On the Contribution of Christian Theology to Ethical Deliberation about Neuroscience and AI

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1. The Problem

> "[W]e are on a path to a world in which it will be possible to decode people's mental processes and directly manipulate the brain mechanisms underlying their intentions, emotions and decisions; where individuals could communicate with others simply by thinking; and where powerful computational systems linked directly to people's brains aid their interactions with the world such that their mental and physical abilities are greatly enhanced" (Yuste, Goering et al. 2017: 160)

More recent work lends support to this claim (e.g. Coin et al. 2020; Farahany 2023).

Practical ethical reasoning about these scenarios requires deep conceptual work about **human and individual identity, social relationships, agency, and moral responsibility:**

♦ "Fundamental neuroethics" (Farisco et al. 2022)

Christian theology has rich resources for exploring these questions:

♦ "Fundamental neuroethics," done theologically.

♦ Offers a vision of human life and community relevant not only to in-house Christian discussions but also to wider debates about these issues.

2. Human Identity and the Image of God

What does it mean to be human at the interface of neurotechnologies and AI? Do the possibilities emerging at this interface threaten or question our humanity in ways that require a response?

Human-machine hybridity unsettles species boundaries, in ways that are sometimes salutary (cf. O'Donnell 2018), sometimes troubling. How might Christian theologians think about this?

"Then God said, 'Let us make humankind in our image, after our likeness…'" (Gen. 1:26).

The *imago dei* (image of God) is at the heart of Christian understanding of what it means to be human. BUT…

♦ It should not be read "structurally" (indicating some feature such as rationality that is supposed to define the human).

♦ Rather, understood "performatively": "actively *seeking* humanity" (McFadyen 2016: 112) where circumstances or human actions question, deny, or diminish the humanity of some.

This suggests that the *imago* is less about policing species boundaries, more about how we live responsibly together in society. Which leads to …

3. Individual Identity and Human Sociality

How might emerging neurotechnologies call individual identity into question, and how should we respond?
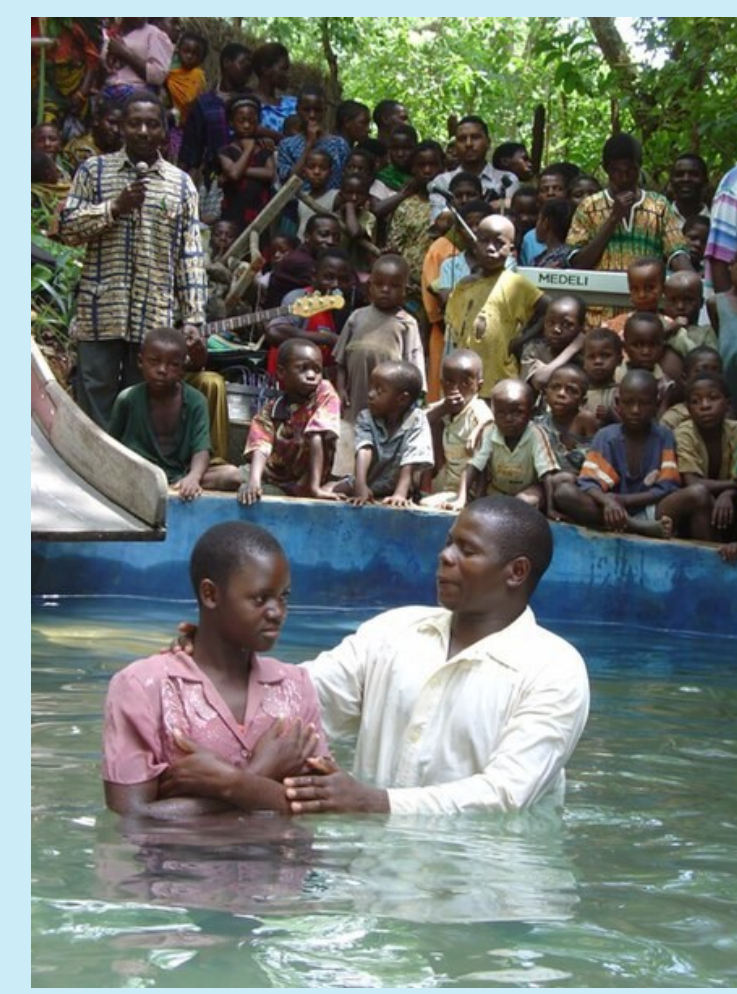
Direct brain-to-brain communication and linking of different brains in collective thinking and action could raise far-reaching questions about individual identity.

"You are the body of Christ and individually members of it" (1 Corinthians 12:27).

This New Testament metaphor for the Church offers a vision of human sociality in which:

♦ Members are united and interdependent without losing their identity.

♦ Social relations are marked by solidarity and mutual care.

Dietrich Bonhoeffer (1998): this is a reality available to all humanity, not just card-carrying Christians. A key aspect is *responsibility*, which leads on to…
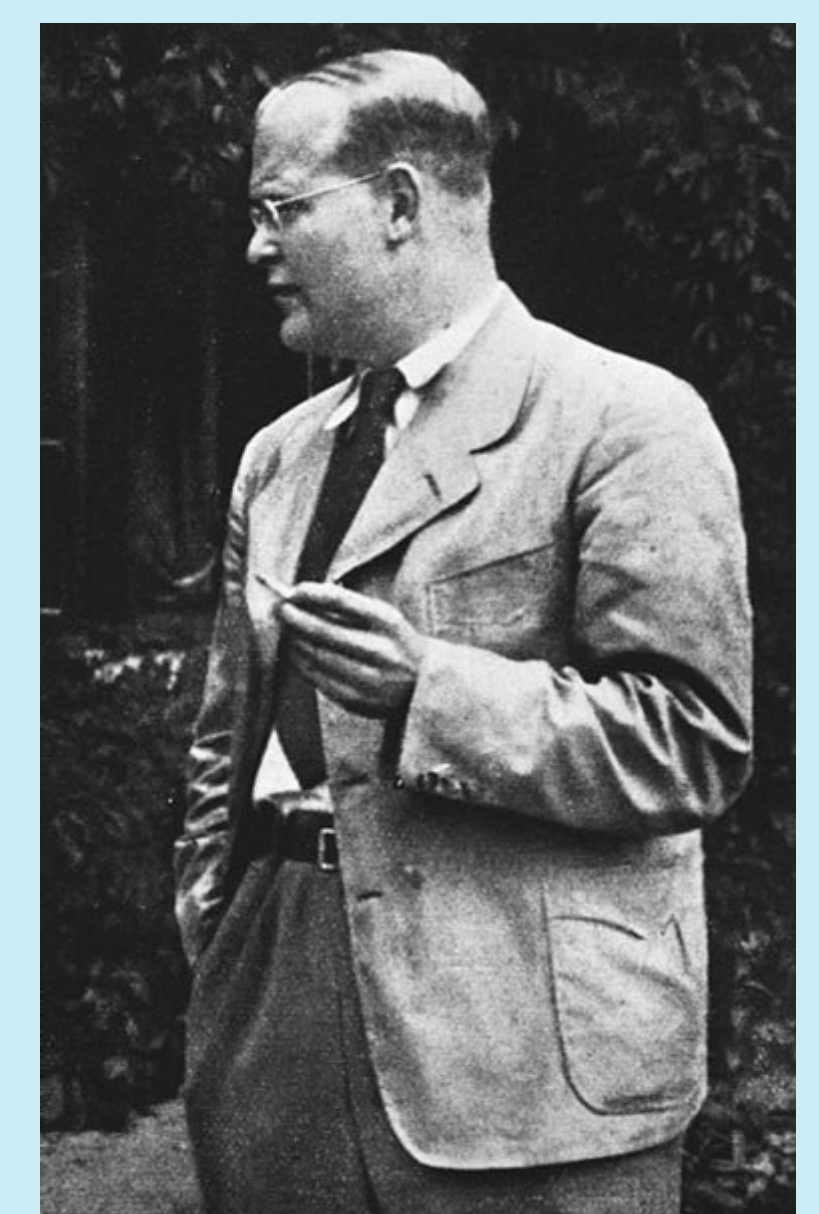
4. Neurotech and the Responsible Life

How should we understand and support moral agency and accountability in the context of emerging neurotechnologies?

Bonhoeffer (1998; 2005): "vicarious representative action" is at the heart of the responsible life:

♦ Jesus Christ, the Son of God, was humanity's "vicarious representative" in his life, death, and resurrection.

♦ "[A]ll human life is in essence vicarious representation" (2005: 258) - living a responsible human life involves acting on behalf of one another.

♦ This "refutes the fiction that the isolated individual is the agent of all ethical behavior" (2005: 258).

♦ Responsible life might involve "raising to a conscious level the responsibility of those entrusted to [our] care, in strengthening their responsibility" (2005: 258).

Bonhoeffer offers a nuanced theological account of moral agency that can be collaborative and interdependent without loss of individual identity or responsibility.

5. Practical Conclusions

What does "actively seeking humanity" in the context of neurotech and AI look like?

Living a responsible life in a way that enables and evokes responsible living by others, in contexts where technological developments place agency and responsibility in doubt.

♦ Tech applications that rendered responsibility ambiguous and hard to trace should be regarded with great suspicion.

♦ But those that supported or restored users' capacity for responsible action could be welcomed as exercises of "vicarious representative action."

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