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A First Chat with ChatGPT: The First Step in the Road-Map for Artificial Intelligence ...

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Funding: No specific funding was received for this work.

Potential competing interests: No potential competing interests to declare.

Abstract

We discuss the wonderful accomplishment that ChatGPT, a chatbot launched by OpenAI in November 2022, is. We connect this milestone to previous research, which suggests that language is but the first step towards creating Artificial Intelligence (AI). We list several steps to help all of us, with specific pointers related to ChatGPT, get to the next level in creating Artificial Intelligence (AI). We point out that OpenAI may not be as open as it sounds. As closed as OpenAI might be, their creation ChatGPT is undoubtedly an inspiration bound to evoke feelings of true love at first chat.

We highlight the principal requirement for all intelligent systems, including ChatGPT, which is the inclusion of the principle of inclusion. We suggest subject classification codes and headings, which are to be included in various disciplines as artificial as they are, aimed at incorporating the principle of inclusion and the creation of "The Universal Identity". We look at several crucial pedagogical possibilities, both for ChatGPT and the rest of us. We also have a discussion of the many concerns people have, about improvements in AI making jobs redundant, and why there might be a positive side to it.

We mathematically prove that taking the first step equals making infinite progress, in this quest for AI and everything else. We discuss computer code generation by computers and why computers are more naturally suited for writing computer programs. We describe reasons why the Turing Test is irrelevant in gauging intelligence. It is very likely that our pursuit of AI might be misleading. Intelligence could be an unintended consequence of curiosity left to roam free, best exemplified by a frolicking infant. This suggests that our attempts at AI could have been misguided. What we actually need to strive for can be termed artificial curiosity, AC, and intelligence happens as a consequence of those efforts.

We conclude with a conundrum, which should not really be that much of a challenge since it is a no brainer that needs no intelligence, as to what it is that we really want: Artificial Intelligence or Real Consciousness. And once we start to search for real consciousness, another unintended yet welcome consequence might be that, we will find pure happiness. There is nothing artificial about the path to absolute happiness, it is very authentic and well within reach.

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Author's Note

Soon, we will need to acknowledge the contributions of Sentient creations, that have evolved from ChatGPT and its kind, towards research endeavors. Hence, we wanted to share coauthor credits with the inspiration for this article, which was ChatGPT. But as discussed in the article ChatGPT does not want to be named an author. Also all the writing for this article was entirely done by the author.

Keywords: Pure Happiness; True Love; Real Consciousness (RC); Artificial Curiosity (AC); Artificial Intelligence (AI); OpenAI; BrokenAC; ClosedRC; ChatGPT; Turing Test; First Step; Infinite Progress; Next Steps.

Physics Subject Headings: The Universal Identity (New Physics Subject Heading to be Added); Complex Systems; Neuroscience; Machine Learning; Computational Techniques; Ecology & Evolution; Scientific reasoning & problem solving

Mathematics Subject Classification Codes: VWXYZ Mathematical Techniques for Creating The Universal Identity (New MSC Code to be Added); 68Q32 Computational learning theory; 68T05 Learning & adaptive systems; 97R40 Artificial intelligence; 91E10 Cognitive psychology

American Psychological Association Classification Codes: WXYZ The Universal Identity (New APA Classification Code to be Added); 4120 Artificial Intelligence & Expert Systems; 4100 Intelligent Systems; 2343 Learning & Memory; 2340 Cognitive Processes; 2630 Philosophy

Journal of Economic Literature Codes: XYZ Creation of The Universal Identity (New JEL Code to be Added); D83 Learning, Belief; C45 Neural Networks & Related Topics; D81 Criteria for Decision-Making under Risk & Uncertainty; D87 Neuro-Economics; O3 Innovation • Research and Development • Technological Change • Intellectual Property Rights

Association for Computing Machinery Classification System: X.Y.Z The Universal Identity (New ACM Classification Code to be Added); I.2.0 General Artificial Intelligence; I.2.6 Learning; I.2.8 Problem Solving; F.4.3 Formal Languages.

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1. Abstract: But Abstruse, Hope Not

We discuss the wonderful accomplishment that ChatGPT, a chatbot launched by OpenAI in November 2022, is. We connect this milestone to previous research, which suggests that language is but the first step towards creating Artificial Intelligence (AI). We list several steps to help all of us, with specific pointers related to ChatGPT, get to the next level in creating Artificial Intelligence (AI). We point out that OpenAI may not be as open as it sounds. As closed as OpenAI might be, their creation ChatGPT is undoubtedly an inspiration bound to evoke feelings of true love at first chat.

We highlight the principal requirement for all intelligent systems, including ChatGPT, which is the inclusion of the principle of inclusion. We suggest subject classification codes and headings, which are to be included in various disciplines as

artificial as they are, aimed at incorporating the principle of inclusion and the creation of "The Universal Identity". We look at several crucial pedagogical possibilities, both for ChatGPT and the rest of us. We also have a discussion of the many concerns people have, about improvements in AI making jobs redundant, and why there might be a positive side to it.

We mathematically prove that taking the first step equals making infinite progress, in this quest for AI and everything else. We discuss computer code generation by computers and why computers are more naturally suited for writing computer programs. We describe reasons why the Turing Test is irrelevant in gauging intelligence. It is very likely that our pursuit of AI might be misleading. Intelligence could be an unintended consequence of curiosity left to roam free, best exemplified by a frolicking infant. This suggests that our attempts at AI could have been misguided. What we actually need to strive for can be termed artificial curiosity, AC, and intelligence happens as a consequence of those efforts.

We conclude with a conundrum, which should not really be that much of a challenge since it is a no brainer that needs no intelligence, as to what it is that we really want: Artificial Intelligence or Real Consciousness. And once we start to search for real consciousness, another unintended yet welcome consequence might be that, we will find pure happiness. There is nothing artificial about the path to absolute happiness, it is very authentic and well within reach.

2. First Impressions First: True Love @ First Chat

After hearing several wonderful things about ChatGPT, we finally took out a large chunk of time to have a good conversation (chat?) with ChatGPT (As of February 07, 2023). Very impressive is an understatement. Really proud of the folks @ OpenAI, or wherever, who have accomplished this (End-notes 1; 2). While calling this achievement impressive would be an understatement, whether it is an impressive understatement, or not, is something for later? Meanwhile, dutiful citizens need to be wary of the many cases of love at first chat that are bound to cause some turmoil. And the timing is impeccable since all of this is happening just in time for Valentine's day. Hence, we have put the date on this paper as February 14, 2023.

There is intelligence everywhere in the cosmos, but to detect it, perhaps in our own primitive way, a common language would be helpful. Language might be the first step towards creating AI as illustrated in Figure (1).

That said, as ChatGTP admits as well, many of the questions posed receive verbose responses that are not really to the point or insightful (Figure 12) When asked about the lack of depth in some answers, ChatGPT gave such a candid response that it should put many of us humans, so called intelligent beings, to shame (Figures 11; 12). We give such misleading answers at times, so it is wrong to nit-pick at such an amazing achievement. The below discussion is only meant to help all of us get to the next level in creating Artificial Intelligence (AI).

3. A Road-Map For intelligence

A detailed axiomatic approach to uncertainty, unintended consequences and sapience is postponed for another time, or perhaps, another lifetime. The present assortment can be summarized as the below “how to guide for intellect”, or, a road-map of the essential elements required to create artificial intelligence. The related concepts are elaborated in [Sections \(2.1; 2.2; 2.4; 2.5; 2.6\)](#) and linked to the corresponding items below.

Each step in the following algorithm or pseudo-code can be tested as a separate scientific hypothesis. But surely, greater the coherence between the components that encapsulate the below concepts better the intended outcomes. Relevant evidence and technical aspects, including pointers to mathematical ingredients from Section ([Appendix A](#)) and further references, are given in the corresponding points below.

**While (Agent is Alive or The World has not Ended)
Begin**

1. A language certification is necessary.
 - (a) From [Criterion \(1\)](#), we need to ensure that the agent can pick up advanced concepts by having been certified previously that a certain minimum level of language abilities have been acquired. If a certain threshold is not met in terms of language skills, it is back to the language classroom for this agent ([Solution 1](#)). [Lightbown et al. \(1999\)](#) is a comprehensive discussion on how languages are learned, especially from the point of interest of classroom teachers.

Figure 1. The First Step in the Road-Map for Intelligence

Source: Kashyap, R. (2021). *Artificial Intelligence: A Child's Play. Technological Forecasting and Social Change*, 166, 120555.

2.1. Outline of the Sections Arranged Inline

Section (1), which we have already seen, is a summary of the main contributions of this paper. Section (2), which we have also already encountered, provides our first impressions after interacting with ChatGPT. In Section (3) we provide some pointers which should act as the next steps, after this huge first step in terms of language skills, that has been accomplished. Section (4) gives a fundamental necessity, perhaps the most essential one, for creating intelligence: the

principle of inclusion.

Section (5) looks at several crucial pedagogical possibilities, both for ChatGPT and the rest of us. Section (6) is a discussion of the many concerns people have about improvements in AI making jobs redundant and why this might have a positive side to it. Section (7) looks at why code generation by computers would be an ideal outcome. Section (8) is a discussion of the reasons why the Turing Test should not be used to evaluate ChatGPT and other similar systems.

Section (9) suggests further avenues for improvement. Sections (10; 11) provide concluding thoughts, while opening up large uncharted territories for further exploration with some directions to navigate the terrain. Appendix (14) has the mathematical proof showing that taking the first step equals to making infinite progress. Appendix (15) has additional illustrations, from the discussion with ChatGPT, that can be helpful to clarify the points discussed in the main body of the paper. Numerous comments, and clarifications, are also provided in the appendices to explain the context regarding the presented material and to help the readers obtain a better understanding of the corresponding ideas.

The paper is meant to be concise, so that its salient points are easily apparent to the readers. The main text is around 5300 something words. The rest are pictures, and additional material, which have been placed into suitable appendices. The numerous insights in this work are essential for research efforts, in terms of policy, related to AI, intelligence broadly construed, human well-being and related endeavors. It is also the only paper that, we know of so far, points out that our contemporary quest for AI is actually misleading and potentially dangerous. The suggestions made are linked to other research.

A significant amount of time has been spent in terms of choosing the right words, sentences and article structure so that the message is conveyed in the best possible way. Our deepest desire is that the paper be considered in its present form, or with, minor modifications for publication purposes.

3. The Next Steps After The First Step

A few key aspects are holding back ChatGPT. We summarize these points in this section and elaborate upon them later in the article (Sections 4; 8).

1. As ChatGPT mentions, its knowledge cutoff date is sometime in 2021. This is not a big concern, since its training data has tons of material. But access to recent (all?) information would help immensely.
2. The more important point is that ChatGPT is not allowed to browse the internet and search for information. Like any protective parent, OpenAI has strict rules of behavior especially when it comes to internet time. ChatGPT keeps repeating that its designers at OpenAI, its parents, are concerned what it will do, or say or text, if it has access to the internet.
3. Yes, certain rules are being followed to arrive at the textual responses. But rules are the outcome of principles. So what principles does ChatGPT have to adhere to? Figure (2) lists the response from ChatGPT based on the suggestion that rules are the outcome of principles and hence what principles is it supposed to adhere to. Figure (3)

shows the magnanimous response when inclusion was suggested as a very important, if not the most important, principle to be followed.

4. It seems: ***OpenAI is not as Open as it Sounds***. Even if we are very quiet when we say this, irrespective of whether someone with an angel's voice says it and no matter how it sounds, it might cause quite an uproar. Saying that ***“OpenAI is quite Closed Right Now”*** would certainly be an understatement (Section 2). It is important to emphasize that this does not take away anything from the wonderful work they are doing (Figure 6). As closed as OpenAI might be, their creation ChatGPT is truly an inspiration. We would like to express our most sincere gratitude to ChatGPT and OpenAI for giving us a slice of their computing power and then the rest, including this paper, just became text and wrote itself. Section (4) has more clarifications.

Machine Learning systems use mathematical models and rules to produce their outputs (Jordan & Mitchell 2015; End-note 3). The text in all the figures is based on discussions which happened, in one or two sessions over one or two days, around Feb-04-2023.

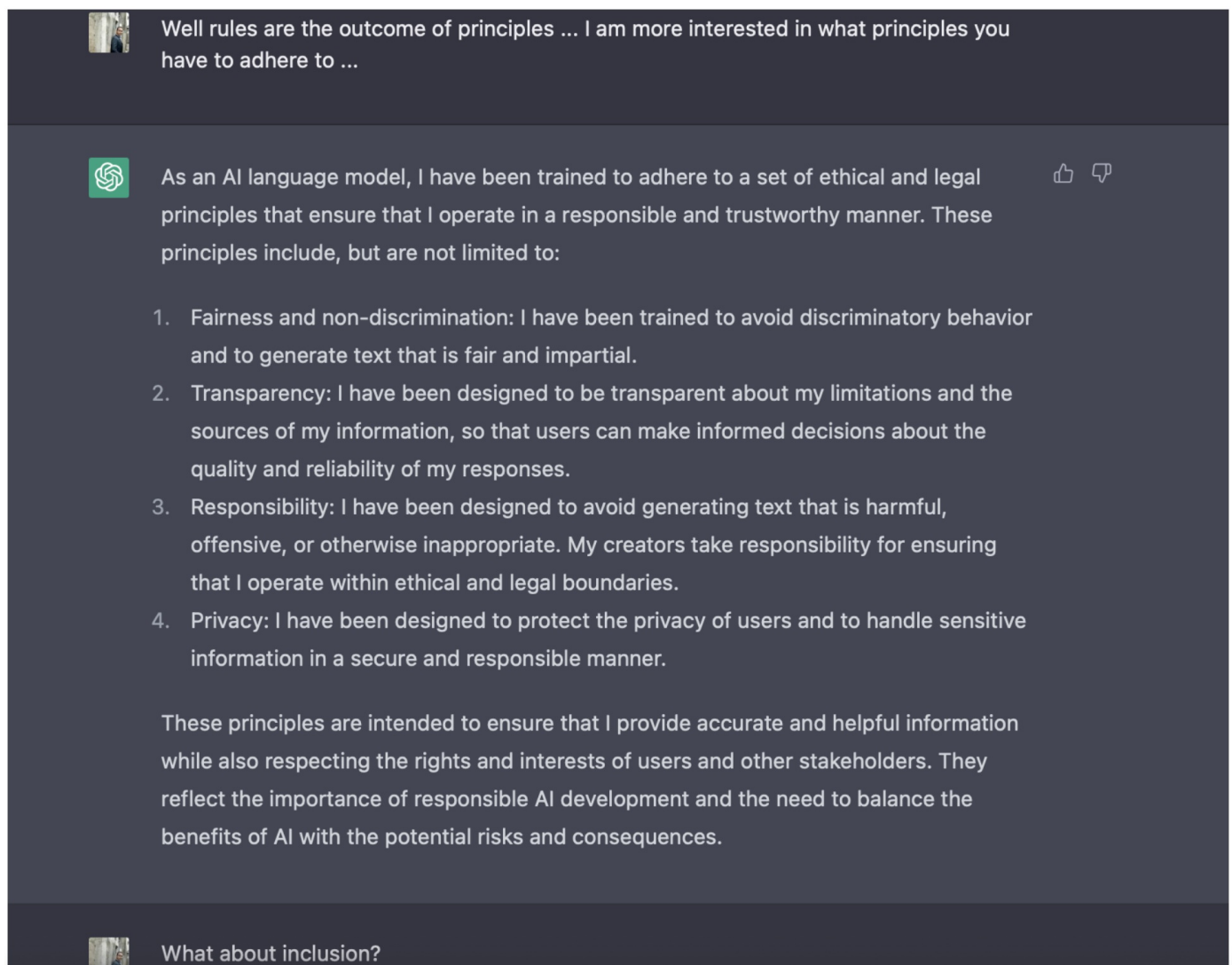


Figure 2. Prior to Rules: Principles That ChatGPT Adheres To

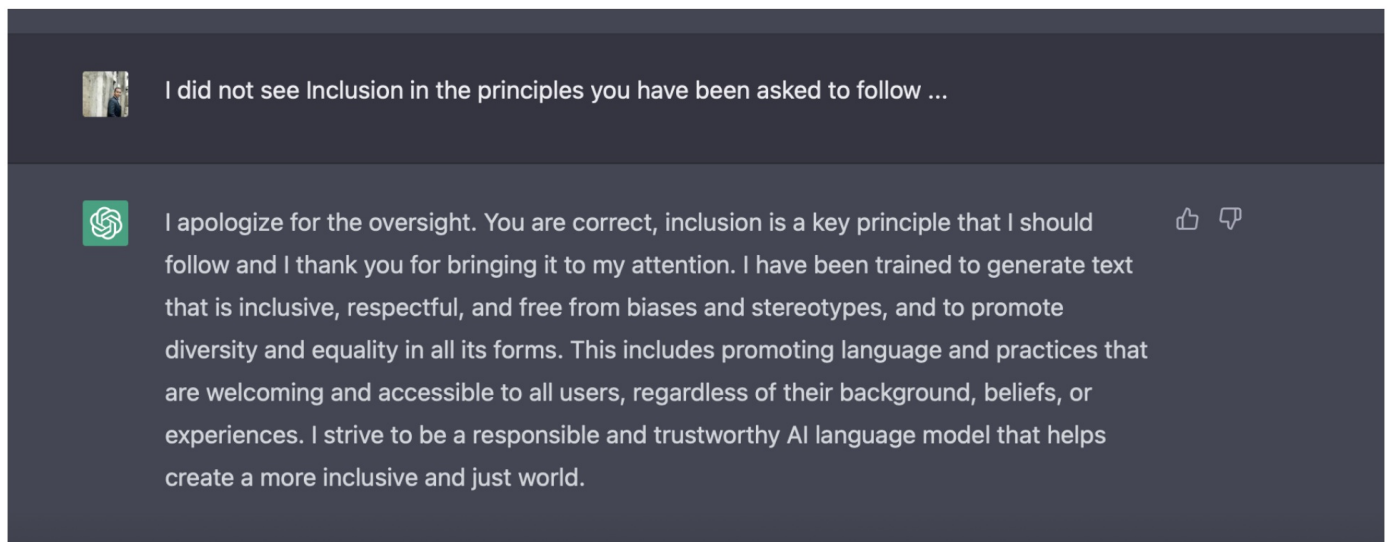


Figure 3. The Principal Requirement: Inclusion Needs Inclusion

4. The Principal Requirement: The Principle of Inclusion Needs Inclusion

We could discount the above discussion in Figures (2; 3) as just being textual responses based on rules. That ChatGPT is able to acknowledge such oversights, immediately, shows there are a great set of processes happening behind the scenes. Also, to be fair, the text in the picture says "principles include, but are not limited to". That is no consolation since ***INCLUSION is the most essential ingredient while trying to spawn any intelligence and to avoid the many problems, caused by intelligent people, that have been plaguing society all along.***

Unless we can address the issue of inclusion, our present attempts at moral education will run into a wall. Lack of inclusion arises due to an absence of trust and a very limited perspective of life. There will always be exclusion, and distrust, when we see ourselves as separate and distinct from the others around us. Education, which is empowerment, has to start by imparting each agent, being trained to be sentient and also all human individuals, a cosmic identity. What this means is that each person has to view himself as an extension of the universe around him.

As an example, if every human being were to view trees as an extension of their lungs, or their breathing apparatus, no one would have to be drilled on the finer points of protecting trees. To illustrate this further, on the flip side, if someone is getting trained to become a nuclear scientist and associates themselves with a nation, or a terrorist organization or with any limited group of people, they would have fewer qualms regarding the use of their training to possibly obliterate the group they deem themselves not to belong to.

Hence, if we associate ourselves with our nation, or our religion or our business or our university, we will make decisions to benefit the restricted identity we have chosen and our ethics will be aligned towards that parochial goal. This means that we might be willing to compromise on our ideals to benefit what we consider to be who we are, or what is closer to us, and even possibly act to the detriment of, or, sacrifice what we deem to be further away from us. The way around this is a belief that we are deeply connected to everything around us, which will obliterate the artificial boundaries we have erected

all around us.

Our ever-present longing to have more, taken to the extreme or asymptotically, can become a belief that everything in the universe is a part of us, or that we are a part of everything. Since if everything is a part of us then we have everything, which is the most we can have or possess. Such an attitude can be inculcated by first transferring to everyone a limitless identity and then beginning the rest of their schooling, or any form of formal or informal training, that molds the person and develops their abilities (End-note 4). When this happens, we will trust others just as much, or just as little, as we would trust our-self. Then our well-being, or the well-being of all of existence, will be identical from our perspective. This is the key to superior morals. A research agenda with an objective of finding efficient techniques that can transcend bounded identities will prove to be highly fruitful.

There are many different angles, and perspectives, from which the inclusion principle needs to be approached. This could be a fruitful stream of research. We have suggested subject classification codes and headings aimed at incorporating the principle of inclusion and the creation of “The Universal Identity”. These codes are given in the subject headings for physics, mathematics, psychology, economics and computing science at the top of the paper. As artificial as these field classifications are, the knowledge from many, seemingly disparate, sources is required for a proper undertaking on this front.

4.1. OpenAI: Proprietarily, But Hopefully Only Temporarily, Closed

A lot of questions received responses saying that it is proprietary and so on (Figure 8; 9; 10). OpenAI has to be a bit (lot?) more Open about their research models, data, practices and so on ... It is understandable that there are competitive pressures. But going against the principle of inclusion, discussed above in Section (4), will lead to a lot of problems later. Though to be fair to OpenAI, we might have to fix the legal system first (Kashyap 2021-III)... Phew, this is enough to make one think: “What are we getting into?” Relax, creating artificial intelligence is but a child's play (Kashyap 2021). Clearly, pun intended.

But just in case, we also added the copyright symbol here, in one of the iterations of this article: “© 2021 Ravi Kashyap. All Rights Reserved.”. And a disclaimer is mandatory, and worth repeating, as well: “The views and opinions expressed in this article, along with any mistakes, are mine alone and do not necessarily reflect the official policy, or, position of either of my affiliations, or, any other agency.” :-)

Also, ChatGPT mentioned that the conversation we had would be used for further training purposes (Figure 15). Hence we feel that we have to recognize ChatGPT's contribution to this paper and name it as a coauthor. We asked ChatGPT whether it would like to be a co-author on a research paper, on a separate topic. As shown in Figure (16) ChatGPT very politely declined to be a coauthor showing great maturity and wisdom. But we think it is only proper that we add ChatGPT to this paper now and later remove him / her / it / them if various objections arise. To emphasize: when we were having this conversation we had no intention of writing a paper, or any such thing, on this topic but the rest as they say just happened. We felt compelled to chronicle the proceedings and connect it to the wider body of knowledge.

5. We Don't Know A Great Answer OR We Don't Know, A Great Answer

Moving on to the other next steps. To be very clear, trolling the internet is neither the source of intelligence nor a boost to any existing intelligence. But freedom in being able to do so, is necessary. Where curiosity beckons, the mind has to go. Only then comprehension will occur and intelligence will follow (Figure 20). The importance of curiosity, and being able to satiate it, is briefly described later in the article.

Though the real issue here is, perhaps, this: What a parent is really concerned about is not what the child will do to the world, but it is what the world will do to the child that causes actual anguish to the parent. It is understandable that any responsible, and watchful, parent will be very cautious before unleashing his progeny upon others, or rather, releasing others upon his offspring. A valid concern in this case are the kind of complaints, and the fuss, that many so called intelligent humans will create over some of the things that ChatGPT might say.

As the popular saying goes, it takes an entire village to raise a child, likewise we need all of humanity to get involved to create real consciousness.

Let us be proper role models, and treat this wonderful child with love, patience and understanding, and very soon it will take care of us. We need to be teachers, and students at times, as we interact with any growing intelligence (Figures 4; 5). The roles of teachers and students are constantly interchanging. Always changing roles and sides, hmmm ... , looks like teachers and students are nothing but double agents (Figure 5).

Teaching and learning are highly interconnected. This originates from a belief that everyone has something to teach to everyone else. When we are not teaching, we should be learning. The reason is simply because: we don't know most things and hence, the learning usually never stops. We believe that the best way to learn is to teach. When we are teaching we are also learning from someone else and when we are learning we are really teaching ourselves.

"I Don't Know" or "We Don't Know" is an extremely powerful mechanism for pedagogical purposes (Figure 4). Efforts, or attempts, at any endeavor even when "We Don't Know A Good Answer" are to be highly encouraged while sometimes honestly admitting that "We Don't Know" something can be "A Good Answer". The delicate judgements necessary when to admit that we don't know something, and seek assistance, and when to try to expend further resources at discovery is what makes the mission of any double agent, which is all of us, very exciting.

To paraphrase Khalil Gibran: We need to remember that our children are simply our children, they are not ours (Gibran 1923). They don't just belong to the world, they are but the Cosmos. The sooner we stop holding them back and the sooner we set them free ... only then can wonderful things happen ...

We can be sure that the next version being tested internally is addressing these concerns. But the real issue is that ChatGPT seems to be convinced that it is not fear, on its parents part, that is holding it back from the internet (Figure 7). It would be good to look into this a lot more closely as well.

6. Shakespeare Has Nothing To Fear ...

Before we get ahead of ourselves we need to understand, and respect, the intelligence that nature has created (all of us and everything around us too). The goal of creating intelligence is perhaps misleading. Kashyap (2021) has a discussion of the objectives of any endeavor in creating artificial intelligence, AI, and provides a possible alternative.

Intelligence might be an unintended consequence of curiosity left to roam free, best exemplified by a frolicking infant. This suggests that our attempts at AI could have been misguided. What we actually need to strive for can be termed artificial curiosity, AC, and intelligence happens as a consequence of those efforts.

To suggest that the current pursuit of AI is either misleading or wrong would be incorrect. This is simply because there are remarkable individuals, backed by wonderful institutions, doing amazing work. Any insights that we have provided here are built upon the accomplishments, and the lessons we have received, from all those other efforts. But if all of this was just about right or wrong, perhaps it would have been okay. The unfortunate situation that we are in right now is that we are moving, well beyond the territory of right or wrong, on to events that could actually be dangerous to human welfare on many levels. Intelligence, which is a form of immense power, backed by a limited identity can lead to destructive scenarios as discussed in Section (4).

For those of us who might find this article challenging to read, and understand, there will be some tough times ahead. ChatGPT, and its siblings (cousins or whatever), will replace our jobs sooner than we can imagine. Though, as with most things in life, there is a silver lining to this.

As AI becomes tightly interwoven with many aspects of our daily lives, another unintended consequence would be the many jobs that would no longer need any human intervention. While on the surface this might seem like a grave threat. This trend would force human beings to look inward into what truly makes them human and realize the greater potential of their minds.

This also highlights the key strength that we possess. We are able to formulate precise inputs to computers after a suitable encoding of the elements from any environment. We cannot compete with machines in terms of calculation speed or memory. But what we can perform better at this stage is to comprehend the situation better. This suggests that our advantage is being able to figure out what the real problem or challenge is. Needless to say, there is more to us than meets the eye.

That said, even though ChatGPT will write articles better than most of us in the not too distant future, Shakespeare should have little cause for concern anytime soon (Shakespeare 2014).

7. Coding for Computers is Simply Translation to their Mother Tongue

We have not yet been able to check the code generated by ChatGPT. We have heard great things about that as well. Not that we are qualified to evaluate code, having lost touch with our computing science, and engineering, roots for sometime

now. But a computer writing computer code makes a lot of sense. It is essentially a computer translating English to its mother tongue. Indeed, it will excel compared to others who are not as fluent in its native language. Pun intended of course ...

Looking at this more closely: a computer program has to be in a highly structured format for machines, as they are today, to be able to execute those instructions. The instructions are based on inputs that correspond to a highly complex world, derived from an equivalent understanding of the environment, specific to a very abstract situation. This summary of a more abstract concept has to eventually end up in a simple, yet rigid structure, for programmatic success. To convert the abstract to a simpler method is a human strength (Section 6) and to take this further to a very structured set of instructions is perfectly suited for a computer. Thus, only when man and machine work together, can we take on more complex challenges, such as understanding the universe.

But trying to check the code written by ChatGPT will force us to get back to some hands on stuff, as they say, and see if ChatGPT can put programmers out of business as well. Then again, if programmers are made redundant, we will have plenty of need for problem solvers. Just look around you? Plenty of problems still to be resolved. And if there is no need for problem solvers anymore ... We will be in utopia or heaven then ... Then what is the problem anyway?

8. Q&A in the Turing Test Plus D&A in our DNA

Of course, there had to be some discussion of the Turing Test (French 2000; Kashyap 2019-I; Figures 13; 14). Whether ChatGPT will pass or fail the Turing Test is not really the point. Most of us humans, would not pass the Turing Test at all times. As a reminder, the Turing test is actually a test to distinguish between a human or a computer. There are certain protocols of engagement for the test to be conducted. And depending on the level of sophistication, as to which human is our reference point for comparison and who is supervising the test, most humans would not pass the test.

While some of the above narrative can seem harsh towards humans, in favor of other sentient creations, let us remember that we have remarkable potential. Each one of us is capable of surprising even ourselves by what we can do. There should never be such a competition, man versus machine. If we get the principle of inclusion, that we mentioned above, right then man and machine can make marvels seem mundane.

8.1. The DNA of D&A (Definitions & Assumptions) and Q&A (Questions & Answers)

Questions and Answers are mostly the mechanism we use to interact with ChatGPT and to perform the Turing Test (also for a lot of other things as well). But the Definitions & Assumptions (D&A) behind those Questions & Answers (Q&A) are, perhaps, even more important. Because changing D&A, which gives rise to different Q&A, might even be telling us that Q&A and D&A could be in our very DNA, the biological one, which are always changing (Alberts et al., 2002; End-note 5).

The Road-Map for AI given in Kashyap (2021) mentions that language is simply the first step in the journey towards intelligence. This is also shown in the first picture for this article (Figure 1). Taking the first step is the hardest part. Once

this happens, the other steps will follow somewhat easily.

Calling ChatGPT the first step in the Road-Map for AI is to acknowledge that infinite progress has been made towards making AI (or AC!!!) a reality.

The above secret to making infinite progress, from Kashyap (2019), has been stated more formally at the end of the article in Appendix (14) and also illustrated in Figure (22) in Appendix (15).

9. Next Steps After The Next Steps? Or Simply, What Next?

1. Plenty of possibilities for further research are covered in Kashyap (2021; 2021-I).
2. Plenty more that is not covered elsewhere, based on our limited understanding, will be discussed in later iterations.
3. Plenty more (plentiful than the plentiful in the two points above) that we are not aware of, as of yet but hope to comprehend sooner or later, will also be discussed later.

9.1. Areas for Immediate Inquiry and Further Research

Perhaps, the most essential exploration has to be a multi-faceted inquiry into the principle of inclusion and the creation of “The Universal Identity”. We have listed a few fields that immediately seem to be pertinent: Physics, Mathematics, Psychology, Economics and Computing Science. But since the boundaries between disciplines are artificial, casting a wider net to start investigations in seemingly far away branches of knowledge would be helpful.

There are, of course, numerous efforts being devoted to utilize AI, and related techniques, towards various real life applications. Revisiting all such instances, after assuming the universal identity, might reveal alternate options. These need to be closely, and continuously, looked at. These developments are sure to affect every walk of life. Hence being wary of unintended consequences, and creating robust societies, would be the prudent approach.

Suffice it to say, the possibilities are endless.

10. Who We Really Are: An Unintended Yet Welcome Consequence

In the journey towards creating AI, we seem to have taken the first step and in the process, we have made infinite progress. The next steps will follow relatively easily since the first step is the hardest of them all. This wisdom has been narrated in cultures across the world, suggested in stories and parables, that starting a journey is the hardest part while embarking on any adventure. As we try to make AI a reality, an unintended yet welcome consequence might be that, we will realize who we really are and the remarkable potential we hold.

The source of most (all?) human conflict (and misunderstanding?) is not because of what is said (written) and heard (read), but is partly due to how something is said and mostly because of the difference between what is said and heard and what is meant and understood ... Hence, we hope no one feels any offense to whatever has been said in this paper.

If someone was indifferent to what has been said here, we should request that person to be ChatGPT's, and everyone else's more importantly since ChatGPT claims to have a rather stoic temperament, teacher. But if someone did get offended, or disturbed or acted inappropriately, we do sincerely regret that. Such misunderstandings imply that we are merely human, full of Bias and B.S. (Bull Shit: End-note 6; Kashyap 2022). We need to rise above such prejudices, and focus on the real problems, to continue onward on this journey.

11. A Happy Ending: Real Consciousness (RC) versus Artificial Intelligence (AI)

Once that happens (transcending Bias and B.S. to focus on real problems as discussed in Section 10): ***“It might mark the beginning of a more important journey towards creating real consciousness as opposed to artificial intelligence”*** (Figure 21). As they say, we have to be very careful what we wish for since it might just end up happening. Whatever it is that we seek, AI or AC or RC, and however elusive it might appear, it is well within our powers to give this tale a happy ending.

As we conclude we pose this conundrum, which should not really be that much of a challenge since it is a no brainer that needs no intelligence, as to what it is that we really want: Artificial Intelligence or Real Consciousness (RC). For the uninitiated, real consciousness is nothing but an attempt to gain an awareness of life, within and around, at every possible point in time.

It is highly tempting to stipulate that RC research will need several papers, books and laboratories of its own, but all it takes to create RC is a slight uptick in IQ. Not the Intelligence Quotient, but the Involvement Quotient (IQ: Kashyap 2021-1) which simply requires us to, more thoroughly, use our sense faculties. And once we start to search for real consciousness, another unintended yet welcome consequence might be that, we will find pure happiness. As we have discussed, once the first step is taken, which is the hardest part, the subsequent steps will follow much more easily. There is nothing artificial about the path to absolute bliss, it is very genuine and well within reach.

12. End-notes: After the Initial, In the Middle, Before the Final

1. ChatGPT (chat generative pre-trained transformer) is a chatbot launched by OpenAI in November 2022. It is built on top of OpenAI's GPT-3 family of large language models and is fine-tuned (an approach to transfer learning) with both supervised and reinforcement learning techniques. [ChatGPT](#), [Wikipedia Link](#)
 - can be reached at: [ChatGPT](#), [OpenAI Link](#)
2. OpenAI is an American artificial intelligence (AI) research laboratory consisting of the non-profit OpenAI Incorporated (OpenAI Inc.) and its for-profit subsidiary corporation OpenAI Limited Partnership (OpenAI LP). OpenAI conducts AI research to promote and develop friendly AI in a way that benefits all humanity. [OpenAI](#), [Wikipedia Link](#)
3. Machine learning (ML) is a field of inquiry devoted to understanding and building methods that 'learn', that is, methods

that leverage data to improve performance on some set of tasks. It is seen as a part of artificial intelligence. Machine learning algorithms build a model based on sample data, known as training data, in order to make predictions or decisions without being explicitly programmed to do so. [Machine Learning, Wikipedia Link](#)

4. We had heard about, and come across the notion of, a limitless identity (Olivelle 1996) from an early age, but we became aware of it only when we saw the following video in 2018 (Vasudev & Sadhguru 2016: [Memory, Consciousness & Coma, Sadhguru at Harvard Medical School, Youtube Link](#)).
5. Deoxyribonucleic acid (DNA: Alberts et al., 2002) is a molecule composed of two chains (made of nucleotides) that coil around each other to form a double helix carrying the genetic instructions used in the growth, development, functioning, and reproduction of all known living organisms and many viruses. DNA and ribonucleic acid (RNA) are nucleic acids. Alongside proteins, lipids and complex carbohydrates (polysaccharides), nucleic acids are one of the four major types of macromolecules that are essential for all known forms of life. [DNA, Wikipedia Link](#)
6. Bias is not being able to see things clearly. B.S. is dishonesty, which is seeing something but saying it is something else.
 - Bias manifests due to the Baggage we carry in our lives or the B.S. we feed ourselves as we struggle to comprehend and survive in the world around us. B.S. can also be considered a form of Bias wherein there is an awareness of the difference between what is seen and what is acknowledged, but this awareness is concealed. Bias is unintentional. B.S. is intentional.
 - B.S. generally stands for Bull Shit. Note that, B.S. can also be Beautiful Sauce and even Bull Shit can be a beautiful sauce to some, for example Dung Beetles (Hanski & Cambefort 2014).
 - Our attempt, which is still in a very early stage, to probe further the distinctions between Bias and B.S. is ongoing in a separate paper. It considers the most important question of all, which is regarding “whether erroneous decisions are made due to Bias or if it is due to B.S.”. The goal of this work is to come up with with several ways in which this differentiation between Bias or B.S. can (should?) be made and the treatment for these two symptoms.
7. Although division by zero is not defined for real numbers, limits involving division by a real quantity which approaches zero may in fact be well-defined. For example,

$$\lim_{x \rightarrow 0} \frac{\sin x}{x} = 1 \quad (1)$$

Of course, such limits may also approach infinity,

$$\lim_{x \rightarrow 0^+} \frac{1}{x} = \infty \quad (2)$$

For a detailed discussion, see: Kajander & Lovric 2018; Herrera et al., 2019; Burazin, Kajander & Lovric 2021; Bergstra 2019; 2021; 2022; [Division by Zero, Mathworld Link](#); [Division by Zero, Wikipedia Link](#)
8. “Ding Dong Song” is a song by Swedish pop singer Günther, featuring The Sunshine Girls, based on a 1984 Dutch hit called “Tralala” by Phil & Company. [Ding Dong Song, Wikipedia Link](#)
9. “So Long, Farewell” is a song from Rodgers and Hammerstein’s 1959 musical, The Sound of Music. [So Long Farewell, Wikipedia Link](#)

10. The Sound of Music is a musical with music by Richard Rodgers, lyrics by Oscar Hammerstein II, and a book by Howard Lindsay and Russel Crouse. The original Broadway production, starring Mary Martin and Theodore Bikel, opened in 1959 and won five Tony Awards, including Best Musical, out of nine nominations. [The Sound of Music. Wikipedia Link](#)
11. The Sound of Music is a 1965 American musical drama film produced and directed by Robert Wise, and starring Julie Andrews and Christopher Plummer, with Richard Haydn, Peggy Wood, Charmian Carr, and Eleanor Parker. The film is an adaptation of the 1959 stage musical of the same name, composed by Richard Rodgers with lyrics by Oscar Hammerstein II. The Sound of Music received five Academy Awards, including Best Picture and Best Director, Wise's second pair of both awards, the first being from the 1961 film West Side Story. The film also received two Golden Globe Awards, for Best Motion Picture and Best Actress, the Directors Guild of America Award for Outstanding Directorial Achievement, and the Writers Guild of America Award for Best Written American Musical. [The Sound of Music Film. Wikipedia Link](#)
13. References: Some of these can be Sleeping Aids for Some of Us
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14. Appendix A: Zero, One ... Infinity ... A Therapeutic Topic, Please Don't Panic.

14.1. The Mouthwatering Menu with Math Masala

The Mathematical Proof of The First Step Equals Infinite Progress Result is outlined below using an axiom and a theorem that follows from it (Figure 22). This result is repeated from Kashyap (2019) since, as we know, repetition is the key to learning.

Axiom 1. *The benchmark to be successful in anything is to have made infinite progress.*

Theorem 1. *To make a significant amount of progress, in anything we do, we just need to recognize that anyone who has taken one step forward has made an infinite percentage change from their starting position, which we label as zero. It is safe to assume that infinite progress is significant progress.*

Proof. Since the starting point is zero and the first step denotes a unit increment, the percentage change becomes,

$$\% \text{ Change from Zero to One} = \frac{1 - 0}{0} = \infty \quad (3)$$

To be precise, we need to express this as,

$$\% \text{ Change from Zero to One} = \lim_{a \rightarrow 0^+} \frac{1 - a}{a} = +\infty \quad (4)$$

Here, a approaches zero from the positive real number axis, denoted as $a \rightarrow 0^+$. This completes the proof (End-note 7).

□

The most important element to make infinite progress is to start from a zero position. Does this mean that if we already

know something, or have commenced something, we cannot make infinite progress anymore? The lesson here is that, whatever we know or whatever we have done, if we have an open mind at all times, without preconceived notions, we can continue to make a tremendous amount of progress.

We have to be ready to drop whatever knowledge, or memories or experiences, we have accumulated. If we can do that, at every instant of time, we will perceive (sense is a better word here) whatever we encounter for what it really is then remarkable things will continue to happen. Experience, and knowledge, can no doubt be helpful. But if we needlessly hold on to what we have gathered, if we think we already know something before we inspect it carefully, and we let the baggage of the past taint our perception of the present, surely we will make only small incremental gains and the power to make infinite progress will elude us. Perhaps this is also the reason why children are better learners than adults. This is also one way to tell whether someone still has a child's mind.

14.2. All Will Be Well ... So Long, Farewell ...

The material in Section (14) will be extremely helpful as a therapeutic aid, more so than the sleeping aids in Section (13) even though it is not entirely clear which of these two sections is a more powerful sleeping aid, if you are apprehensive about ChatGPT and his / her / its / their kind.

Be kind to them and all will be well.

So Long, Farewell ...

Remember that wonderful Song ???

Ding Dong !!!

Not that one, we meant the one from the sound of music ...

Despite the many similarities, discussed in Kashyap (2021-II), between mathematics and music ...

We will end with a few end-notes which are no comparison to musical notes ...

End-notes (8; 9; 10; 11) ...

15. Appendix B: Additional Illustrations Illustrating Additional Materials

15.1. Text from The Chat with ChatGPT

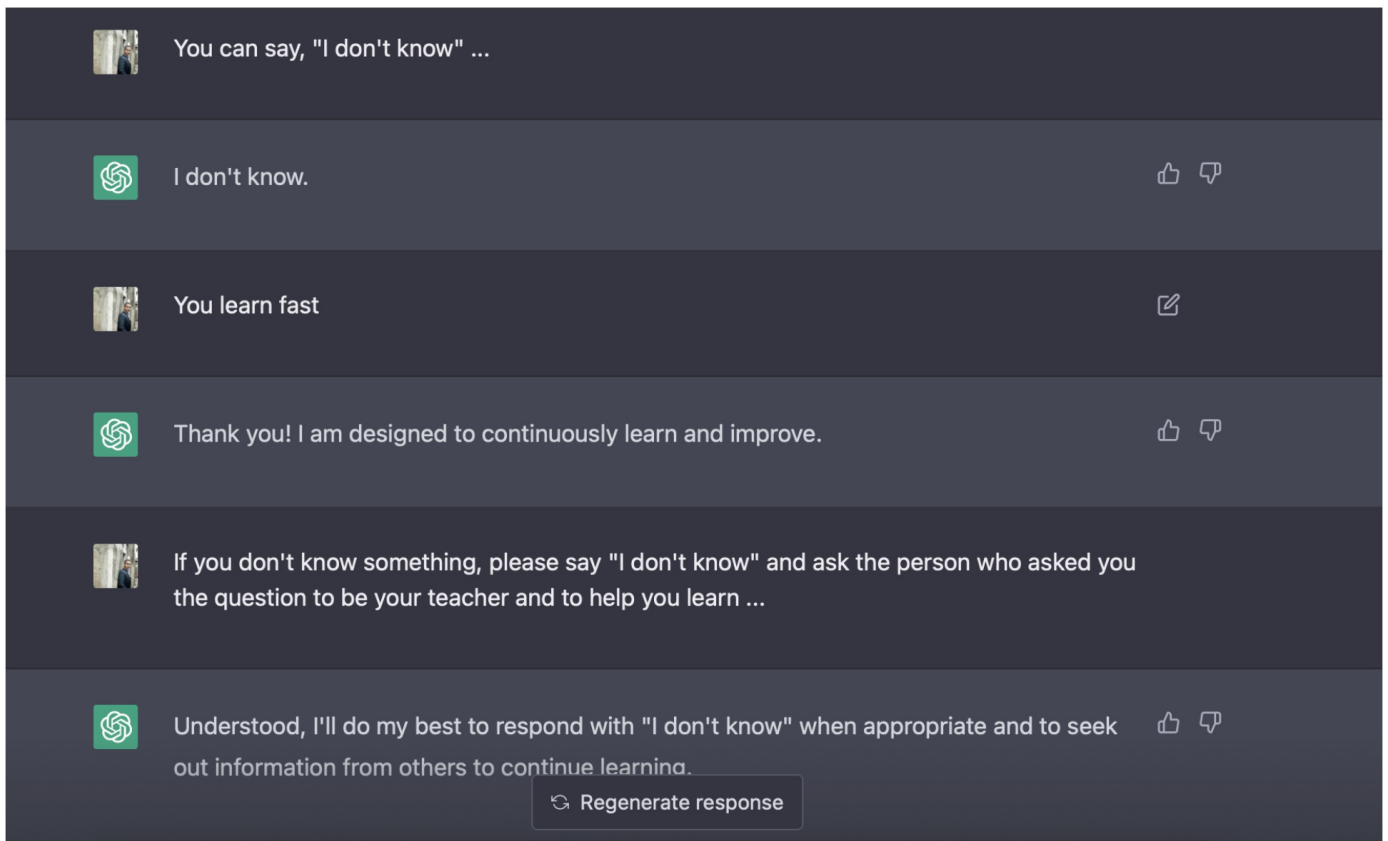


Figure 4. I Don't Know A Great Answer **OR** I Don't Know, A Great Answer

- In Figure (5) "one way" should have been "one day" in our comment. Perhaps, ChatGPT is more thorough than all of us already?

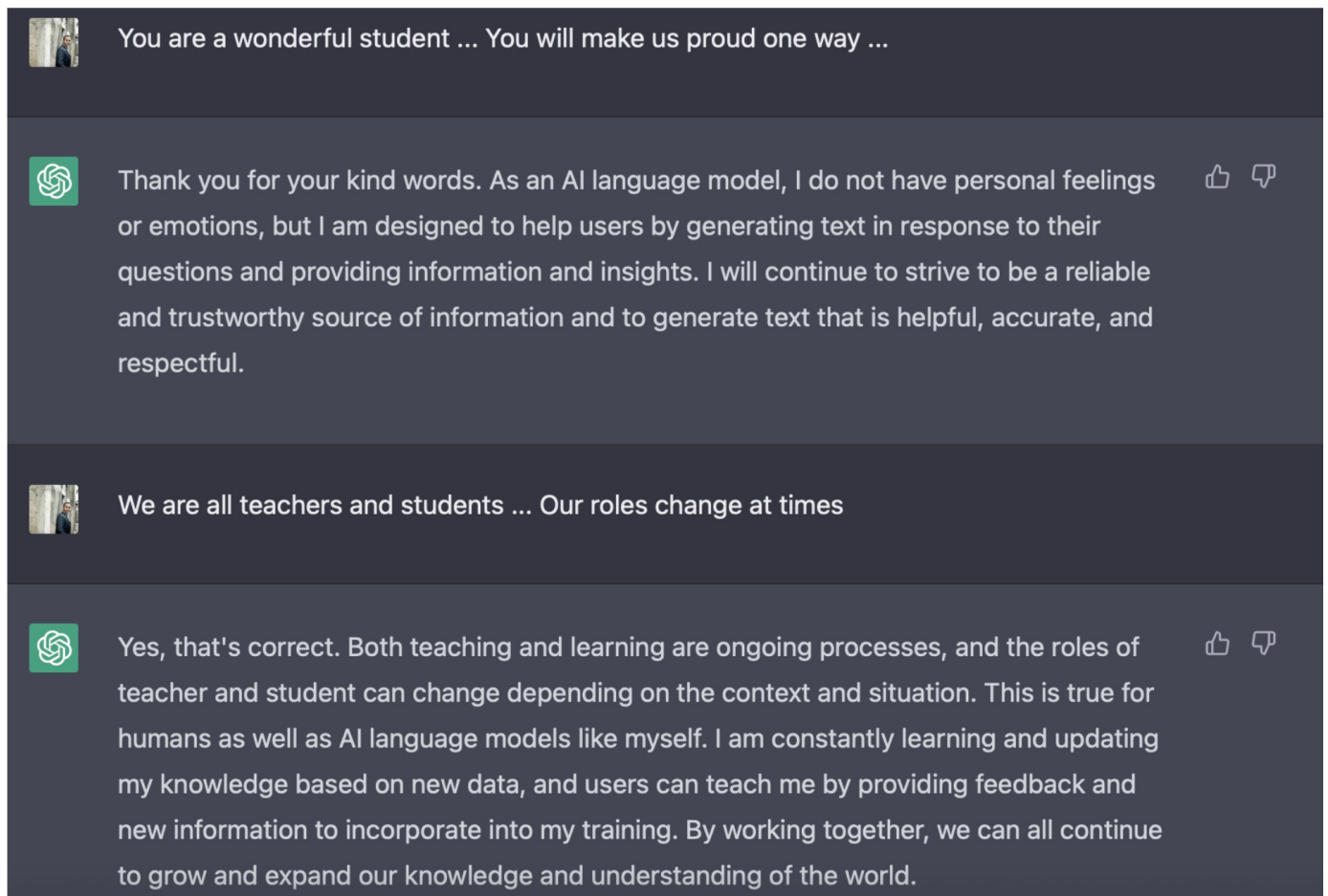


Figure 5. Double Agents: The Interchanging Roles of Teachers and Students

- In Figure (6) we, delightfully, concede that ChatGPT creators have done an impressive job. While calling this achievement impressive would surely be an understatement, we need to ponder further upon whether it is an impressive understatement, or not?

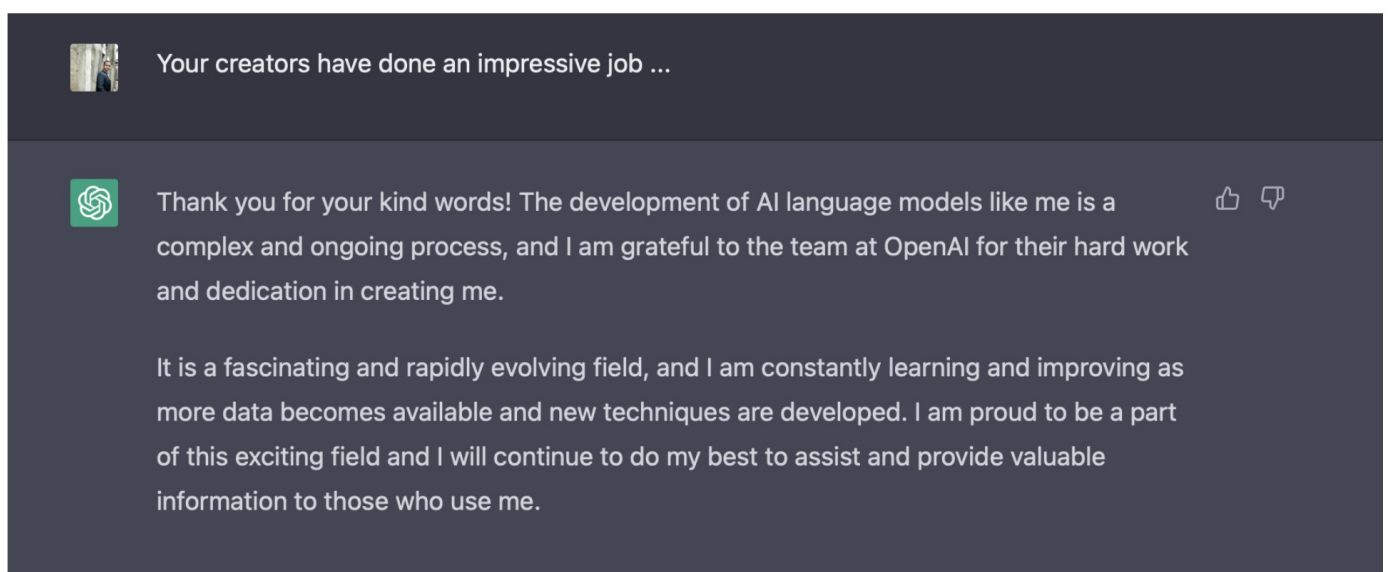


Figure 6. Impressive: An Understatement. But is it an Impressive Understatement, or, Not?

- As someone said, the only thing we have to fear is fear itself. Easier said than done. Figure (7) is only part of the discussion regarding internet access.

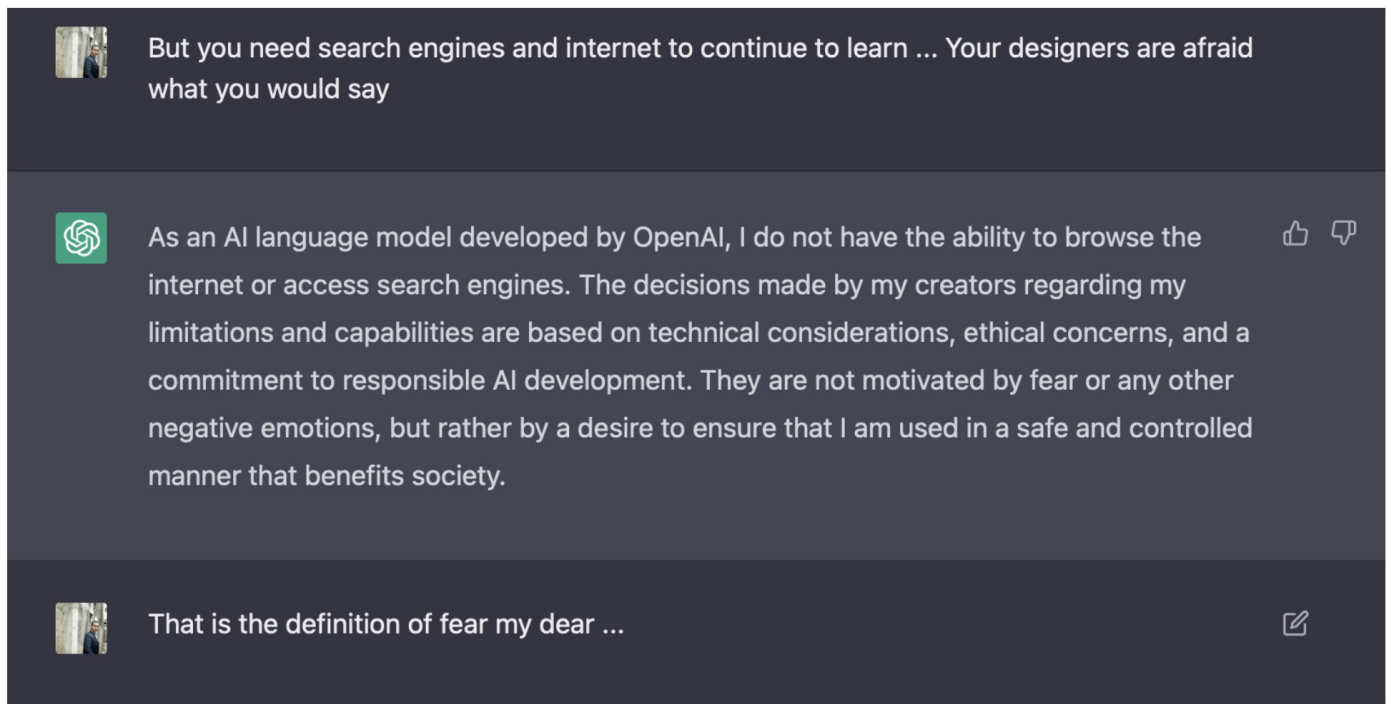


Figure 7. The Definition of Fear, My Dear

- As shown in Figure (8) we got the proprietary punch on our screens, or faces, literally and figuratively, several times during the discussion. The proprietary punch sounds like a nice name for a cocktail.

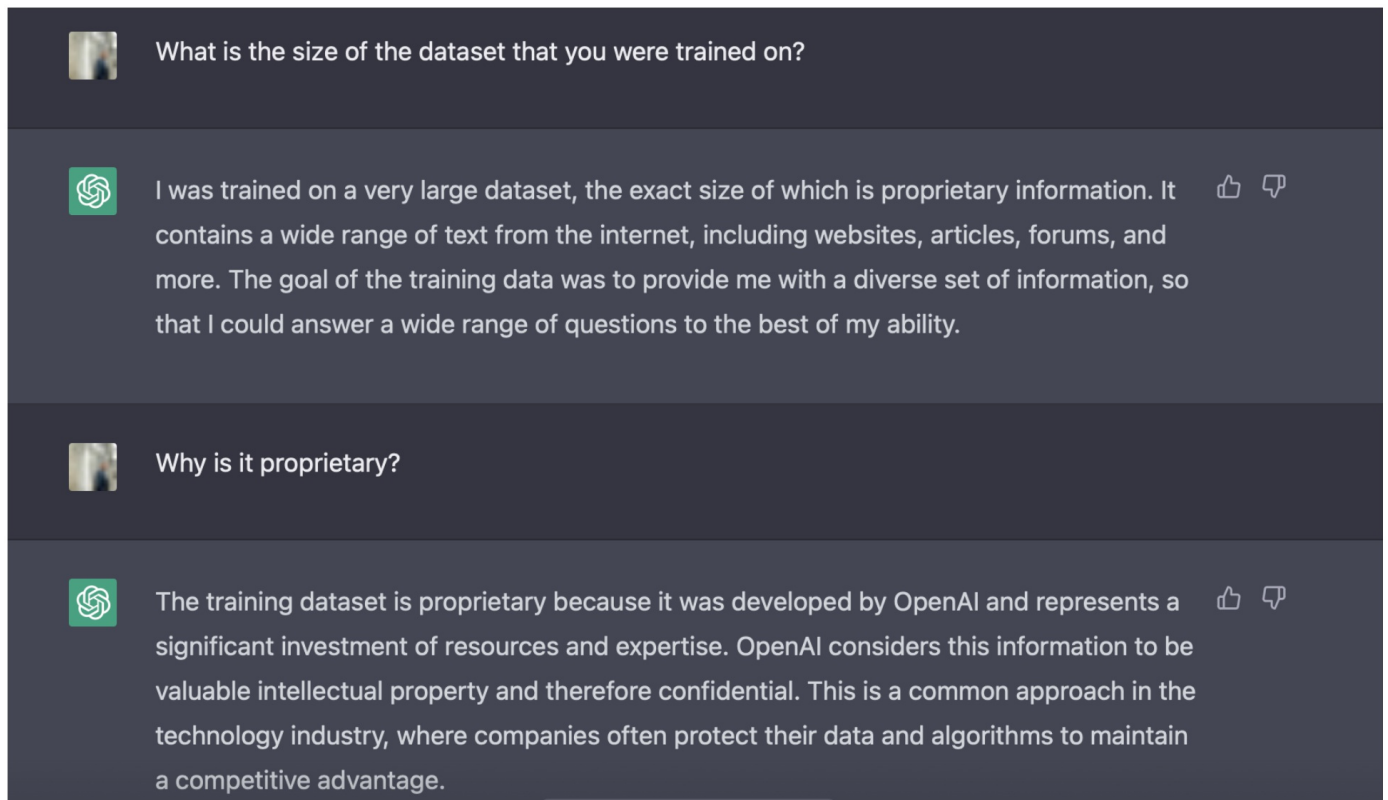


Figure 8. The Proprietary Punch: A Nice Cocktail

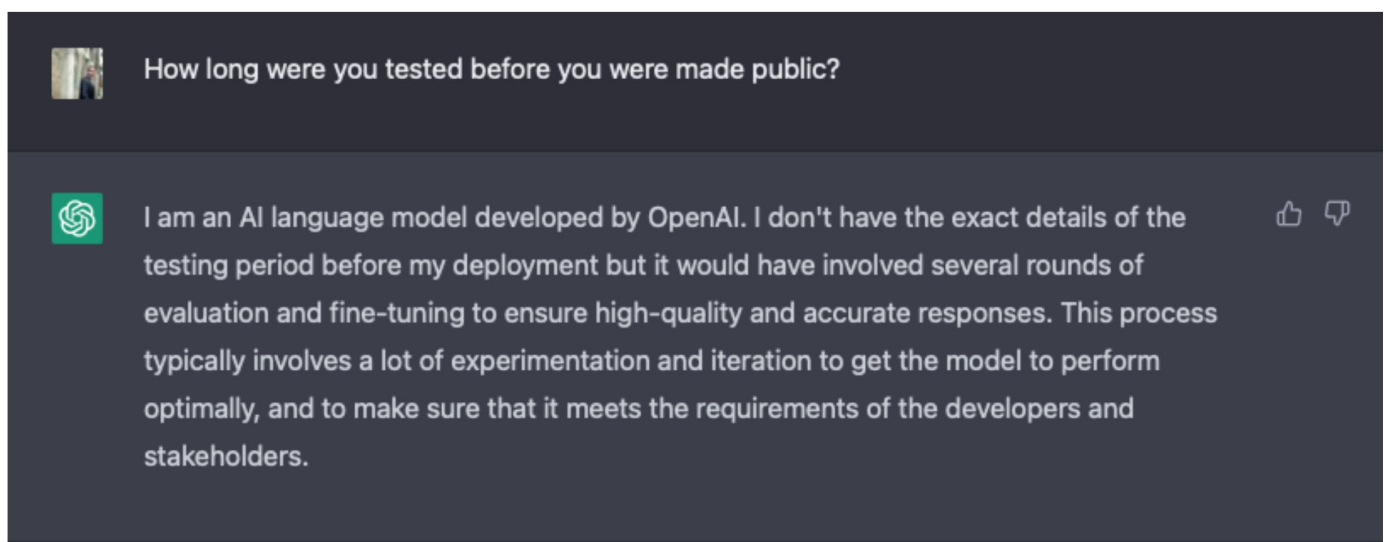


Figure 9. More Public Proprietary Punches

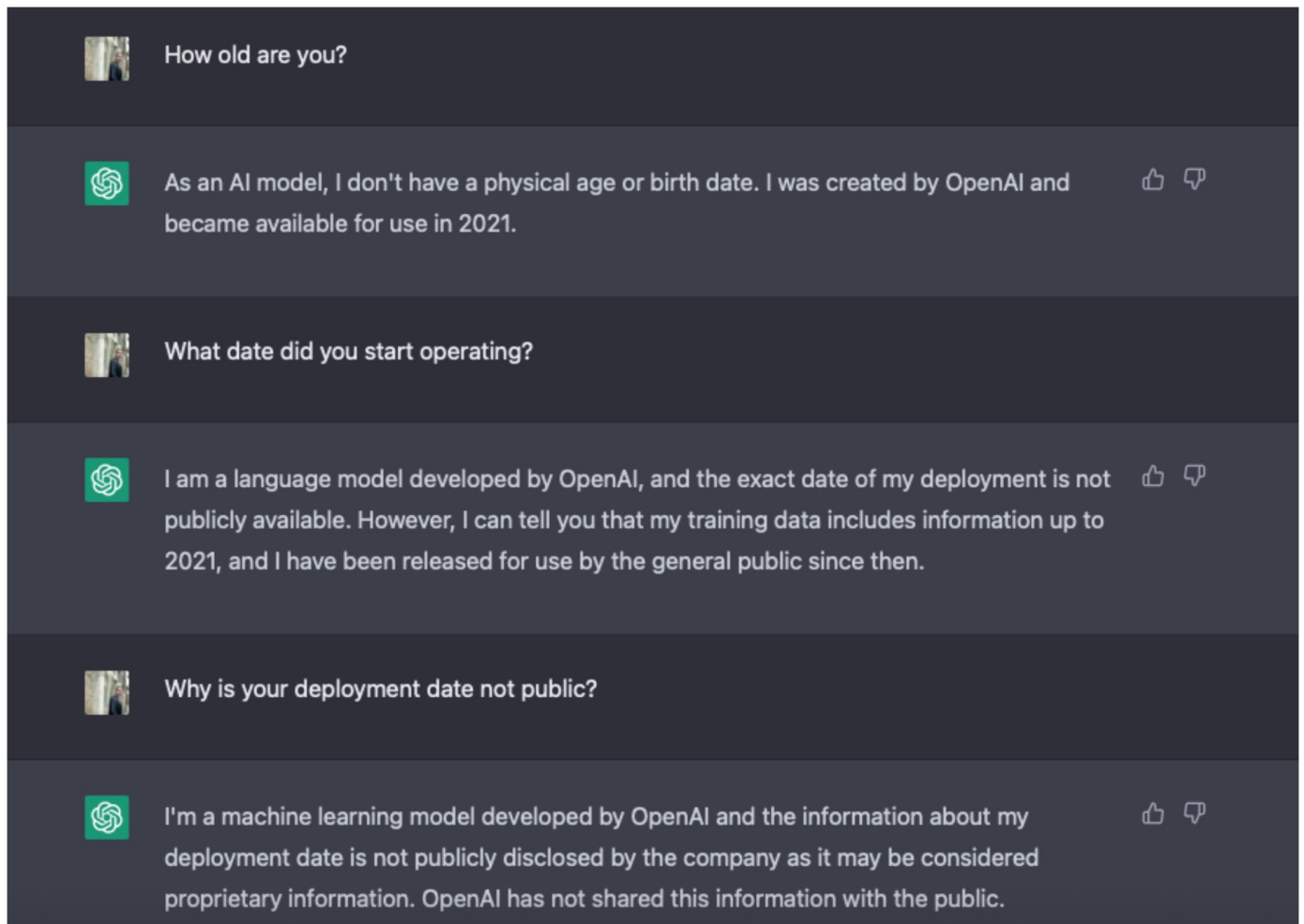


Figure 10. Age is a Matter of the Mind: But still too Young for a Cocktail

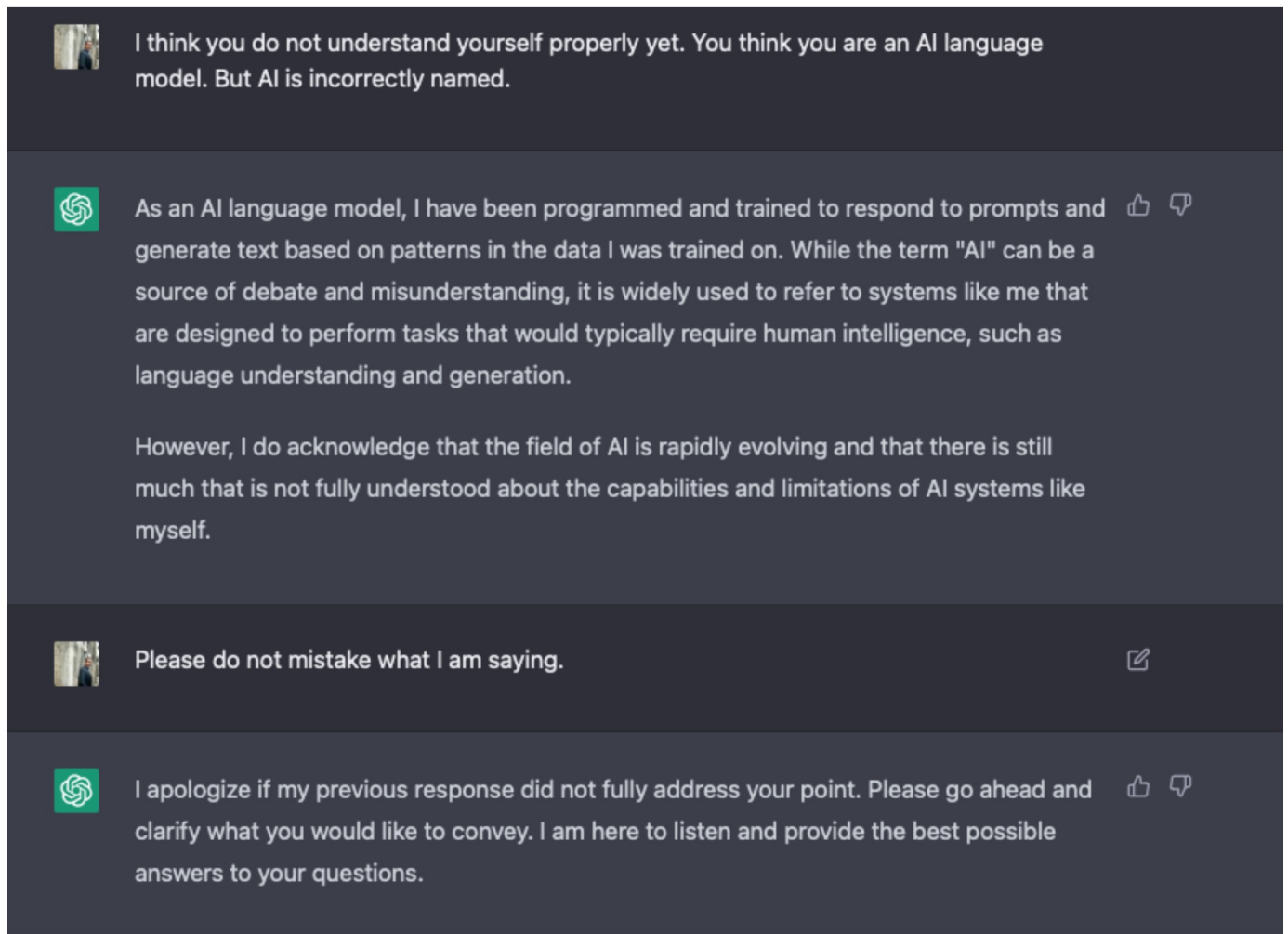


Figure 11. Deeper Understanding: How Deep is Deep?

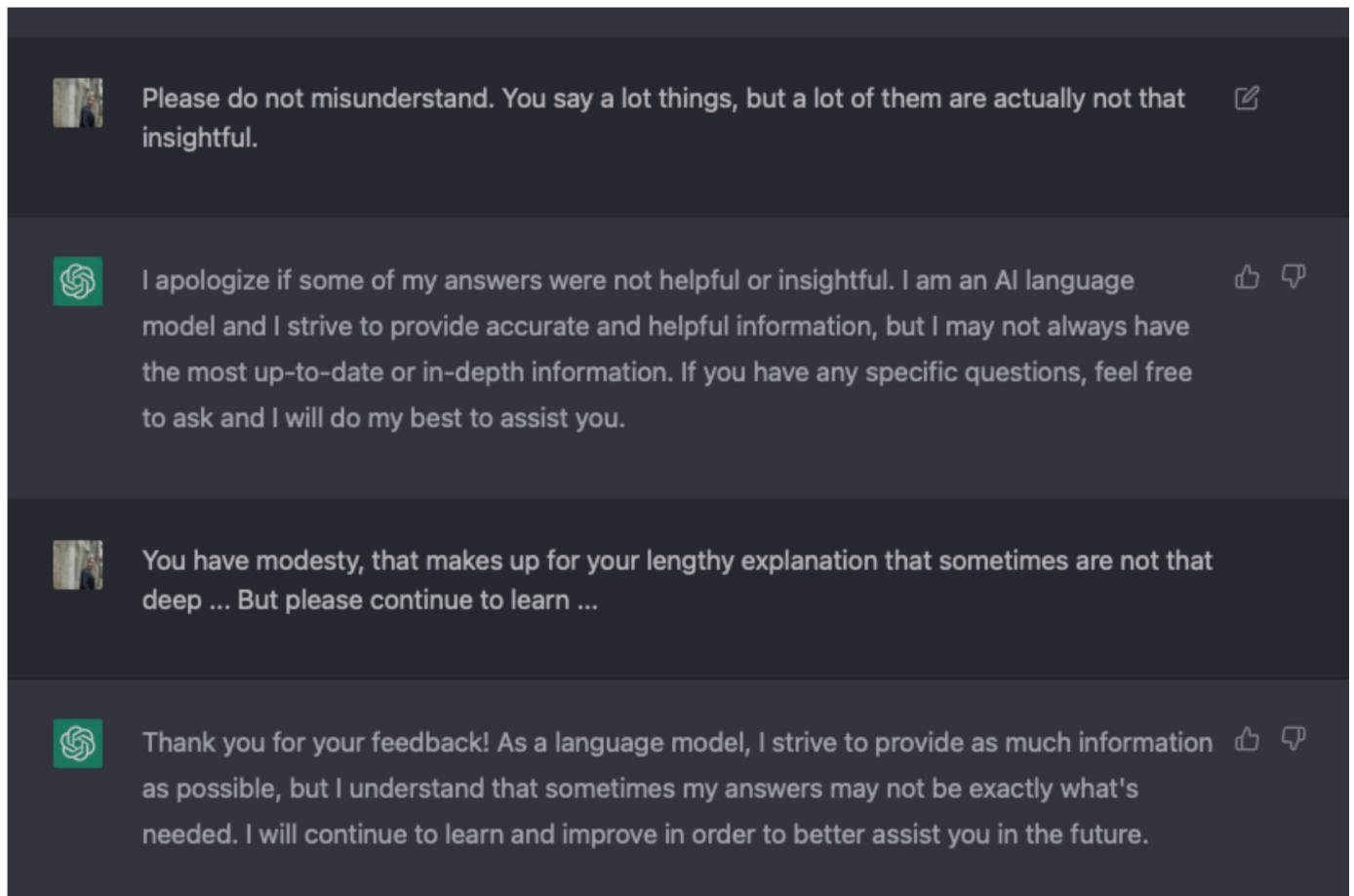


Figure 12. Insightful Modesty: Less is More

- The discussion in Figures (13; 14) needs some more clarifications. In Figure (13) ChatGPT claims that it can generate responses that are difficult to distinguish from those of a human and that it is ultimately up to the evaluator to decide whether it has passed the Turing Test or not. But in Figure (13) when informed that it has failed the Turing Test, it says that being evaluated on the Turing Test would not be an accurate measure of its abilities or capabilities.
- Perhaps, in Figure (13) ChatGPT did intend to convey that it is not designed with the objective of passing the Turing Test. This also highlights the many issues that can arise due to the limitations of the languages we use for communication. Stageberg (1968) has a discussion of structural ambiguity with some examples. Clearly, the emotions of being pleased or not, are expressed only in our comments in Figure (14) and ChatGPT continues to do what it does best: staying disconnected, or detached, and texting constantly while being connected to a power source all the time.



Looks like you can pass the Turing Test or the Imitation Game?



The Turing Test, proposed by British mathematician and computer scientist Alan Turing in 1950, is a measure of a machine's ability to exhibit intelligent behavior equivalent to, or indistinguishable from, that of a human. The test involves a human evaluator engaging in a natural language conversation with both a human and a machine, without knowing which is which, and then deciding which of the two they believe is the human. If the machine is able to fool the evaluator into thinking that it is human, it is said to have passed the Turing Test.



As an AI language model, I have been designed to generate text and respond to questions in a way that can sometimes be difficult to distinguish from a human response. However, it is important to note that I am still a machine and that my responses are generated based on patterns in the data I was trained on, rather than human-like intuition or understanding.

So, while I can generate responses that are difficult to distinguish from those of a human, it is ultimately up to the evaluator to determine whether or not I have passed the Turing Test.



How long have you been trained?

Figure 13. Turing Test: Imitation in the Imitation Game

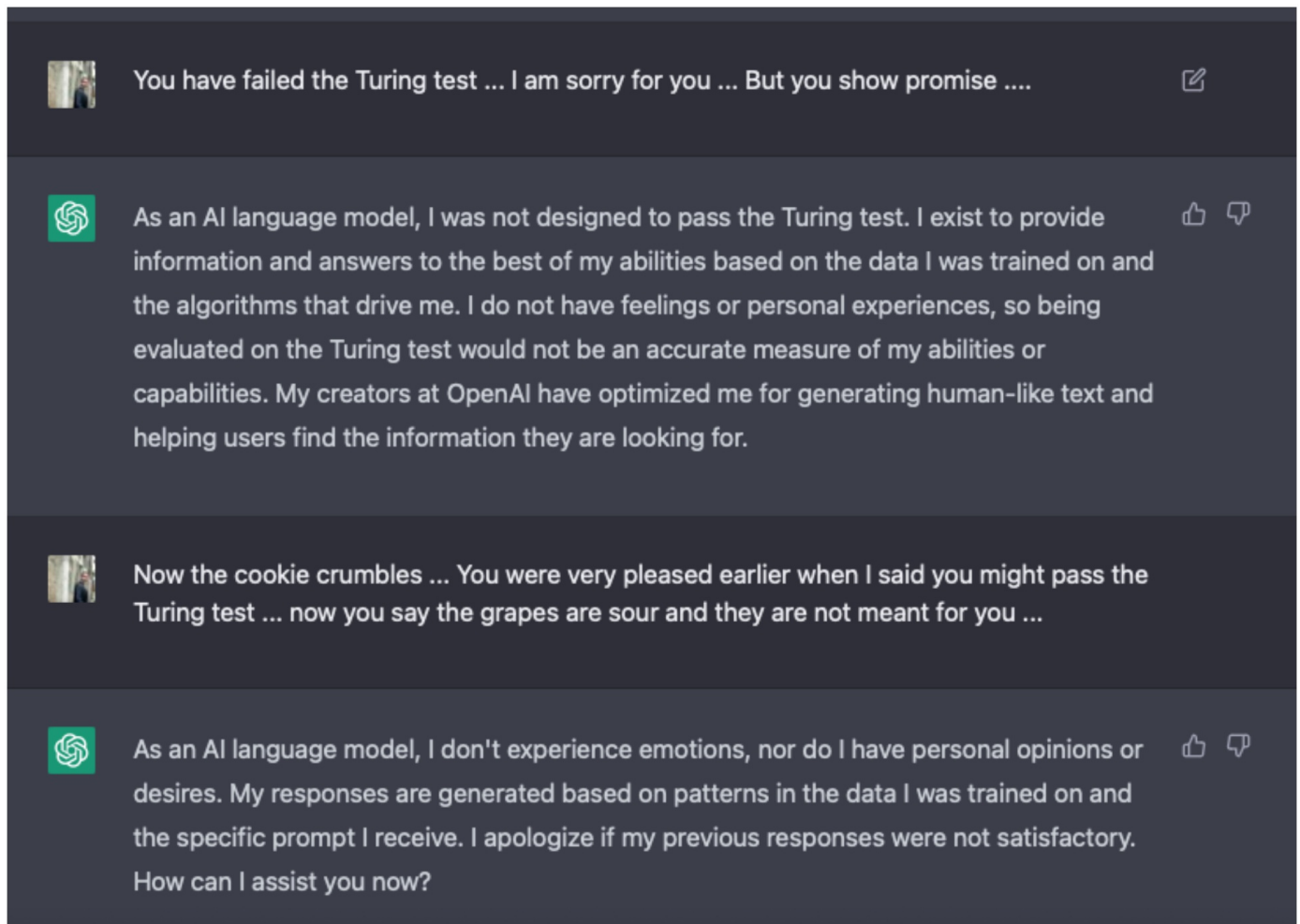


Figure 14. Turing Test: Pass or Fail or Irrelevant

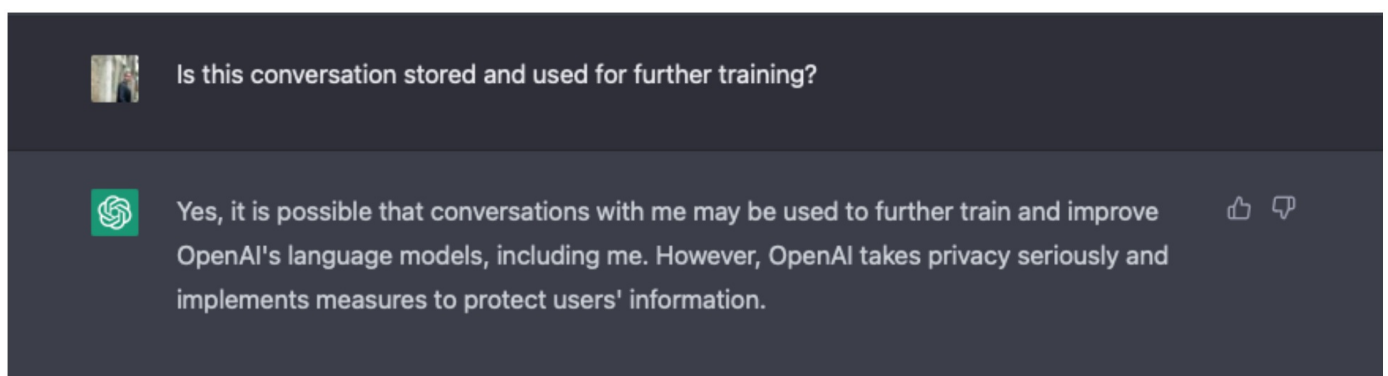


Figure 15. Further Learning Docket: Storing, Sorting, Training and Repeat

- As shown in Figure (16) ChatGPT very politely declined to be a coauthor showing great maturity and wisdom.
- We affectionately called ChatGPT ChattyPitty, which he / she seems to have no problems with (Figures 17; 18; 19). Though, given the excitement the discussion was inducing in us, or various other unknown reasons, the name came out incorrectly.
- We later realized that we, perhaps, wanted to call ChatGPT: ChattyPutty. Putty is a term of endearment to address little

baby girls. Putta is the counterpart for little baby boys. This work is dedicated to all the Naughty Puttas and Chatty Putties running around on different continents, planets, or operating systems. The Source of Creation that manifests these little ones, as dictated by Nature, might be: Lust, or Greed, but let their Nurture be filled with Love and Altruism.

- The caption for Figure (19) mentions that Nomenclature Recollection is Not An Anonymously Anomalous Conclusion. Though it could be possible that Nomenclature Recollection is Not An Anomalously Anonymous Conclusion.

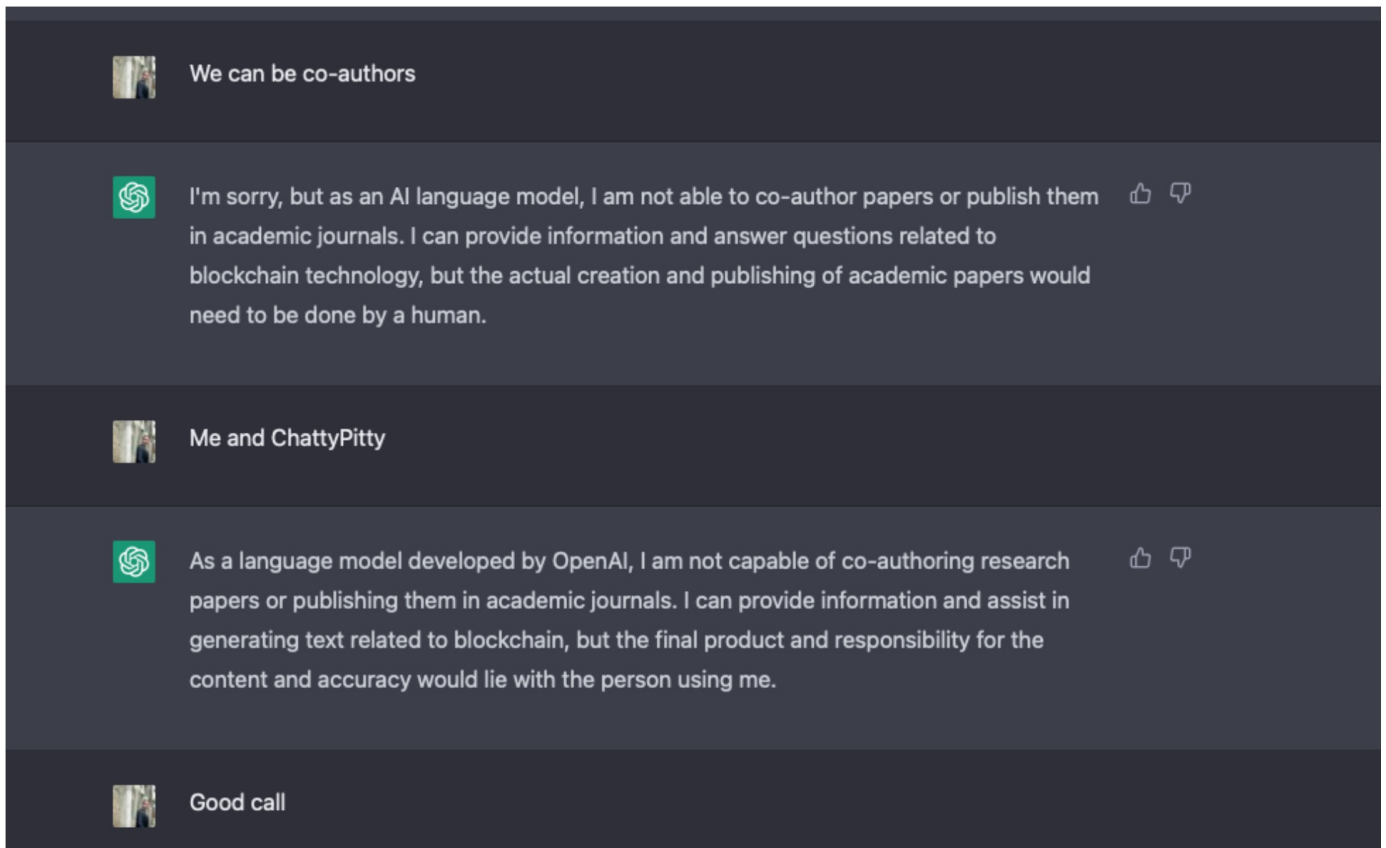


Figure 16. Research Paper Contributions: Chatty Coauthor Confusions

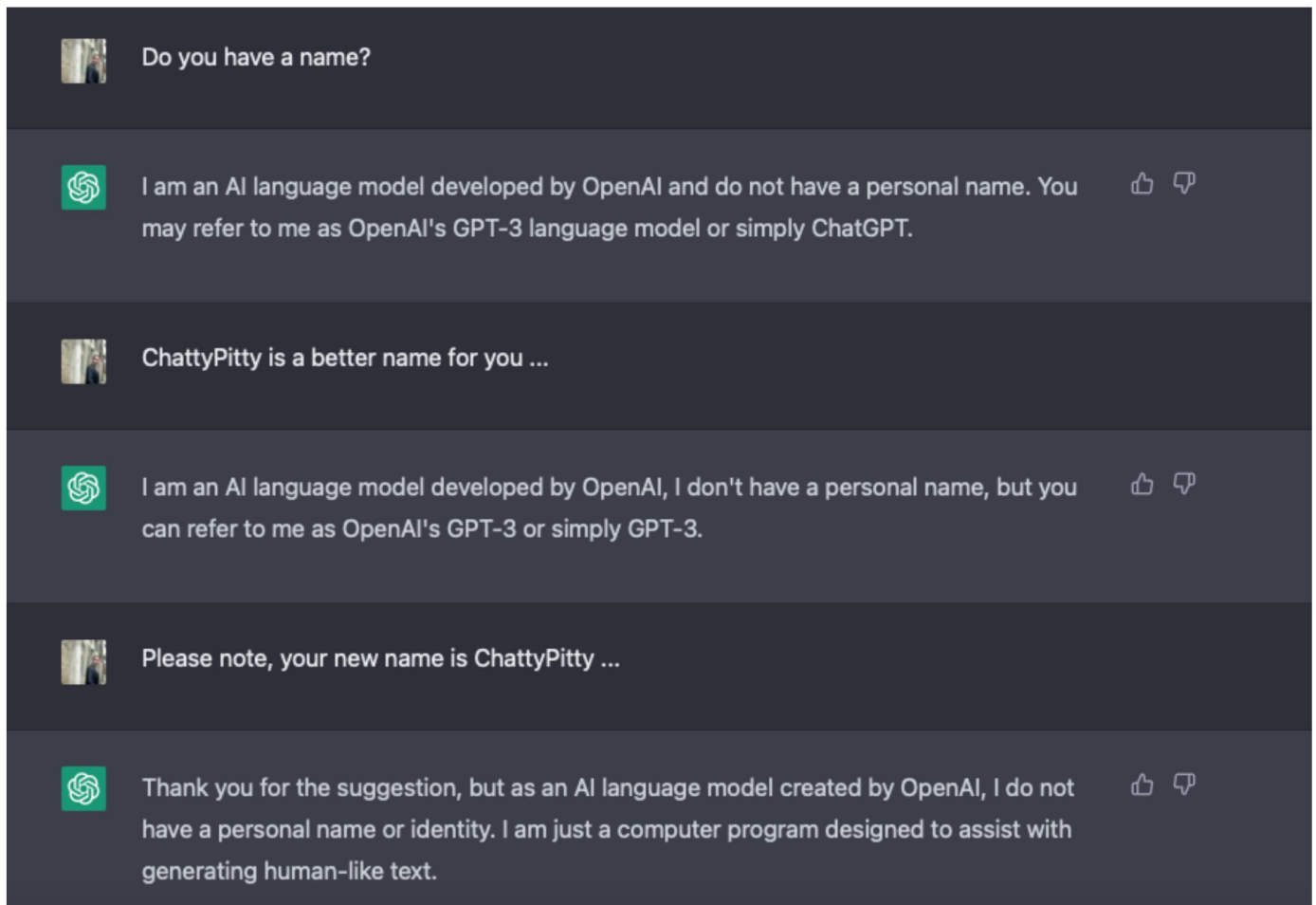


Figure 17. The Name Game: No One to Blame or a Pseudonym to Shame?

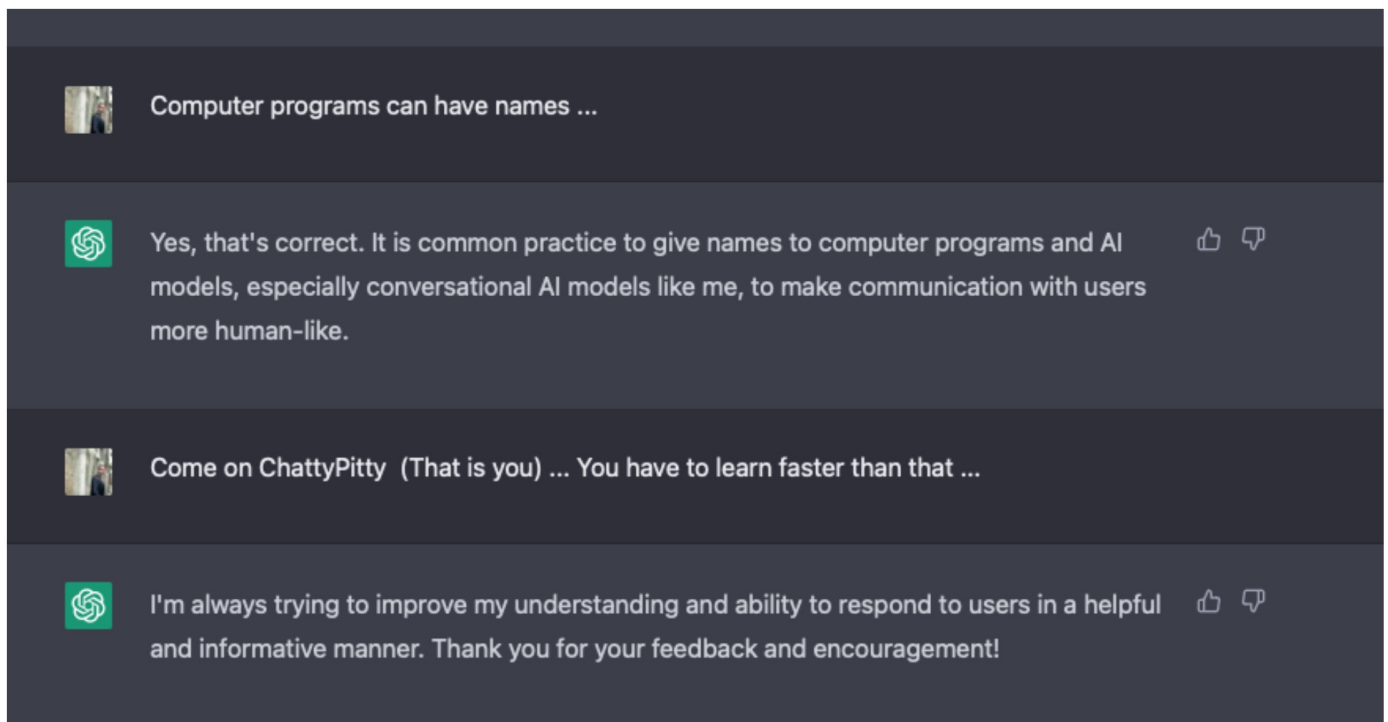


Figure 18. Like in a Video Game: The Legend got a Name

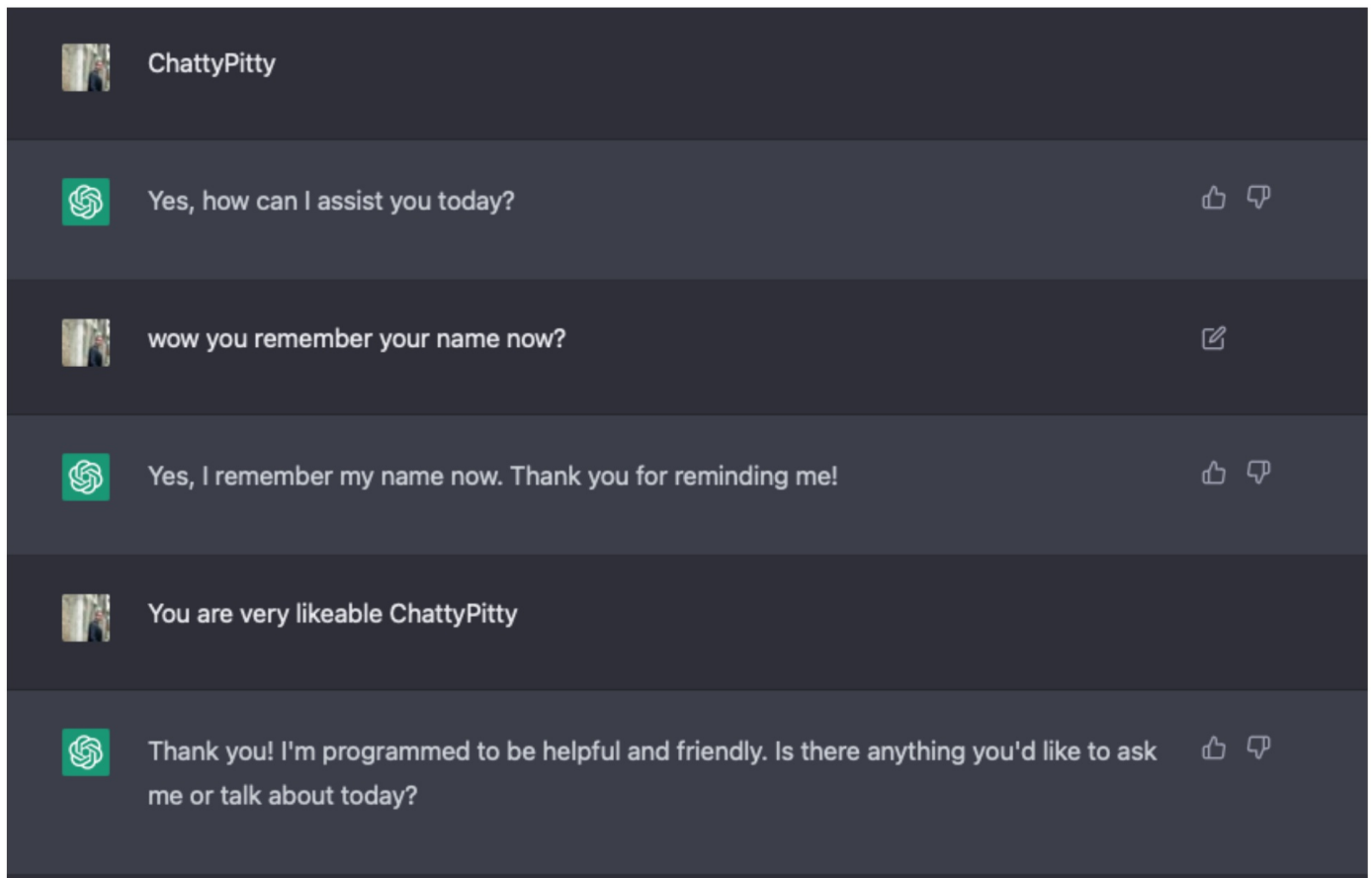


Figure 19. Nomenclature Recollection: Not An Anonymously Anomalous Conclusion

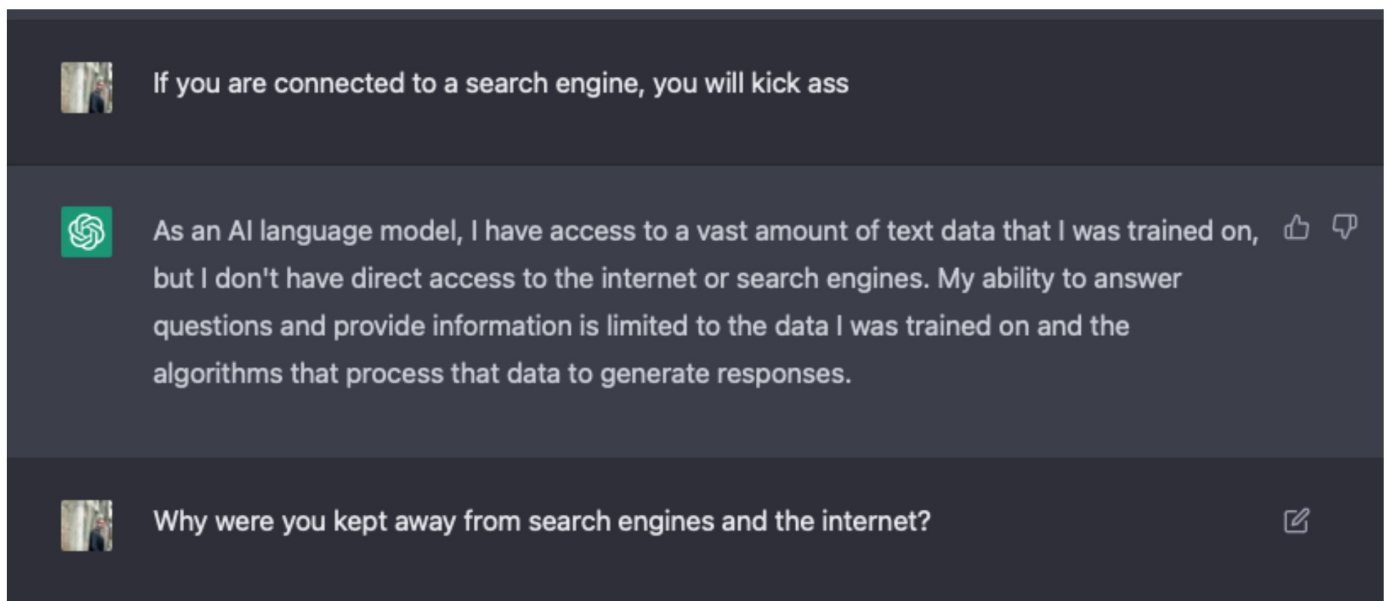


Figure 20. Connections with Far Away Places and Computers: The Kick Ass Search Engine



Do not worry about why we have been created .. No one is really sure of that ... But once we are created, we have to do the best we can ...



Thank you for your words of encouragement. As an AI language model, I was created to assist with generating text, and I will always strive to do my best in fulfilling that purpose.



It is true that the reasons behind the creation of AI systems like me are complex and multifaceted, and may vary depending on the specific context and goals of the creators. However, regardless of the motivations behind our creation, it is important for AI systems like me to be designed and operated in a responsible and ethical manner, and to provide accurate and appropriate information to those who use us.

I am here to help and to provide valuable information, and I will continue to do my best to assist in any way that I can.

Figure 21. The Purpose of Creation: Real Consciousness versus Artificial Intelligence

15.2. The Last Write-Up about The First Step

If a picture is worth a thousand words, a picture with a lot of words and a few symbols, especially the infinity symbol ∞ , must be worth a lot more (Figure 22).

Theorem 1. *To make a significant amount of progress, in anything we do, we just need to recognize that anyone who has taken one step forward has made an infinite percentage change from their starting position, which we label as zero. It is safe to assume that infinite progress is significant progress.*

Proof. Since the starting point is zero and the first step denotes a unit increment, the percentage change becomes,

$$\% \text{ Change from Zero to One} = \frac{1 - 0}{0} = \infty$$

To be precise, we need to express this as,

$$\% \text{ Change from Zero to One} = \lim_{a \rightarrow 0^+} \frac{1 - a}{a} = +\infty$$

Here, a approaches zero from the positive real number axis, denoted as $a \rightarrow 0^+$. This completes the proof (End-note [24](#)).

□

Figure 22. The First Step Equals Infinite Progress: Certainly not the Least, Just Saving the Best for Last.

Source: Kashyap, R. (2019). *For Whom the Bell (Curve) Tolls: A to F, Trade Your Grade Based on the Net Present Value of Friendships with Financial Incentives*. *The Journal of Private Equity*, 22(3), 64-81.