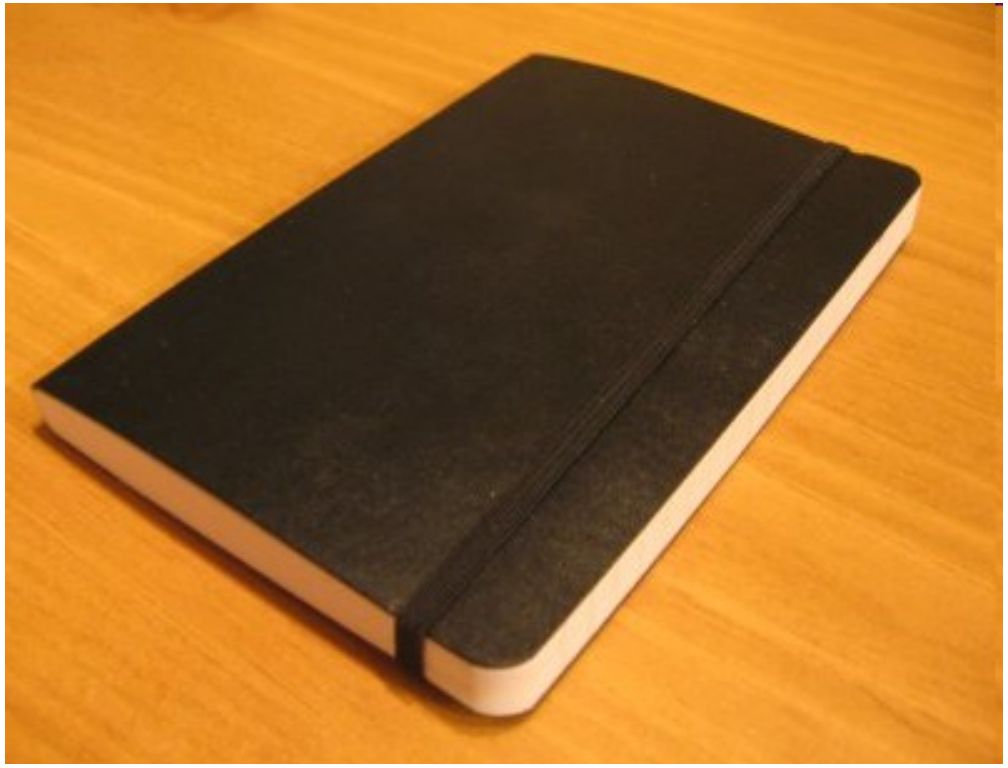
# The Exoself and the future

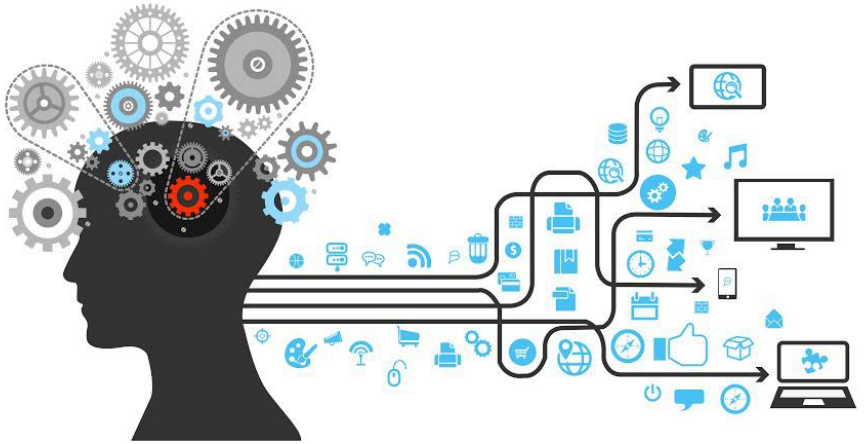
Anders Sandberg
Future of Humanity Institute
University of Oxford

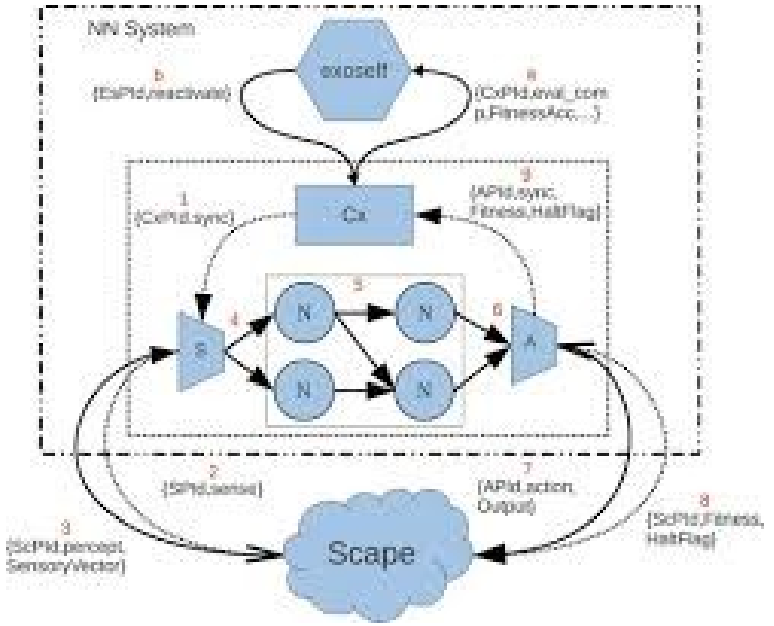
# How Chinese censorship made me aware of my extended self



# Exoselves

- Exoself: “systems linked to the self in a cooperative way, extending the mind and the body.”
- “Sometimes he isn't certain he's still human; too many threads of his consciousness seem to live outside his head, reporting back whenever they find something interesting. .... And it's too early for anyone out there to be trying to hack exocortices... isn't it? Right now, the external threads of his consciousness are telling him that they like Annette.... “
  — *Charles Stross, Accelerando 2005.*

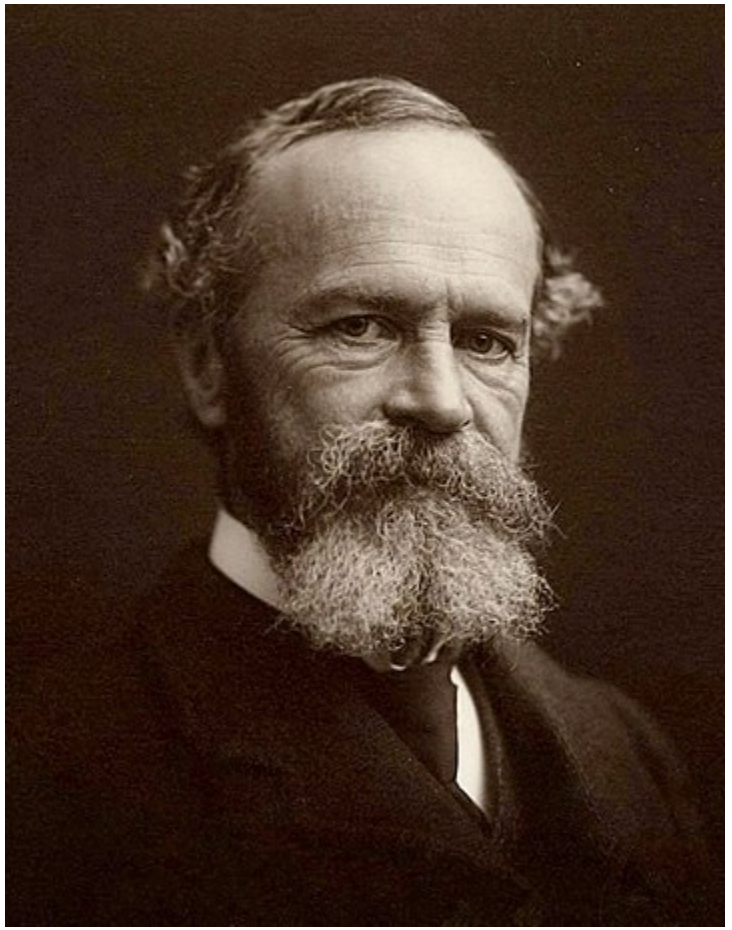




# Fuzzy selves

“The Empirical Self of each of us is all that he is tempted to call by the name of *me*. But it is clear that between what a man calls *me* and what he simply calls *mine* the line is difficult to draw. We feel and act about certain things that are ours very much as we feel and act about ourselves. Our fame, our children, the work of our hands, may be as dear to us as our bodies are, and arouse the same feelings and the same acts of reprisal if attacked. And our bodies themselves, are they simply ours, or are they *us*? “

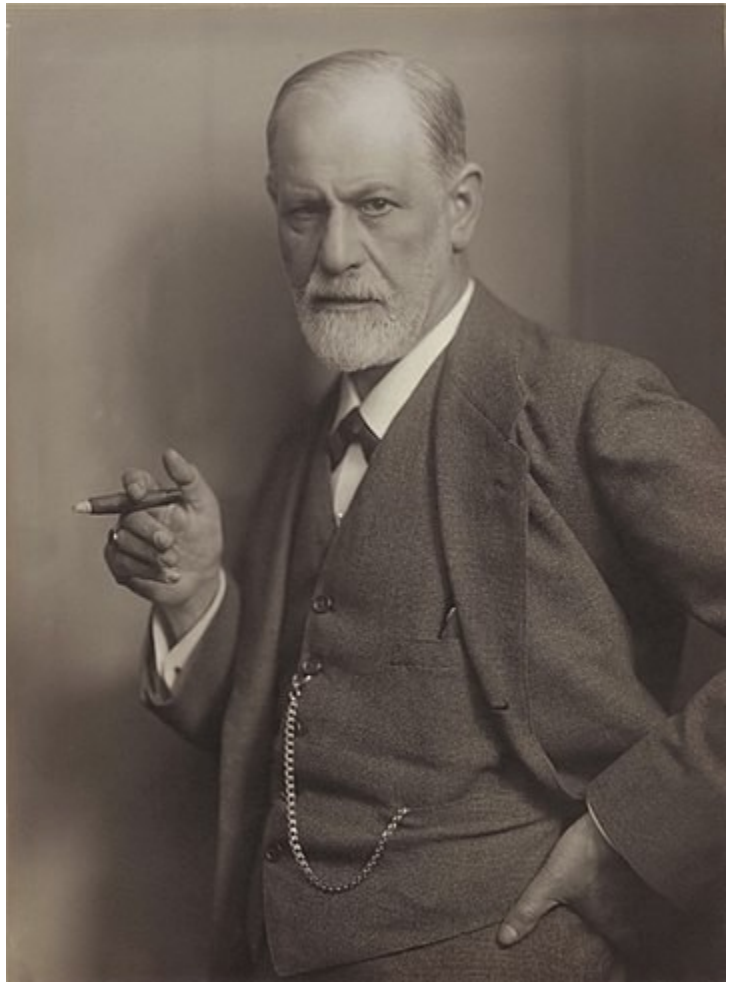
- William James, *The Principles of Psychology* (1890), ch. 10



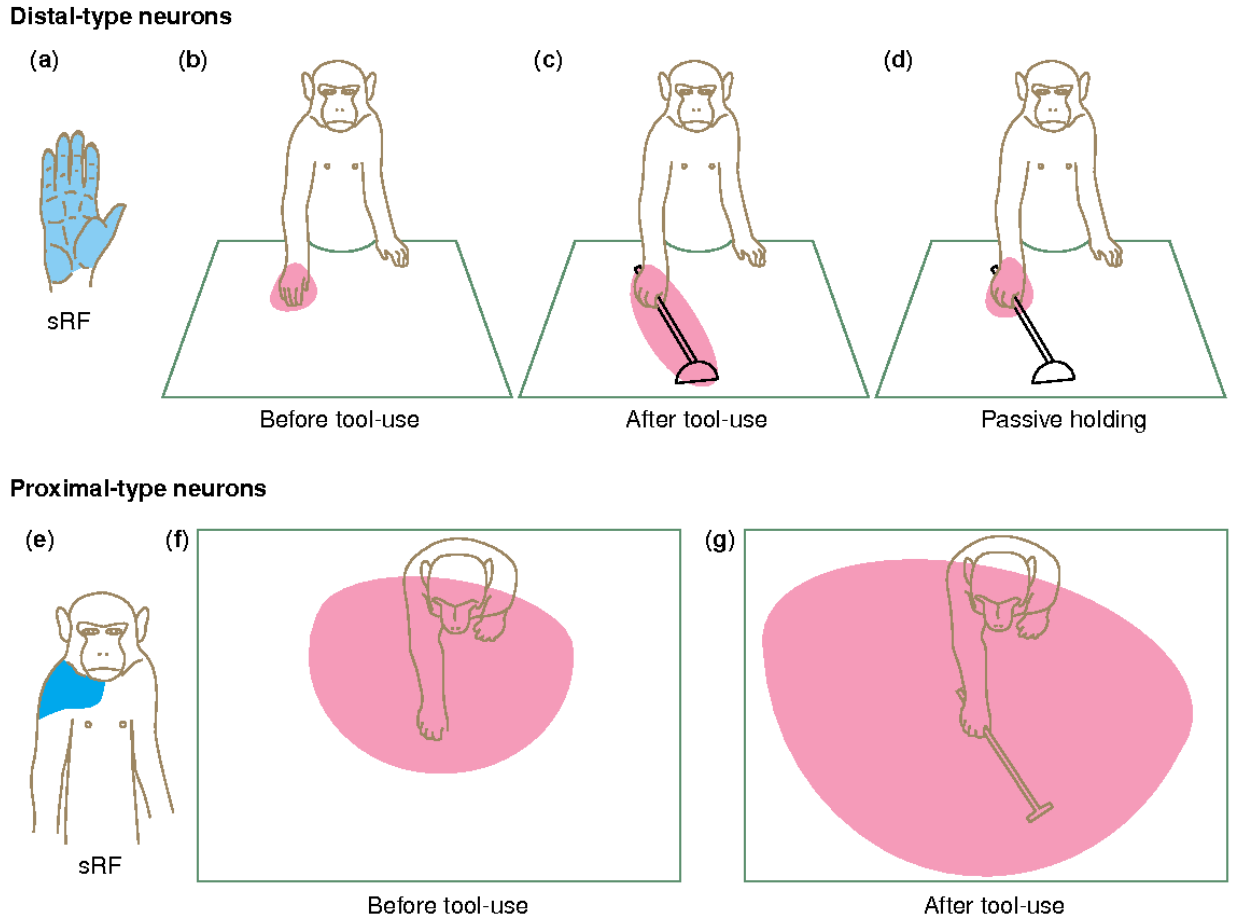
# Fuzzy selves

"With every tool man is perfecting his own organs, whether motor or sensory, or is removing the limits to their functioning. . . . Man has, as it were, become a kind of prosthetic God. When he puts on all his auxiliary organs, he is truly magnificent; but these organs have not grown on to him, and they still give him trouble at times. . . . Future ages will bring with them new and probably unimaginable great advances in this field of civilization and will increase man's likeness to God still more. But in the interests of our investigations, we will not forget that present-day man does not feel happy in his Godlike character."

—Sigmund Freud, *Civilization and Its Discontents (1930)*



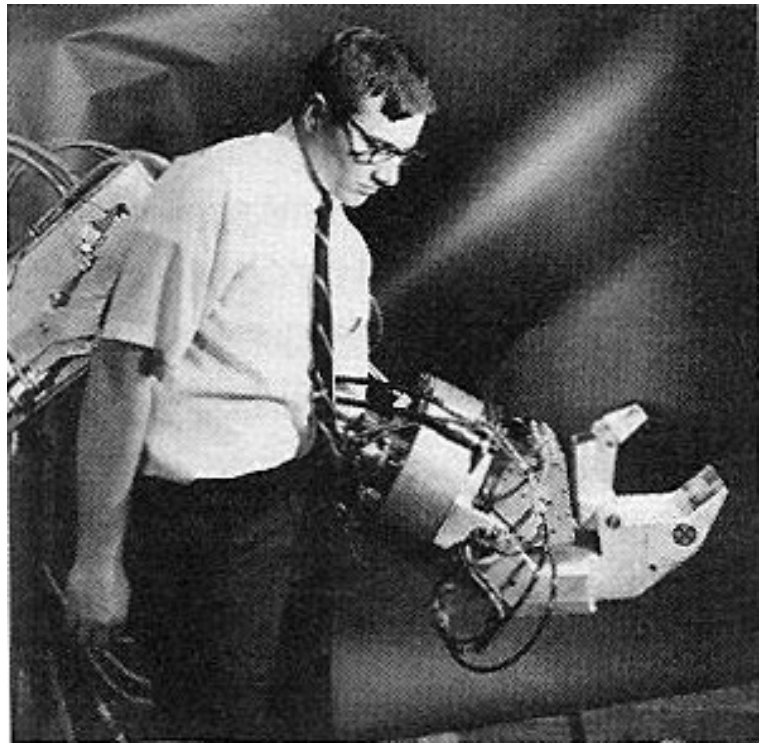
# Fuzzy selves



Maravita, A., & Iriki, A. (2004). Tools for the body (schema). *Trends in cognitive sciences*, 8(2), 79-86.

Staffan Larsson

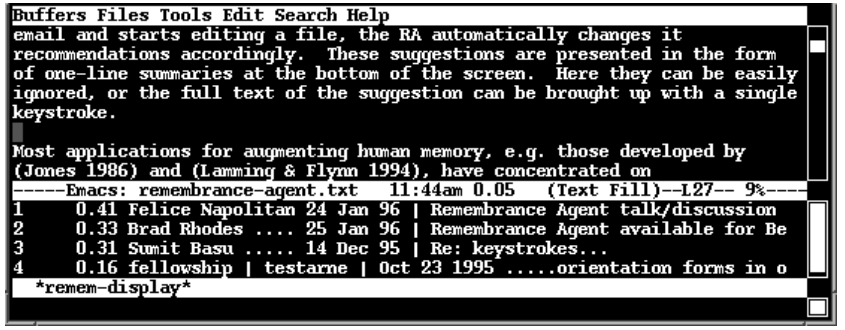
# Human extensions



# How does wearable technology become exoselves?

# How does wearable technology become exoselves?

“Furthermore, through this intimate, interactive relationship with the user, the Remembrance Agent can more easily learn the user's preferences. … This would allows a revolutionary concept in the computer world: **a life-long relationship between a user and a particular machine interface. As the machine and user adapt to each other over the years, a new, integrated being might emerge combining the best features of both**. Imagine a policeman who never forgets a face (adding a digitizing camera and simple face recognition



# How does wearable technology become exoselves?

- “Man-computer symbiosis is a subclass of man-machine systems. There are many man-machine systems. At present, however, there are no man-computer symbioses. The purposes of this paper are to present the concept and, hopefully, to foster the development of man-computer symbiosis by analyzing some problems of interaction between men and computing machines, calling attention to applicable principles of man-machine engineering, and pointing out a few questions to which research answers are needed. **The hope is that, in not too many years, human brains and computing machines will be coupled together very tightly, and that the resulting partnership will think as**

# The monitored self as the virtuous self

Advertisement for Microsoft Band

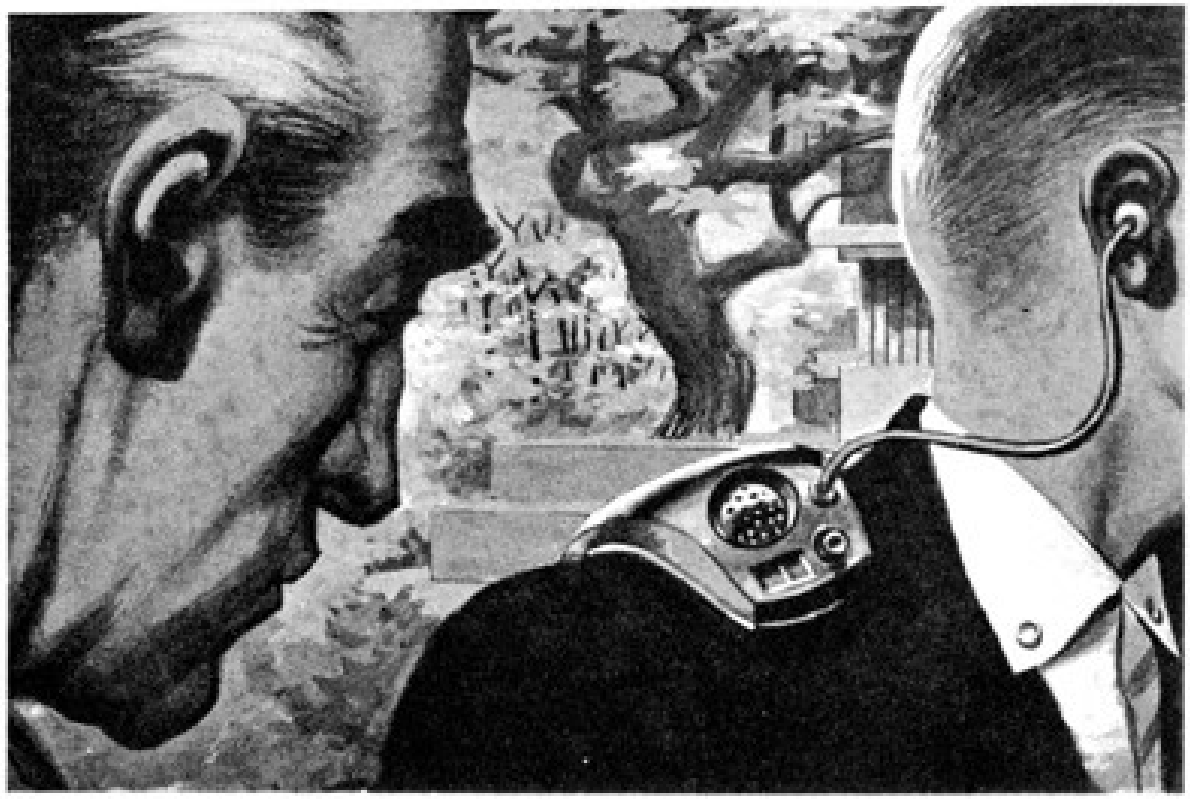
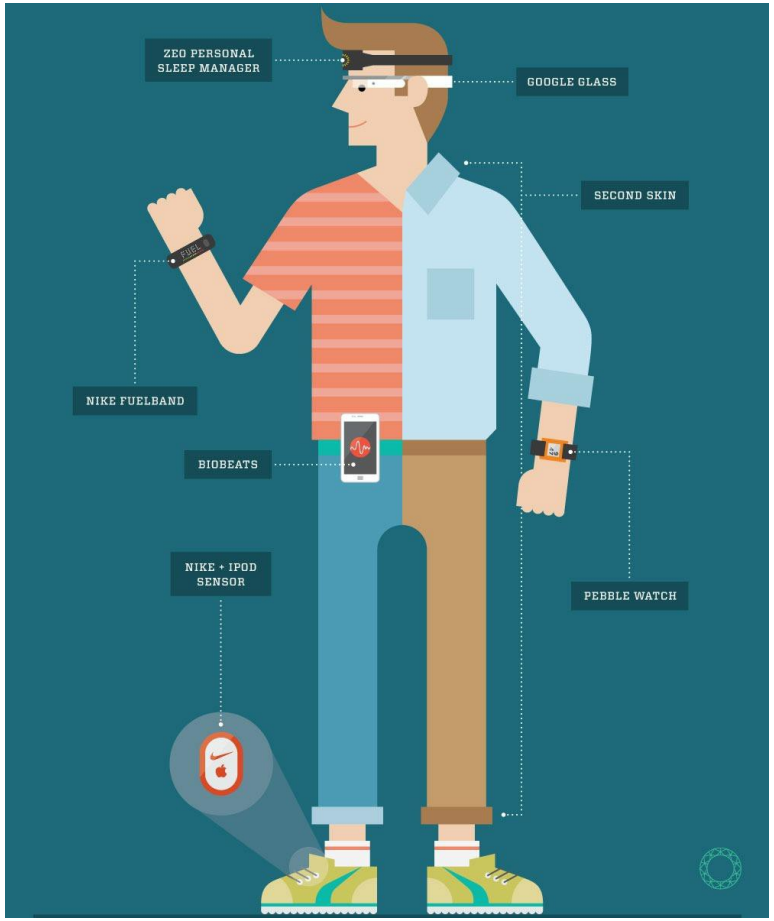
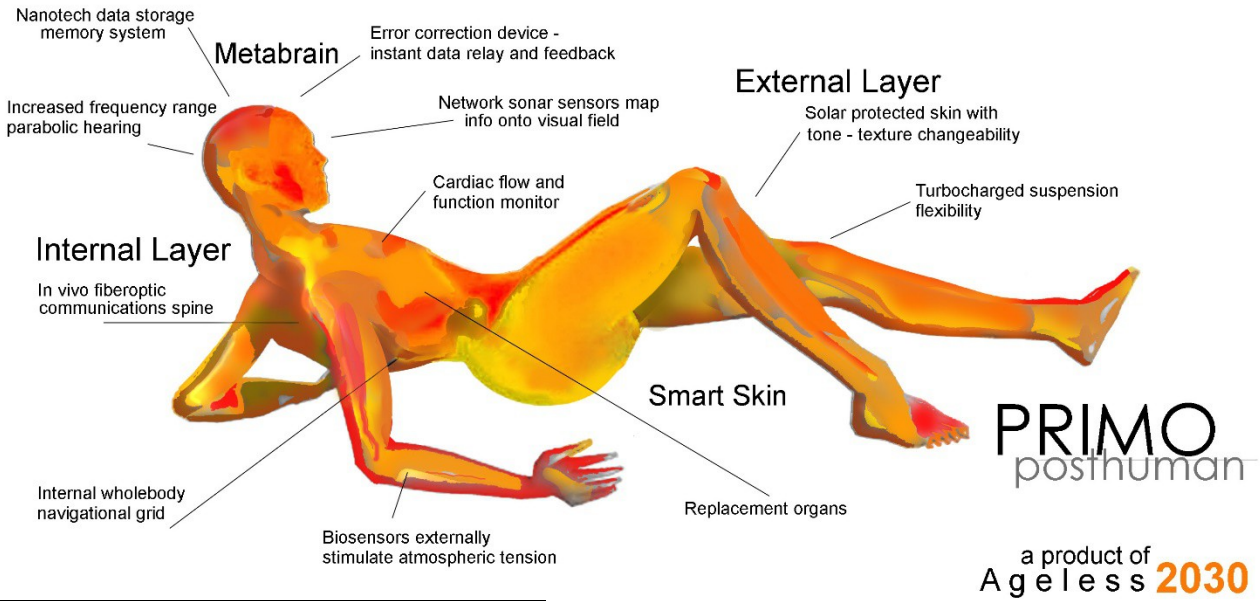
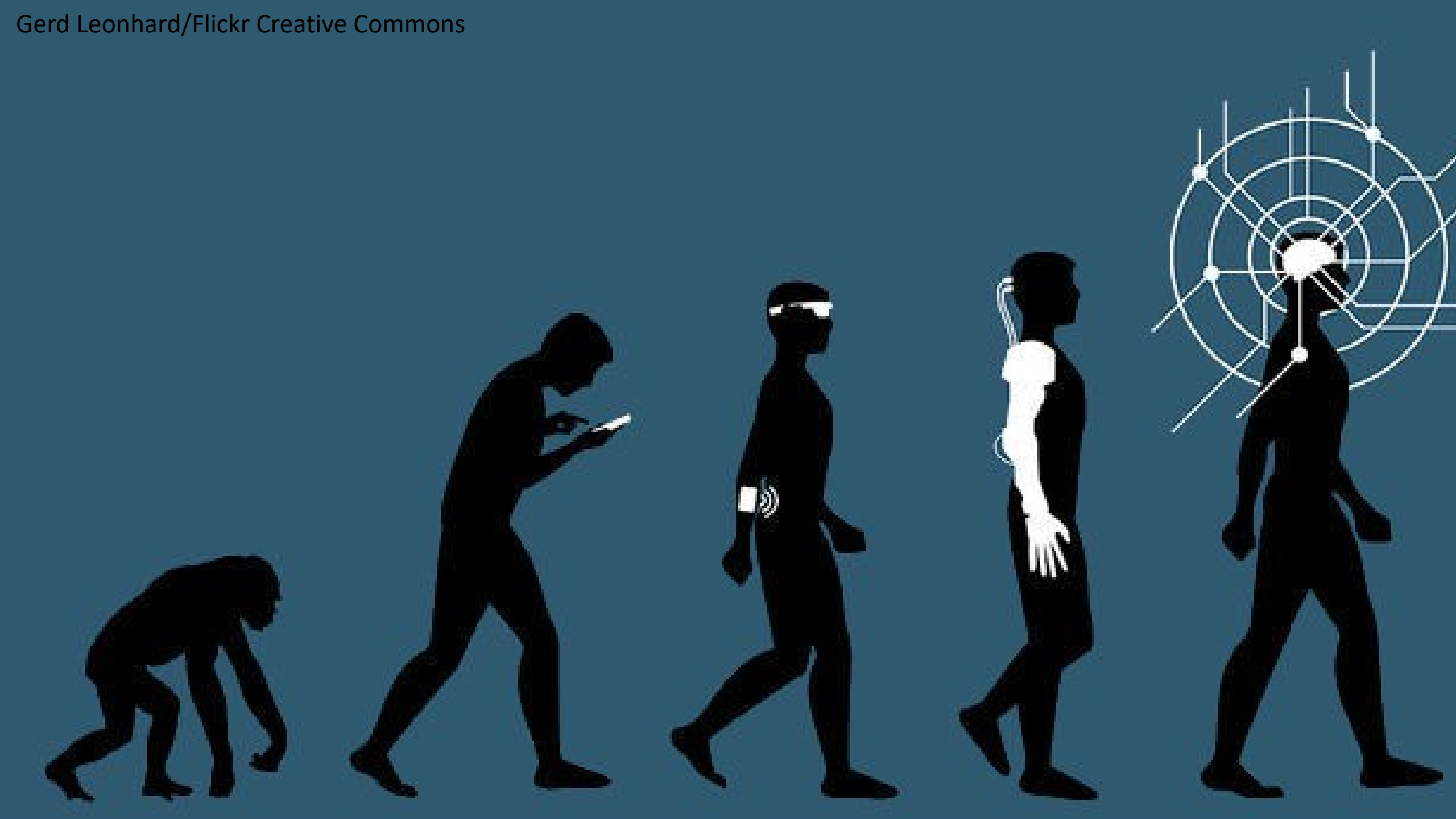


Illustration from Fritz Leiber's "The creature from Cleveland Depths" *Galaxy*, December 1962

# Exoselves as projects



# The future, seen through the exoself

Gerd Leonhard/Flickr Creative Commons