the Basis of Culture" and have found some of his thoughts quite helpful. Pieper distinguishes between work and leisure by saying that work is any activity done primarily for the sake of what it accomplishes whereas leisure is any activity done for its own sake. (Hopefully that's not too over-simplified of a summary.) I like this distinction. Note that a leisure activity might produce extrinsic goods (e.g. peace of mind, focus, energy), but the activity ceases to be leisurely if one tries to perform the activity with the *goal* of getting those goods. Pieper argues (and I agree) that life should ultimately be leisure-oriented. The highest activities (e.g. worship, communal feasting, conversing, etc.) are those worth doing for their own sake. Thus work serves primarily to enable leisure. From a Christian perspective, the most important action done so far in human history was work (Christ's death and resurrection), and it was work precisely because it was aimed at enabling us to enter into the eternal sabbath rest (i.e. leisure) of the Eschaton.
 15. We also need to anticipate the ways in which future careers might use this sort of technology - just as the word processor replaced the typing pool, replacing old jobs and creating a whole new array of marketable skills, the ability to easily create the sort of content we see in advertising, for example, will have wide-ranging impacts.
 16. I would argue that some aspects of education are most properly work-oriented whereas some should be leisure. That is, academic activities can be split into the following three groups: 1. Enabling or enhancing work (this is work). This might include things like learning arithmetic, grammar, how to use tools, etc. 2. Enabling academic forms of leisure (this is still work). This would include much of the student formation we discussed. 3. Studying the cosmos simply for the sake of knowing, wondering, appreciating, etc. (this is leisure). Each of these three are important in their own way, but item 3 is the height or crown of education. I suspect that AI is most relevant and/or useful for item 1 both in terms of what is studied and how we study it. I suspect that AI is most problematic when we attempt to use it for item 3.
 17. I do not think that "AI" is challenging the purpose of education so much as it threatens undermining the result. If students can use the machine to prove that they can read, write, and do some math, what then happens when they enter the job market and cannot actually do any of those things? Will it matter if they are that good at asking the machine for the answer?
 18. The nature and purpose of human education has long been to churn out people capable of contributing to the economy. We want to turn our children into adults who can read, write, do some math, and hopefully exercise a bit of critical thinking. This way, a company only has to provide job-specific training. Higher degree programs emphasize specialization in an area that is also aimed at economic productivity.

Teaching, Learning, and Teacher-Learner Relationship (9 extracts)

Description of the idea: While there are many positive hopes for the use of AI in education, currently AI interferes with the teacher-learner relationship, sometimes through replacement, sometimes through distraction, sometimes through subversion.

In tension with:

- Salient idea: Cheating in Education by Using AI
- Salient idea: Competition between Human Teachers and AI in the Field of Education

- Undesirable: Using AI to "Gamify" Education

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. [When AI is used as a *tool* in education, it can cause problems like the ones I mentioned before. It can also interfere with the student-teacher connection and the student-student connection. Those connections are a form of education in itself - learning to participate in hierarchical and peer relationships. That education is a crucial aspect of human development. Furthermore, those connections say something about what is important and where knowledge comes from. That is to say, human-to-human education as a medium sends the message that the knowledge we are learning is by humans and for humans. We do not learn arbitrary "facts" in an arbitrary, abstract language; rather, we learn the facts discernible to humans understood from an angle intelligible to humans. If we replace human interaction in education with machine interaction, we may subtly imply that the knowledge which is most "relevant" is not specifically relevant to us *as humans* but simply "relevant" via some abstract notion of progress or via an illusion of having utter, god-like objectivity. This in turn, I suspect, will lead to a devaluation of our unique status on earth and an overvaluation of further machine use.](#)
2. [I asked my students how many used ChatGPT to write their assignments. I assured them that I would not go back \(at this time\) to deduct points or report them to administration. I was thinking that about 60% - 70% of them had used ChatGPT. They were honest as they raised their hands -- about 60% of them.](#)
3. [Can generative A, like Chat GPT, take accountability for its claims? I can offer a lecture on the history of philosophical ethics and describe different theories. I can also respond to questions in that lecture and, eventually, I'll share that - all my cards on the table - I think this theory is superior to that one. I have my reasons, but I also take accountability for the position I hold. There appears, and this may be a novice's view, a kind of neutrality in the claims offered by generative AI \(or a feigned neutrality\). Help understanding whether accountability could be taken by an AI system would be most welcome.](#)
4. [the primary issue with, e.g., students who plagiarize a paper or an essay. The misrepresentation is a bad thing, but the real issue is that they defeat the purpose of the essay, the subsequent conversations, and the course.](#)
5. [However a particular AI tool is used in education -- by teacher, student, or some combination thereof - - the learning needs to be at the forefront.](#)
6. [We had a workshop here at USF last week on ChatGPT in the classroom; one of the really interesting things that came up across disciplines from CS to Rhetoric to Design was how it encouraged us to think about teaching the process of thinking and writing, and not just evaluating a finished product. Rough drafts, outlines, and version control are not just helpful for discouraging ChatGPT-generated essays, but they encourage us to help students think more clearly.](#)
7. [Issue 4: I suspect that most AI learning systems are explicitly or implicitly gamified; it might not even be possible to make a non-gamified AI learning system. Studying for the sake of grades is bad \(and gamified\) enough. Studying for direct gamification reasons is even worse. At least with grades one might be considering one's future prospects and thereby internally link \(albeit loosely\) what one is learning to one's future. With gamification, one learns the content for reasons entirely extrinsic to the learned content. Now, one might ask, "Who cares why you're learning something as long as you learn it?" There are at least two responses to this: * Why you learn something will effect what knowledge you retain and what other concepts you relate it to. Thus what you learn and why you learn it are not cleanly separable. * More importantly, gamifying education tells students that what they are learning is not valuable to know for its own sake but is purely valuable for something it gives you \(e.g. game points, emojis, future career dollars, etc.\). This cuts against the important non-economic "leisure" reasons to learn that I discussed under the purpose-of-education bubble in CartoDebat.](#)
8. [I think that AI \(specifically generative tools like ChatGPT\) challenge us as educators to think more carefully and deeply about what we are teaching our students to do, and also the sorts of skills and knowledge they need for future careers.](#)
9. [To me, learning is the activity of the agent acquiring new knowledge or skills whereas educating is the activity of whoever is teaching the learner. "Education" then refers to the interaction between the teacher and the learner with an emphasis on the teaching side of things. To be "self-educated" means that to some extent one has simultaneously filled both the teacher and learner role. Interpreted via my categories, it sounds like you're saying that the role of teaching \(educating\) is to prepare students for](#)

[careers, but then students can go off on their own and learn other things on their own. I definitely disagree with that thesis.](#)

Religion, human purpose, and AI (4 extracts)

Description of the idea: Religion is an important lens through which AI can be interpreted; in our data, it is directed towards questions of the purpose of human life, specifically with respect to work and leisure.

In tension with:

- Salient idea: Cheating in Education by Using AI
- Undesirable: Using AI to "Gamify" Education

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. [As a point of clarification, I don't mean to say that anything with a goal is work, but rather that doing an activity with a goal other than doing that activity is work. I certainly agree that fulfilling that command is a form of work. Both work and rest are essential. However, I don't think we should understand the role of humanity solely in terms of that one command, even though it is given at a special place in Genesis. Consider another important command for Israel recorded in Exodus 20:8-11: "Remember the Sabbath day, to keep it holy. Six days you shall labor, and do all your work, but the seventh day is a Sabbath to the Lord your God. On it you shall not do any work, you, or your son, or your daughter, your male servant, or your female servant, or your livestock, or the sojourner who is within your gates. For in six days the Lord made heaven and earth, the sea, and all that is in them, and rested on the seventh day. Therefore the Lord blessed the Sabbath day and made it holy." Even though more days are allocated for work than for rest, the most special and holy day is for rest \(leisure\). This practice of the Sabbath rest is then taken in the New Testament as an image for the age to come. Consider for example Hebrews chapter 4, especially verses 8-11: "For if Joshua had given them rest, God would not have spoken of another day later on. So then, there remains a Sabbath rest for the people of God, for whoever has entered God's rest has also rested from his works as God did from his. Let us therefore strive to enter that rest, so that no one may fall by the same sort of disobedience."](#)
2. [If humans were to comply with the request of "... fill the earth and govern it ..." \(Genesis 1:28a, NLT\), would that be considered work or leisure? Using your comment about the difference between leisure and work, I would argue that it should be considered as work given that the goal is clearly specified. Hence, it seems to me that life should be ultimately work-oriented.](#)
3. [I would argue that some aspects of education are most properly work-oriented whereas some should be leisure. That is, academic activities can be split into the following three groups: 1. Enabling or enhancing work \(this is work\). This might include things like learning arithmetic, grammar, how to use tools, etc. 2. Enabling academic forms of leisure \(this is still work\). This would include much of the student formation we discussed. 3. Studying the cosmos simply for the sake of knowing, wondering, appreciating, etc. \(this is leisure\). Each of these three are important in their own way, but item 3 is the height or crown of education. I suspect that AI is most relevant and/or useful for item 1 both in terms of what is studied and how we study it. I suspect that AI is most problematic when we attempt to use it for item 3.](#)
4. [I have been reading Josef Pieper's book, "Leisure, the Basis of Culture" and have found some of his thoughts quite helpful. Pieper distinguishes between work and leisure by saying that work is any activity done primarily for the sake of what it accomplishes whereas leisure is any activity done for its own sake. \(Hopefully that's not too over-simplified of a summary.\) I like this distinction. Note that a leisure activity might produce extrinsic goods \(e.g. peace of mind, focus, energy\), but the activity ceases to be leisurely if one tries to perform the activity with the *goal* of getting those goods. Pieper argues \(and I agree\) that life should ultimately be leisure-oriented. The highest activities \(e.g. worship, communal feasting,](#)

[conversing, etc.\) are those worth doing for their own sake. Thus work serves primarily to enable leisure. From a Christian perspective, the most important action done so far in human history was work \(Christ's death and resurrection\), and it was work precisely because it was aimed at enabling us to enter into the eternal sabbath rest \(i.e. leisure\) of the Eschaton.](#)

Competition between Human Teachers and AI in the Field of Education (10 extracts)

Description of the idea: Can human teachers compete with ChatGPT and future AIs, with AI's incredible breadth of knowledge and speed? Human teachers have the advantage of being fellow humans with their students, thus making many aspects of education clearly relevant.

In tension with:

- Salient idea: Cheating in Education by Using AI
- Salient idea: Teaching, Learning, and Teacher-Learner Relationship
- Salient idea: The human purpose of education and how AI aligns

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. [Can generative AI, like Chat GPT, take accountability for its claims? I can offer a lecture on the history of philosophical ethics and describe different theories. I can also respond to questions in that lecture and, eventually, I'll share that - all my cards on the table - I think this theory is superior to that one. I have my reasons, but I also take accountability for the position I hold. There appears, and this may be a novice's view, a kind of neutrality in the claims offered by generative AI \(or a feigned neutrality\). Help understanding whether accountability could be taken by an AI system would be most welcome.](#)
2. [Should a generative AI like ChatGPT with access to almost all human knowledge and unmatched compute power be allowed to compete unevenly with human lecturers or professors trained with limited or partial human knowledge?](#)
3. [The example of word processor replacing typing pool is very instructional. Humans are still in charge of using the technology, i.e. word processor. The case of generative AI like ChatGPT is dangerous because their lack of transparency can lead to censorship of knowledge.](#)
4. [What are the considerations for human development and education regarding when artificial intelligence as a topic should be introduced in school?](#)
5. [Our current understanding of nature and the purpose of human education is limited to our understanding of what it means to be human. Hence, we may first need to understand the impact of AI on our definition of "human" as that may drastically change how we approach the intersection of AI, and nature and education.](#)
6. [I do not think that "AI" is challenging the purpose of education so much as it threatens undermining the result. If students can use the machine to prove that they can read, write, and do some math, what then happens when they enter the job market and cannot actually do any of those things? Will it matter if they are that good at asking the machine for the answer?](#)
7. [To me, learning is the activity of the agent acquiring new knowledge or skills whereas educating is the activity of whoever is teaching the learner. "Education" then refers to the interaction between the teacher and the learner with an emphasis on the teaching side of things. To be "self-educated" means that to some extent one has simultaneously filled both the teacher and learner role. Interpreted via my categories, it sounds like you're saying that the role of teaching \(educating\) is to prepare students for careers, but then students can go off on their own and learn other things on their own. I definitely disagree with that thesis.](#)

8. [I think that AI \(specifically generative tools like ChatGPT\) challenge us as educators to think more carefully and deeply about what we are teaching our students to do, and also the sorts of skills and knowledge they need for future careers.](#)
9. [When AI is used as a *tool* in education, it can cause problems like the ones I mentioned before. It can also interfere with the student-teacher connection and the student-student connection. Those connections are a form of education in itself - learning to participate in hierarchical and peer relationships. That education is a crucial aspect of human development. Furthermore, those connections say something about what is important and where knowledge comes from. That is to say, human-to-human education as a medium sends the message that the knowledge we are learning is by humans and for humans. We do not learn arbitrary "facts" in an arbitrary, abstract language; rather, we learn the facts discernible to humans understood from an angle intelligible to humans. If we replace human interaction in education with machine interaction, we may subtly imply that the knowledge which is most "relevant" is not specifically relevant to us *as humans* but simply "relevant" via some abstract notion of progress or via an illusion of having utter, god-like objectivity. This in turn, I suspect, will lead to a devaluation of our unique status on earth and an overvaluation of further machine use.](#)
10. [Issue 3: A huge part of education is learning to interact socially with one's teachers and classmates. This socialization is likely just as if not more important than much of the material taught. If we replace much of this experience with screen-time and AI interactions, we lose out on this aspect of education.](#)

Cheating in Education by Using AI (4 extracts)

Description of the idea: AI makes cheating incredibly easy, thus raising the question of how best to evaluate student learning - and the purpose of education overall, which for students is often focused on grades and degrees, not learning for its own sake.

In tension with:

- Salient idea: Religion, human purpose, and AI
- Salient idea: Teaching, Learning, and Teacher-Learner Relationship
- Desirable: Education is Desirable Regardless of Economic Usefulness

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. ["I didn't have enough time so I used it," "I didn't do well on my first few assignments and wanted to improve," "I have a learning disability and this helped me craft my words," "I am an international student and do not want to have points taken off for not understanding English," "I just don't care about this class."](#)
2. [I do not think that "AI" is challenging the purpose of education so much as it threatens undermining the result. If students can use the machine to prove that they can read, write, and do some math, what then happens when they enter the job market and cannot actually do any of those things? Will it matter if they are that good at asking the machine for the answer?](#)
3. [I asked my students how many used ChatGPT to write their assignments. I assured them that I would not go back \(at this time\) to deduct points or report them to administration. I was thinking that about 60% - 70% of them had used ChatGPT. They were honest as they raised their hands -- about 60% of them.](#)
4. [the primary issue with, e.g., students who plagiarize a paper or an essay. The misrepresentation is a bad thing, but the real issue is that they defeat the purpose of the essay, the subsequent conversations, and the course.](#)

New AI-Powered Objects and Sensors: The Internet of Things (1 extracts)

Description of the idea: The internet of things (IoT), combined with AI will results in a world full of sensors and autonomous artifacts. These things will do things that we normally expect of humans, such as monitoring systems, as well as be able to do things that humans cannot do, such as interpret animal communications.

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. [In the age of Internet of Things - a type of AI - many objects will perform actions traditionally peculiar to humans. For example, sensors. In addition, animals will be able to carry out activities traditionally believed to define "human". For example, animal speech recognition.](#)

Concern about Harms Caused by AI (4 extracts)

Description of the idea: AI is powerful and power brings risks of harm, as well as opportunities for benefit. However, in the public imagination, harms seem to predominate.

In tension with:

- Salient idea: New AI-Powered Objects and Sensors: The Internet of Things
- Salient idea: Religion, human purpose, and AI

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. [a recent Financial Times article claims that about 300mn jobs across major economies are at risk. This qualifies as humans harming other humans with AI when you think about the implications of the job loss on households. Hence, your example seems to still qualify as an indirect human injury being caused by AI.](#)
2. [A nice point, but what of the potential for humans to harm other humans via AI assistance? Is the something that we should be thinking about or concerned about? It happens already, of course, but how to we think about AI as amplifying or extending the human ability to harm others, or weigh that against its ability to amplify or extend benefit?](#)
3. [An adaptation of the first two of Isaac Asimov's "Three Laws of Robotics" summarizes what I think AI should never do. 1. AI may not injure a human being or, through inaction, allow a human being to come to harm. 2. AI must obey rules that govern the society where it is being used except where such rules would conflict with the First Law. We can debate what it means for AI to injure humans. For example, an AI system that replaces humans will cause economic injury or economic harm to humans whose jobs are being replaced. Similarly, an AI system that allows an override by a human when the human feels like the AI system is fair will cause harm through its inaction. \)](#)
4. [How about we think of this as an example of indirect human injury being caused by AI?](#)

Challenge of Student Assessment Due to AI Changing Education and Educational Practices (5 extracts)

Description of the idea: Educational assessment becomes not only more difficult due to cheating with AI, but also due to measures taken in response to reducing the risk of cheating, looking for new assessment methods.

In tension with:

- Salient idea: Cheating in Education by Using AI
- Desirable: Education is Desirable Regardless of Economic Usefulness

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. [The attempt to quantify academic success leads teachers and students to focus on teaching and learning the sorts of knowledge and skills that can be quantified. However, in life, the most meaningful forms of knowledge and skill are often unquantifiable or only loosely quantifiable by proxy.](#)
2. [Issue 1: It is very hard to quantitatively assess academic work.](#)
3. [I do not think that "AI" is challenging the purpose of education so much as it threatens undermining the result. If students can use the machine to prove that they can read, write, and do some math, what then happens when they enter the job market and cannot actually do any of those things? Will it matter if they are that good at asking the machine for the answer?](#)

Desirable / Undesirable

Undesirable: Using AI to “Gamify” Education (1 extracts)

Description of the idea: Because gamification makes learning into a game (thus promoting collecting points, reputation, etc.) rather than seeking out learning for its own sake (the intrinsic value of learning), it undercuts the purpose of education: learning for its own sake. Furthermore, because the motivation is not the knowledge itself, but rather the gamified correlates of knowledge, gamification is likely to undercut learning even if it is the more practical forms of learning rather than the theoretical.

In tension with:

- Salient idea: The human purpose of education and how AI aligns
- Desirable: Education is Desirable Regardless of Economic Usefulness

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. [Issue 4: I suspect that most AI learning systems are explicitly or implicitly gamified; it might not even be possible to make a non-gamified AI learning system. Studying for the sake of grades is bad \(and gamified\) enough. Studying for direct gamification reasons is even worse. At least with grades one might be considering one's future prospects and thereby internally link \(albeit loosely\) what one is learning to one's future. With gamification, one learns the content for reasons entirely extrinsic to the learned content. Now, one might ask, "Who cares why you're learning something as long as you learn it?" There are at least two responses to this: * Why you learn something will effect what knowledge you retain and what other concepts you relate it to. Thus what you learn and why you learn it are not cleanly separable. * More importantly, gamifying education tells students that what they are learning is not valuable to know for its own sake but is purely valuable for something it gives you \(e.g. game points, emojis, future career dollars, etc.\). This cuts against the important non-economic "leisure" reasons to learn that I discussed under the purpose-of-education bubble in CartoDebat.](#)

Desirable: Education is Desirable Regardless of Economic Usefulness (3 extracts)

Description of the idea: education is beneficial to human development regardless of whether it is instrumentally useful for economic reasons. This is not to deny the importance of economic use, but only to say that if AI were to take all meaningful work, humans still ought to seek education.

In tension with:

- Undesirable:

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. [there are many good non-economic activities that directly require education \(or even consist of the activity of education\). For instance, reading great poetry requires education. Playing music requires education. Appreciating a math proof requires education. Philosophical and theological dialogue require education. Marveling at biochemistry requires education. Etc.](#)
2. [I think it is *crucial* to believe that there are other essential purposes of education. After all, what is the economy for, anyways? It produces material wealth and services which in turn offer sustenance and safety to humanity. However, once we have obtained sufficient sustenance and safety for ourselves and others, what should we want to do with our time? We should often want to engage in non-economic activities, like resting and participating in culture.](#)
1. [The nature and purpose of human education has long been to churn out people capable of contributing to the economy. We want to turn our children into adults who can read, write, do some math, and hopefully exercise a bit of critical thinking. This way, a company only has to provide job-specific training. Higher degree programs emphasize specialization in an area that is also aimed at economic productivity.](#)

Desirable: AI Should Never Harm People (1 extracts)

Description of the idea: Building upon the idea of Asimov's Laws, it is desirable that AI should never harm people.

In tension with:

- Salient idea: Cheating in Education by Using AI

Corresponding extracts (click on the arrow on the left to unfold/fold)

1. [An adaptation of the first two of Isaac Asimov's "Three Laws of Robotics" summarizes what I think AI should never do. 1. AI may not injure a human being or, through inaction, allow a human being to come to harm. 2. AI must obey rules that govern the society where it is being used except where such rules would conflict with the First Law. We can debate what it means for AI to injure humans. For example, an AI system that replaces humans will cause economic injury or economic harm to humans whose jobs are being replaced. Similarly, an AI system that allows an override by a human when the human feels like the AI system is fair will cause harm through its inaction.](#)

Part 2: Salient ideas of 2024

Creativity, Art, Music, Process and Product (24 excerpts)

Description of the idea: Generative AI greatly alters human creativity, with both bad and good possibilities. AI puts human creativity at significant risk not only by generally making creativity more accessible to more people, but also by making products in the style of particular artists which can then compete with the original artist. Creativity may be enhanced for some and harmed for others, and along with that creativity the of meaning that we experience along with it, both as experienced by artists and humanity more broadly.

Corresponding extracts

- [It seems that AI may be able to facilitate the translation process between an idea and an artistic expression. Although the translation process itself may be part of the art creation and the personal touch is really important. In the AI era, are we losing the capacity to distinguish what is AI creation and what is human creation in terms of art?](#)
- [Do you think that AI could become a good tool to be utilized in creating art? If someone lacks the means, technique, or materials to create something specific \(like a drawing\), would you consider it 'art' if they prompted an AI to create it for them?](#)
- [This is an important area to consider--I'll focus on music and the process of human impact on the creation and performance of music. As the father of a professional musician, and one who has other family members who make their living based on the creation of music, both the creative skills they have and their livelihoods that are at stake are at risk because of AI. Still, when I listen to music, I often wonder now what was produced by a human and what wasn't--as long as I am entertained, should I care?](#)
- [in terms of creativity, it really depends on what you define to be 'art'. If you were to define it as something that provokes emotion, then yes something created with AI in this space could be art. But, if we just talk about creativity, so much of what humans value as creativity comes from their lived experiences and person thoughts, those of which AI does not have in the same capacity. If someone would want to make art or be creative with AI, I think they would need to acknowledge or have it known that this was created with the work of AI and not solely on their own merit, as sure they maybe put the prompt in AI and tweaked it that way, but the basis of it comes from AI.](#)
- [I have always marveled at the ability of those with musical gifts to create beautiful music. It is part of what allows me to be in awe of the human race, even when there are examples of people who are what we term bad actors. The ability for humans to create music gives me hope, therefore. I am prepared for artificial music, but would still want to know that it was not created by a human, I think, to hold on to some understanding of reality and to feel that hopeful connection to human composers and musicians.](#)
- [Meaning has a very individual quality to it and *if* AI gave us more time \(and I'm not sure it actually will\), then we could put that time towards meaningful things... or unmeaningful things as well. This is a human response to AI giving us more time \(kind of filling in a new negative space\). What about the "positive space" side of it? What might AI do there in terms of meaning? Can using the AI itself bring or remove meaning? I will just say, from my perspective, I think using AI to write for me would remove meaning from my work, and substitute a rough approximation of what the internet thinks is meaningful = the AI dataset. Likewise, if I knew I were reading something generated by AI, it would make me skeptical of the meaning to be found in that text - meaning, once again, that is a distillation of the internet. Not a bad thing, but not the same as an individual creative human author.](#)
- [there has been an important a paradigm shift when it comes to creativity. For a simple example, early chess programs could be beaten by grandmasters because grandmasters imagine different alternatives beyond the programming of the chess-bot. But with enough machine learning, that paradigm actually reversed. Today, players are being caught using bots to cheat precisely because the bot operates with](#)

GREATER imagination than a human player would in a given scenario (<https://www.wired.com/video/watch/chess-cheating>). But this pattern is repeating in all sorts of areas. We can identify GenAI precisely because of its creativity - its willingness to put 7 fingers on a hand or turn out images of the founding fathers with darker skin tones. But in arenas we are less familiar with than the five-fingered human hand, the same sort of creative license now becomes dangerous misinformation

- I still think of computing as a tool of human creativity, as humans are still involved in directing the computation done to arrive at a newly generated, creative output. If generative AI begins to output things without human input, as some of the current text to 3D systems seem to be able to do, I am less interested in those outputs. I look at them, and though I can acknowledge the ability of the system to create such a output, I'm not interested in them in the same way I am moved and awed by creations of humans like a symphony or a great piece of art. Indeed, it is because those have been generated by a human mind that I consider them treasures.
- This is one of the more interesting aspects of the shift from traditional computing to "AI" based computing, especially when it comes to generative AI. Creativity used to be considered 100% a human capacity. Computing was a tool, but humans brought the actual creative elements. This is important, because creativity is one area where judgment is involved. Generative AI seems to be capable of creating independently of human input. What it needs is to be able to judge when to be creative and when to not be creative. When I am looking for a summary of the daily news... or a picture of someone I want to reference... or research for a scientific or history paper.... creativity is not appropriate. When I am asking for artistic renderings--images, music, nonfiction writing, etc--creativity is encouraged.
- I feel this is THE central concern. AI is both born from and a mechanism for creativity and innovation, two of my passions. But the context and moment in time in which AI is being developed, namely capitalism, white supremacy culture and extractive economies, means AI will likely enrich and empower the few at the expense of the majority. I wanted to participate in this initiative because I'm hoping there are people smarter than me, who care about compassion and using innovation for the greatest good and will be able to influence the trajectory of AI to help humanity help ourselves and our planet.
- the line seems to be whoever has the ability to bargain for AI to not be used, such as the latest writers and actors strikes. It really puts into perspective that creative people felt threatened by AI more than others, and moved quickly to make sure they had job security. That then asks the question is what roles can be replaced by AI and what is lost if they're AI. There is really a lot of possible quality loss if the AI has more control, but in terms of Hollywood, theres a good chance that there will still be people with an eye for what they're making. Trying to set up the restrictions on how much workforce cut down AI can do could be a start, such as a 50% cut of people to cut costs and replace that work force with AI is the acceptable line. In the end, the people who use the tool the best will be the most successful with it, its just if the workforce can make the employers set a line of how much of the work is done by AI.
- It really offers a tool for people to use to speed up processes and it will be a new skill that rises people to the top. There is a certain level of understanding how the AI models work to be better at developing them, but nobody needs to know the inner workings to be good at them. It's similar to how any other ordinary skill will make some people more productive than others. The fear is that AI will be doing all of the work and we lose out on human creativity, but there will still be aspects that people need to keep working the AI to ask for better and better. If people leave the AI to keep generating ideas on top of it's own ideas, it will get worse and worse progressively. AI currently isn't at a self sustainable point and course could be corrected.
- It could cause something akin to a 'brain drain', this happened in eastern Germany during the Cold War when the oppression of living there caused those with big ideas to other countries.
- I my dream world, AI would be used to help humanity figure out a way to support human thriving. We would let AI do the boring laborious work, and humans the work of connecting, community building, healing the planet and being creative in our own unique ways
- if AI did take over a huge amount of work AND everyone did have their basic needs for income and stability met, I think there would be a magnificent blooming of creativity and possibility. There are so many people who are bogged down with surviving right now, those who do not have the time or energy to be creative or to think about how they might like to contribute to society. If their creativity and capacities were not consumed by the requirements of survival and supporting their families, I believe we would have a renaissance
- True creativity will probably shine through more as they are the "rare find" in the AI era.

- Citizens in a democracy elect representatives to act on their behalf in government. When voters choose their representatives--their delegates to government--they expect these individuals to serve with critical thinking and creativity skills. If such representatives turn to AI tools as a substitute for their own duty to be creative and to apply critical thinking to the policy and political issues of the day, they have potentially undermined representative democracy. If elected representatives of the people use AI to direct them to what they should be doing as representatives and further use AI to generate legislation or policy proposals, then democracy becomes representation by BOTs, not representation by and for the people.
- In addition to and related to creativity, AI also poses a threat to curiosity. The promise of precision in response to our inquiries leaves us without the curious meanderings of tradition research methods. The digitation of data and precision of search engines already took this somewhat from us, but AI threatens to make information gathering frictionless, and thus without creative meandering. Consider what is lost when we no longer... --pull the other books on the same dewey decimal shelf, --listen to the songs that are on the album but not played on the radio, --read the next article in the newspaper or magazine --pull out a roadmap when we made a wrong turn or, now, what is lost when we trust AI to... --make our medical diagnoses --determine our career paths --create our art --write our stories. How much should curiosity inform... --prison sentencing? --military firing decisions?
- When digital art technology came out there was an editing ability that takes much less time than what people would do in dark rooms. It allows people with less camera skill and better computer skill to do similar or better work. That being said, it's easy to trained eyes to see the difference. It would work similarly that if someone creates art with AI it will take less time but still the AI research skill to get a good enough output they think is worth their signature. On the other hand, it's very common practice for artists to acknowledge the medium they use with the titling and the art community could enforce this standard. If they were to do it that way, it would only raise the bar for what is considered 'good' in terms of AI art. This is just a new form of art, and while it takes less time to make the art, the fine tuning of it will be the effect that separates the good from the bad.
- I am concerned about AI fully replacing humans in almost any capacity because that may lead to deskilling that may be detrimental to growth and opportunity. Of course, tools and technology have replaced functions that humans had previously completed themselves, but AI--to me--seems to have the ability to replace far more tasks at a far more rapid pace.
- A meaningful life is very subjectively defined. AI will not have a capability, at least at first, to know enough about any one person to help with defining or fostering meaning. However, the individual can ask questions of AI and elicit suggestions - just as we might ask a friend for a good book recommendation that addresses a "meaningful" subject.
- Increasingly I am uncomfortable with discussions about "AI" broadly, as if it's one thing; given, for example, the distinctions between generative AI and other types of AI, such broad questions/answers are not very revealing--and potentially misleading.
- AI has a key role today in human critical thinking. It can start our thinking by giving a quick and rough answer to a question. It becomes a brainstorming partner. It can also refine ideas by asking AI detailed questions which arise in the writing or analytical process.
- Speaking with a mentor of mine who has severe dyslexia, he noted that large-language models like ChatGPT can be particularly helpful for him and significantly decrease the amount of time he spends voice typing or altering all the spelling and stylistic errors. Therefore, AI may offer these more organizational or basic writing capacities that can be a barrier for certain groups.

Education (10 Excerpts)

Description of the idea: AI puts education at risk because it reinforces the false goal of emphasizing product over process. Education is about the learning process, and to short-circuit that process will lead to nice looking products without any real understanding of how to make them, thus reinforcing deskilling and technological dependency. Because AI is such

a powerful tool, it should have some role in education, but it is limited and it is not yet clear exactly what might be the best uses for it.

Corresponding extracts

- Regarding education, AI can lead us to view learning in a more instrumental fashion that devalues the process of trial and error. Additionally, skill-based knowledge will likely become more valued as AI becomes further integrated, creating certain skill "pre-requisites" to enter into any field. For me, one of the things that makes us human is our curiosity. I fear that AI may decrease our opportunities to seek out our curiosity, wonder, and awe which I think brings meaning to human lives and may lead to a sense of widespread lack of purpose.
- I feel as though with the rise of AI, a person's ability to critically think will decrease. I think that this is especially worrying for the younger generations who will grow up with AI as part of their daily lives. Critical thinking is a learned skill, to a certain extent, and not exercising your ability to do so can make it more and more difficult over time. I do also believe that people are starting to trust AI too much. I feel like many are starting to not critically think about the information that something like ChatGPT spits out at them.
- There are those elements we don't even have vocabulary for. These are hard to name until we are amidst the conversation and saying "there should be a phrase for that." Some examples from recent AI history include the advent of terms like 'deskilling' or 'AI Hallucinations.' These are terms that did not exist but were coined in order to talk about AI. This is going to be more and more necessary and this is much of the work we need to do in order to have good public conversations about these things Secondly even once things have been defined, often the public doesn't know the vocabulary yet. This takes a different effort to move conversations out of the ivory (or silicon?) tower and into the zeitgeist.
- AI has a key role today in human critical thinking. It can start our thinking by giving a quick and rough answer to a question. It becomes a brainstorming partner. It can also refine ideas by asking AI detailed questions which arise in the writing or analytical process.
- Here's an interesting -- and growing -- dictionary: <https://montreal.ethics.ai/dictionary/>
- In addition to and related to creativity, AI also poses a threat to curiosity. The promise of precision in response to our inquiries leaves us without the curious meanderings of tradition research methods The digitation of data and precision of search engines already took this somewhat from us, but AI threatens to make information gathering frictionless, and thus without creative meandering. Consider what is lost when we no longer... --pull the other books on the same dewey decimal shelf, --listen to the songs that are on the album but not played on the radio, --read the next article in the newspaper or magazine --pull out a roadmap when we made a wrong turn or, now, what is lost when we trust AI to... --make our medical diagnoses --determine our career paths --create our art --write our stories How much should curiosity inform... --prison sentencing? --military firing decisions?
- AI can offer use a great way to access the human collective knowledge and to make use of it more easily. It will greatly enhance the productivity and help people accomplish a lot more meaningful goals.
- AI will immediately increase the resources, or at least reduce the costs of accomplishing certain tasks. This will benefit any organization, including nonprofits like those working in education, agriculture, etc. in Africa.
- AI (and other technological advances we're not discussing here) will be causing a large scale loss of jobs. In an ideal world, everyone would be guaranteed the basics of living (shelter, food, medical coverage, education) and then AI could have all those jobs without causing tremendous pain and suffering
- One of the things we need for this technology is a broader vocabulary that the public at large understands and uses.