Topic:

Artificial Intelligence, Intelligent Software Agents, Siri

Investigation Question:

How does the development of Artificial Intelligence and/or Intelligent Software Agents’ disadvantage or benefit society in today’s world?

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Introduction

Siri, how is the weather and will it snow today? Response: It’s 56 Degrees and it looks like snow today. Siri, Where is the closest gas station? Response: I have found two gas stations fairly close to you. As simple as it is to ask her a question, the iPhone 4S intelligent software assistant responds without its owner lifting a finger to look it up themselves. For many years, the idea to give a computer demands verbally has been something only one could imagine. Many computer companies have tried but none have really come as close to something as remarkable, convenient, and user friendly as Apple’s “personal assistant”. According to deAgonia M. (2011) Apple’s Mac OS has had voice commands built in since the mid-1990s. Alternatively, Siri is not just voice-command software but an intelligent software agent that could be considered in the category of Artificial Intelligence or ‘AI’. She has the ability to be aware of her surroundings in order to respond correctly to the questions being asked of her. Even though she is the most developed, she definitely is not the first of her kind. The formation of ideas about Artificial intelligence or even some call ‘Intelligent Agents’ emerged with the intelligent interface community that appeared out of artificial intelligence research in the 1980s according to Nardi A. B., Miller R. J., & Wright J. D. (1995). Initially the idea of AIs began through colorful imagination from movies and television (for Apple researchers anyway). Examples such as “Robbie the Robot from “Forbidden Planet,” HAL from “2001: A Space Odyssey,” the Star Trek computers (including Data)” as decarled by Nardi et al. (1995) is considered the fuel that struck the interest of agents in Apple Developers (p. 96). With the start of ideas about AI’s forming and eventually the end result being the development of magnificent software such as Siri, one can assume that advancements in technology such as these will efficiently benefit today’s society in a number of ways. But not only will these advancements benefit society it will also affect it as
well. The purpose of this paper is to investigate the possible benefits and disadvantages of the technological developments in AI’s (Artificial Intelligence), IPA’s (Intelligent Personal Agents), and/or Software Agents on today’s society.

**Background:**
Robin (2009) has traced the history of Artificial Intelligence from the 1950s through dates and recorded factual evidence:

Artificial Intelligence was formally born in a workshop conducted by IBM at Dartmouth College in 1956. McCarthy coined the term Artificial Intelligence…. Newell, Shaw and Simon developed a reasoning program called Logic Theorist. It was meant for automatic theorem proving which led the development of Information Processing Language, the first list-processing language. Chomsky’s theory of generative grammar influenced Natural Language Processing… John McCarthy developed LISP, an AI programming language.

Although this quote gives textual evidence of how AI was first developed, there is no use of understanding or making sense of it if the audience doesn’t even fully understand what Artificial Intelligence is. ‘What exactly is AI?’ could be the initial question pulsing in the reader’s brain. According to Robin from his/her alternative article, Artificial Intelligence (AI) “is the study and creation of computer systems that can perceive, reason, and act” (2010). The objective of the development of AI is to produce a machine that can think on its own otherwise considered an ‘Intelligent Machine’. “It deals with creation of real intelligence artificially” (2010). One can say this has already been somewhat accomplished in today’s era with the development of Siri.

AIs are divided into two sub categories in which they are believed to be called ‘strong AI’. The first sub-category is Human-like AI, in which the computer program thinks and reasons to the level of human-being (Robin, 2010). This simply means that it takes the idea of or reasoning values of a human and uses them to come to a rational yet completely self-aware
decision. The second sub-category is Non-human-like AI, in which the computer program develops a non-human way of thinking and reasoning (Robin, 2010). This means the machine comes to decisions based off its normal robotic thought processes, taking what has been encoded into the computer (what its programmed to think) to give an answer or make a decision. These two categories help the AI unit within the machine to perform tasks as requested by their user.

Today AIs are used for many different everyday tasks which can be very beneficial to its user. Thing such as give the weather, or search for something you need. It is also beneficial in marketing and shopping which will be detailed in the next section.

**Benefits:**

As mentioned before the AI or Intelligent software agent can be used to perform everyday tasks. In a magazine article, Naone E. reported that “Search is the gateway to the Internet for most people; for many of us, it has become second nature to distill a task into a set of keywords that will lead to the required tools and information” (2009). According to this same article search can now be performed verbally through an Intelligent software Assistant developed by Adam Cheyer along with several other developers (not inclusively mentioned). Although the software will definitely be sub-categorized as a Non-human AI, this makes tasks a lot easier for humans. It can help from creating weekend plans to reserving a seat at a fancy restaurant. Hand free tasks provided by the user for the AI to perform while the user can do other tasks.

Not only has this become beneficial for users everywhere, AIs have become very beneficial in the Marketing or e-business area(s) over the past several years. In a magazine article Papazoglou M. (2001) pointed out that “Intelligent business agents are the next higher level of abstraction in model-based solutions to business-to-business e-commerce applications.” (p. 71) In general terms this means that these agents will be/are being used to help with multiple tasks
such as “real-time pricing and auctioning, involving different parties in a supply-chain network”(p.71) in the e-business world. Papazoglou M. also goes on to mention that “Intelligent software agents can carry out work on behalf of human knowledge workers both on the supplier’s and customer’s behalf.” (p. 72)

These benefits help difference the way of living for society as newer and even more advanced technology begins to surface. Although this particular advancement progresses/has progressed the society over the years, like many software there are disadvantages to such intelligence for a machine which will be discussed further in the next section.

Disadvantages:
As all beneficial advancements in technology, AI’s have disadvantages that have either already appeared or appear as more users interact with it. Siri for example, as mentioned by deAgonia Siri has flaws and kinks that should be worked out. She goes on to point out that “there's obviously still work to be done; voice interaction and the technology behind it are very much a work in progress… More annoyingly, Siri requires an active network connection to work” (2010). These appointed flaws can be very big disadvantages for a user on the go (with the assumption that they will not always have an active network or there will be background noise).

Bigger disadvantages that one can assess on their own is how much lazier the public will become. People will no longer want to do their own searches and such for tasks they need fulfilled. Eventually AI’s such as Siri will either replace users in the work field (if they already haven not) or become completely self-aware, no longer perform tasked asked of them, and try to destroy all humanity.

Conclusion:
These new advancements in technology both benefit and disadvantage today’s society in a number of ways. AIs benefit the market, and help user with everyday tasks by performing them...
quickly and more efficiently. Alternatively, not only do they benefit but they have disadvantages that the users should be aware of. Disadvantages such as making the public even lazier than they already are or the fear of AIs becoming completely self-aware. Hopefully in the near future the public will continue to recognize the great uses of Siri but be aware of what its true capabilities are and not to overlook them as “harmless”
References:


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