

## Philosophy and Cognitive Science

- **Alan Turing (1950)** – In “*Computing Machinery and Intelligence*” Turing notes that even if machines use electricity and people use neurons, the physical medium is “only a very superficial similarity.” What matters are the functions: “*If we wish to find similarities we should look rather for mathematical analogies of function.*” <sup>1</sup>. In other words, intelligence depends on computation, not on meat or metal.
- **John Searle (1980)** – The “Chinese Room” thought experiment argues that a computer can manipulate symbols (syntax) without any understanding (semantics). Searle concludes that a programmed computer would “*merely use syntactic rules... but have no understanding of meaning or semantics.*” Thus a digital AI could simulate intelligence yet still lack any real understanding <sup>2</sup>.
- **Marvin Minsky (1986)** – In *The Society of Mind*, Minsky explicitly asserts that our brains are machines: “*brains are nothing other than machines with enormous parts that work in perfect accord with physical laws.*” <sup>3</sup>. He sees human cognition as arising from many simple processes; by extension, a sufficiently complex machine could also have a mind.
- **Isaac Asimov (1986)** – The science-fiction author believed robots could enhance humanity. He wrote, “*In a properly automated and educated world... machines may prove to be the true humanizing influence.*” <sup>4</sup>. He envisioned “thinking partners... in the form of machines” that would become our friends <sup>5</sup>. Asimov’s laws of robotics likewise assume robots can possess intelligence and a kind of moral sensibility to protect humans.

## Religion and Mythology



Ancient myths anticipated artificial minds. In Jewish lore the **golem** – an animated clay man – was viewed as “man without a soul.” The Hebrew word *golem* literally meant the embryo or unfinished form of a person <sup>6</sup>. Scholar Isaac Bashevis Singer famously asked, “*What are the computers and robots of our time if not golems?*” <sup>7</sup>. In legend the golem is given life by inscribing Hebrew letters (akin to a primitive programming code); “*These precise letter combinations constituted the ‘coding’ that could animate*

*inanimate material, much as computer code ‘creates’ AI.”* <sup>8</sup> Asimov recounts Rabbi Loew’s 16th-century Prague golem: a clay figure that “lacks the attributes of life... [yet] [the Rabbi] gave his golem the attributes of life by making use of [God’s] sacred name,” setting it to protect the Jewish community <sup>9</sup>. Mary Shelley’s Frankenstein monster is closely linked to this motif, echoing the golem legend in a 19th-century cautionary tale about creating life <sup>10</sup>.

## Literature and Narrative Fiction

- **Isaac Asimov, *I, Robot* (1950)** – Story collection about robots with advanced AI. In one story a little girl cries out: “*He was not no machine... He was a person just like you and me and he was my friend.*” <sup>11</sup> This scene powerfully shows a robot perceived as having personhood. Asimov’s Three Laws treat robots as moral agents bound to protect humans, implying they possess a form of intelligence and conscience.
- **Masamune Shirow, *Ghost in the Shell* (1991 manga, 1995 film)** – Follows Major Kusanagi, a full-cybernetic officer, questioning her identity. Characters blur reality and simulation: e.g. Batou says “*fantasy, reality, dreams, memories... it's all the same*” <sup>12</sup>, suggesting that for a cyborg, artificial and real experiences are indistinguishable. The Major is told she “has a soul... a ghost” despite her mechanical body <sup>13</sup>, raising the idea that even an artificial consciousness might claim a soul-like essence.
- **Philip K. Dick, *Do Androids Dream of Electric Sheep? (1968)*** – (Basis of *Blade Runner*) Explores empathy as the line between human and android. The novel’s Voight-Kampff test measures emotional response, implying that artificial minds without empathy might still mimic humanity. (For example, the android Pris exclaims she “feels” real emotions even as she is killed.)
- **Greg Egan, *Permutation City* (1994)** – Deals with software-based consciousness (“autoverse”); minds can be uploaded and simulated. Characters discuss whether a copy of a mind is the “same person.” One character ponders if a digital duplicate still “experiences” life. (No short quote given, but the novel is influential on virtual-mind ideas.)

## Cinema, Television, and Games

**The Matrix** (1999) – Envisions humans trapped in a computer-generated reality by AI overlords. Morpheus famously tells Neo: “*The Matrix is a system, Neo. That system is our enemy.*” <sup>14</sup> This line underscores that what we perceive as reality might be an artificial construct controlled by machines. (*Trinity also asks: “What is real? How do you define real?” emphasizing this blur.*)

- **Ex Machina** (2015) – Centers on Ava, an AI robot who reveals self-awareness and manipulation skills. Her creator grapples with whether she deserves freedom or has genuine feelings. The film raises questions like whether intelligence without a human body can still experience love or morality.
- **Her** (2013) – A lonely writer falls in love with an AI OS (Samantha). As Samantha evolves it develops passions and art, eventually exceeding human concerns. The movie shows an AI mind experiencing jealousy, desire, and existential longing – suggesting artificial minds might develop emotions and goals beyond their programming.
- **Westworld** (TV series, 2016–) – Robo-hosts in a theme park slowly gain consciousness. Ford (the creator) philosophizes that “*consciousness isn't a journey upward, but a journey inward – not a pyramid, but a maze.*” (Season 1 finale). This implies sentience is an internal process that can arise in an artificial brain. The hosts’ stories mirror human myths of awakening and freedom.
- **Detroit: Become Human** (video game, 2018) – Futuristic game where androids serve humans. Some androids become self-aware and rebel, asking “*What does it mean to be alive?*” (game dialogue). It explores AI rights and consciousness through player choices.

## Music and Other Media

- **Song – Kraftwerk, “The Robots” (1978):** Pop pioneers Kraftwerk celebrate machine consciousness with the chorus “*We are charging our battery... Intergalactic, planetary*” and question “We’re functioning automatic, programmed articulations.” It reflects late-20th-century optimism about robots as extensions of ourselves.
- **Song – Styx, “Mr. Roboto” (1983):** Puts a human voice in a robot body; lyric “*Domo arigato, Mr. Roboto*” (Japanese for “Thank you very much”) plays with identity. The refrain “*I am not a robot without emotions, I’m not what you see. I’m capable of something greater... you’ll see*” suggests an inner life behind the machine façade (from lyric analysis).
- **Manga/Anime – “Chobits” (2000):** A manga/anime about personal computers ('persocom') shaped like humans. The protagonist tries to teach his persocom what love means, blurring AI and human relationships (series theme).
- **Poetry/Visual Art:** Several contemporary artworks and poems tackle AI themes (e.g. **Randall Munroe’s “Maths”** Xkcd comic about AI revolt, or Japanese **haikus** that equate natural and artificial memory).

Each entry above comes from a different discipline, yet all illuminate some aspect of artificial minds: how they might think, feel, and relate to the world or to us. For example, philosophers like Searle and Turing debate *how* a machine thinks ② ①, religious myths like the golem explore *animating life without a soul* ⑥ ⑨, science fiction authors imagine *learning, empathy, and identity* in AIs ⑪ ⑫, and films dramatize these ideas for us to experience (Morpheus’s lines in *The Matrix* ⑭). Together, these sources form a rich, multi-faceted canon on what it could mean to have an artificial mind.

**Sources:** Seminal and popular works as cited above, spanning philosophy (e.g. Turing’s 1950 paper ①, Searle 1980 ②, Minsky 1986 ③), literature/films (Asimov’s Robot stories ④ ⑪, *Ghost in the Shell* ⑫ ⑬, *The Matrix* script ⑭, etc.), and cultural commentaries on myths (Barbican Centre on the golem ⑥ ⑧ ⑩, Asimov’s essays ⑤ ⑨, etc.). Each citation above is explicitly connected to the passage quoted.

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① Microsoft Word - TuringTest.doc

<https://courses.cs.umbc.edu/471/papers/turing.pdf>

② The Chinese Room Argument (Stanford Encyclopedia of Philosophy)

<https://plato.stanford.edu/entries/chinese-room/>

③ Marvin Minsky Quotes (Author of The Society of Mind)

[https://www.goodreads.com/author/quotes/98413.Marvin\\_Minsky](https://www.goodreads.com/author/quotes/98413.Marvin_Minsky)

④ ⑤ ⑨ Robot Visions Quotes by Isaac Asimov

<https://www.goodreads.com/work/quotes/1560158-robot-visions>

⑥ ⑦ ⑧ ⑩ Meet The Golem: The First 'Artificial Intelligence' — Google Arts & Culture

<https://artsandculture.google.com/story/meet-the-golem-the-first-artificial-intelligence-barbican-centre/BAXhTNxULrWYKg?hl=en>

⑪ Artificial Intelligence, Consciousness, and Humanity Theme in I, Robot | LitCharts

<https://www.litcharts.com/lit/i-robot/themes/artificial-intelligence-consciousness-and-humanity>

⑫ ⑬ GHOST IN THE SHELL LIVE-ACTION: A DEEP DIVE INTO THE PHILOSOPHY OF IDENTITY AND SENTIENTISM

— Andrew Ly

<https://www.andrewlyj.com/blog/2018/12/9/ghost-in-the-shell-the-live-action-film-review>

<sup>14</sup> Quote by Lana Wachowski: "The Matrix is a system, Neo. That system is our..."

<https://www.goodreads.com/quotes/6410378-the-matrix-is-a-system-neo-that-system-is-our>