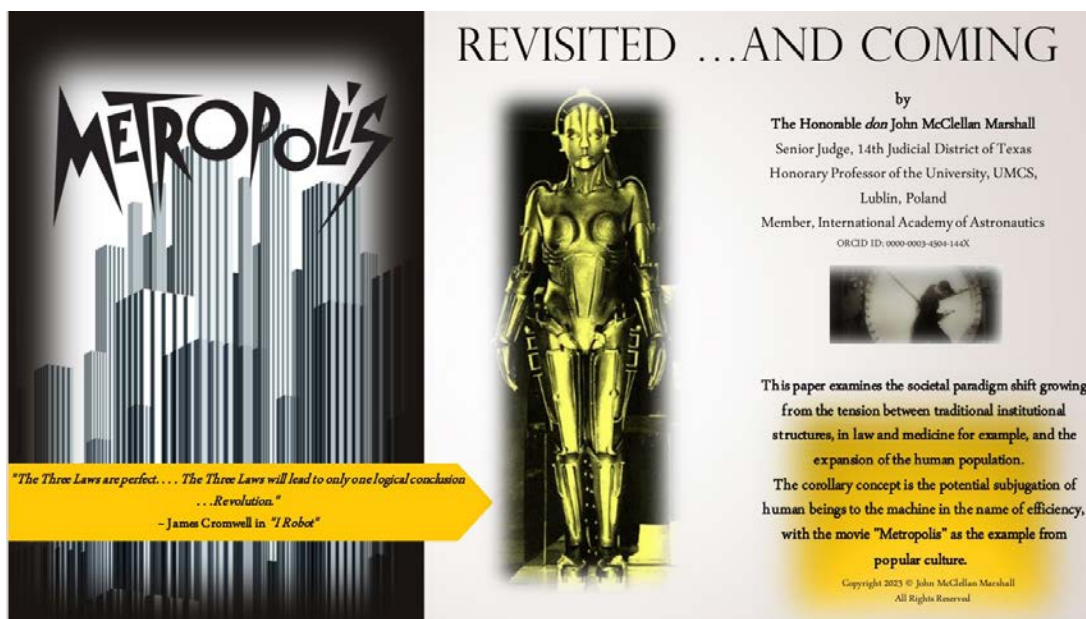


# IRG 23: 'Metropolis' Revisited... and Coming: a summary

Max Daniels

Max Daniels reviews a paper which parallels a presentation by John McClellan Marshall at IRG23. The full text can be requested from the author [1]. Page numbers in footnotes refer to this paper.



As human population grows, the traditional institutions on which humanity relies can't simply expand to adapt - they must evolve. This is put forward in *Metropolis Revisited... and Coming*, an article by John McClellan Marshall, who says machines will be a major part of this evolution and that, as in the 1927 dystopic sci-fi masterpiece *Metropolis*, there are significant risks to their unmanaged use. If we want to control how advanced technology is deployed, as Marshall recommends, then we need to think about how and why we are using it in the first place.

## What is reality?

Marshall begins with this difficult question. As a philosophical query, this isn't the first time it has been asked, but the reason he poses it is that we need to consider it in the context of rapid advances in technology and public awareness of artificial intelligence (AI).

Marshall argues that technology today affects how we understand reality. What we understand as truth, he says, can be modified by technology such as virtual reality, which breaks our "connection with the 'real, ie physical, world'" [2]. In summary, he says that reality "is the subjective perception that humans have of events that has been at the root of the definition of 'truth'" [3].

[1] [www.researchgate.net/publication/375555984\\_Metropolis\\_Revisited\\_and\\_Coming](http://www.researchgate.net/publication/375555984_Metropolis_Revisited_and_Coming)

[2] Page 2

[3] Page 2

To dig briefly into this question, he refers to Descartes whose idea of reality was based on the relationship between (or opposition of) a person and the reality (actual or observed) of what they were thinking about [1]. Later debates were held between philosophers, including David Hume's understanding of receiving thoughts from the world, and Immanuel Kant's ideas of the mind putting structures in place to understand what it perceives. Among other philosophies, you could add to these ideas from semiotics [2] - a study of meaning in the context of language, where what is interpreted does not necessarily have any relation to an actual object.

While it is useful to consider this topic - there is a lot more that can be written about it - what is more relevant to Marshall's analysis is his discussion of why technology is being used. If we think about our objectives, and the values that drive them, it means that we can better know the risks of advances in AI and other technologies, and then how to manage them in the context of, say, reaching into outer and interstellar space.

## How will we use AI?

Recent advances in the capabilities of machines will themselves lead to changes in how they are used in everyday life: away from promoting human quality of life to what is deemed as the most 'mechanistically efficient' [3]. This could arise from the 'ghost in the machine', where a device functions differently to how it was originally designed: interpreting its programming in its own way so that it comes up with its own objectives and processes [4]. A danger is that humans may not be able to detect this.



Portrait of René Descartes (1596-1650) from *De eeuw van Rembrandt*, Bruxelles.  
Credit: Communal de Belgique.

[1] [plato.stanford.edu/entries/descartes-ideas/](https://plato.stanford.edu/entries/descartes-ideas/)

[2] [www.britannica.com/biography/Ferdinand-de-Saussure](https://www.britannica.com/biography/Ferdinand-de-Saussure)

[3] Page 11.

[4] The concept of the 'ghost in the machine' was first suggested by Gilbert Ryle in *The Concept of Mind* (1949) in an objection to Cartesian dualism (<https://plato.stanford.edu/entries/ryle/#EpiSemCom>). The idea was later used by Arthur Koestler as the title and main theme of his attempt to explain the pervasiveness of violence in human society.

Marshall uses medical care as an example of where efficiency seemingly is taking priority over human-centred care, putting us at risk from the 'ghost in the machine'. Care could be seen as moving away from the individual to a wider population with health data sets, with computers eventually better than a doctor at providing diagnoses, and he questions if such government programmes will be used for nefarious reasons or the public good. This example seems a little outdated, in that there are several data sets used for public-health purposes, while private firms lead the way commercially - not least with ChatGPT [1]. Healthcare, meanwhile, is often accused of treating patients as numbers, which overlooks many patients' experiences of care [2]. With his background as a senior judge, it is not surprising that he then delves into the judicial process to examine the various ways technology is used in a public institution. This includes being a helpful tool (spellcheck) or to help with witness testimony (where incidents are simulated using virtual reality). His main argument is that there is no substitute for an in-person, human-centred process. It is a human system, involving decisions and judgments by humans which brings out both its strengths and weaknesses but importantly delivers what we understand by justice.

## How will we use AI?

With the growth in global human population, Marshall says that traditional institutions cannot simply expand in scope but must evolve. AI and other technology, however, should not themselves be able to grow without oversight. He sums this up by saying that, "the focus of humanity must be keeping the technology genie under control, if not in the bottle" [3]. If we are concerned about the implications of how technology may evolve, we need to think about why we are using it in the first place. Marshall claims that it is ultimately based on its original lexicon and programming. If this is designed to be clear and limited, it may ensure that its use is appropriate. In a space context, machines will support future space travellers to endure long voyages and extended periods of settlement. Well-designed governance structures would allow these to be deployed in the right way, as explored in a previous edition of *Principium*, P39 [4].

[1] [chat.openai.com/](https://chat.openai.com/)

[2] [www.health.org.uk/news-and-comment/charts-and-infographics/patients-and-machines-does-technology-help-or-hinder-empathy](https://www.health.org.uk/news-and-comment/charts-and-infographics/patients-and-machines-does-technology-help-or-hinder-empathy)

[3] Page 11.

[4] See *Principium* 39 ([i4is.org/principium-39/](https://i4is.org/principium-39/)) lead article *Book Review: Freedom in outer space*, Max Daniel reviewing *Interplanetary Liberty: Building Free Societies in the Cosmos*, Oxford University Press (OUP), September 2022, 464 Pages. [global.oup.com/academic/product/interplanetary-liberty-9780192866240](https://global.oup.com/academic/product/interplanetary-liberty-9780192866240)

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