

Introduction to biosocial concepts and frameworks

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What is biosocial research?

- Biosocial research examines the interplay between social, behavioural and biological factors
- Attempts to resolve challenges in isolating causal processes

Different meanings and definitions

- disciplinary perspectives
- funders of research

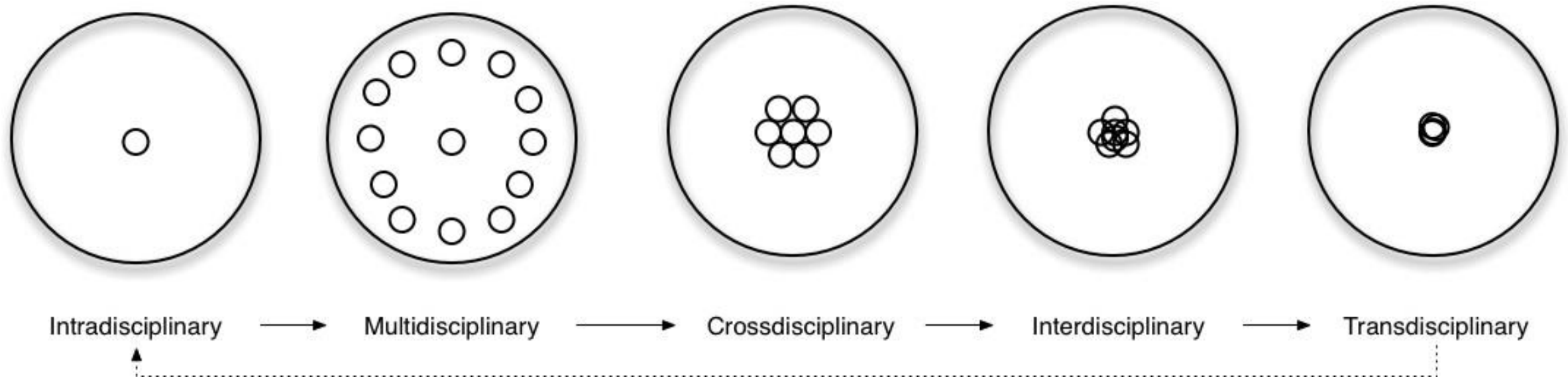
What is biosocial research?

ESRC: Biosocial research...

- is concerned with the dynamic interplays between ***biology, experiences and behaviours*** over the life course.
- encompasses ***multidisciplinary science***, brings together expertise from the biological, medical and social sciences.
- enables ***understanding of the complex pathways and mechanisms*** that shape physical and mental health, social behaviours and outcomes, and genomic, neurological and physiological systems.

Soc-B (ESRC-BBSRC funded) studentships are required to be based at least 50% in the social sciences

Intradisciplinary to Transdisciplinary

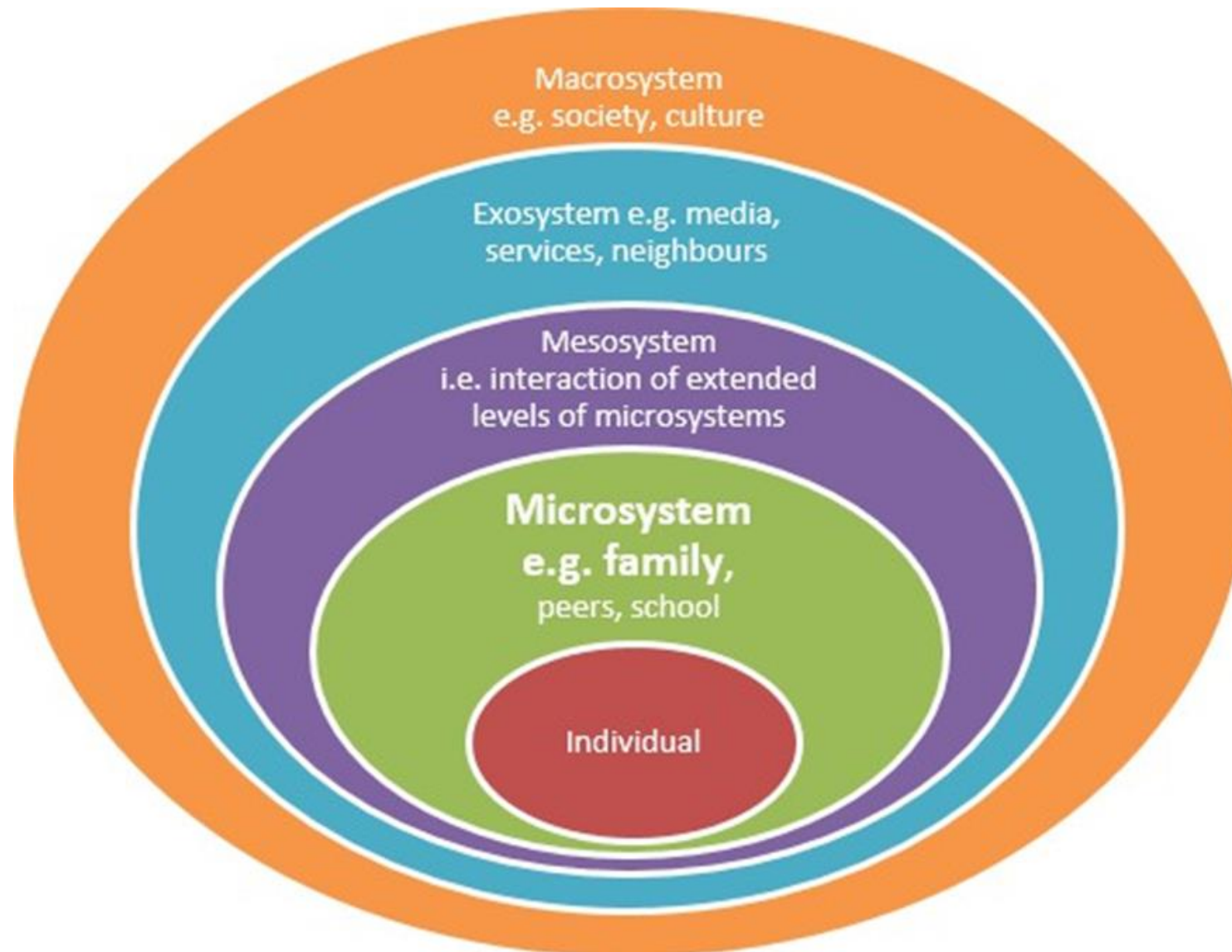


The biosocial lifecourse

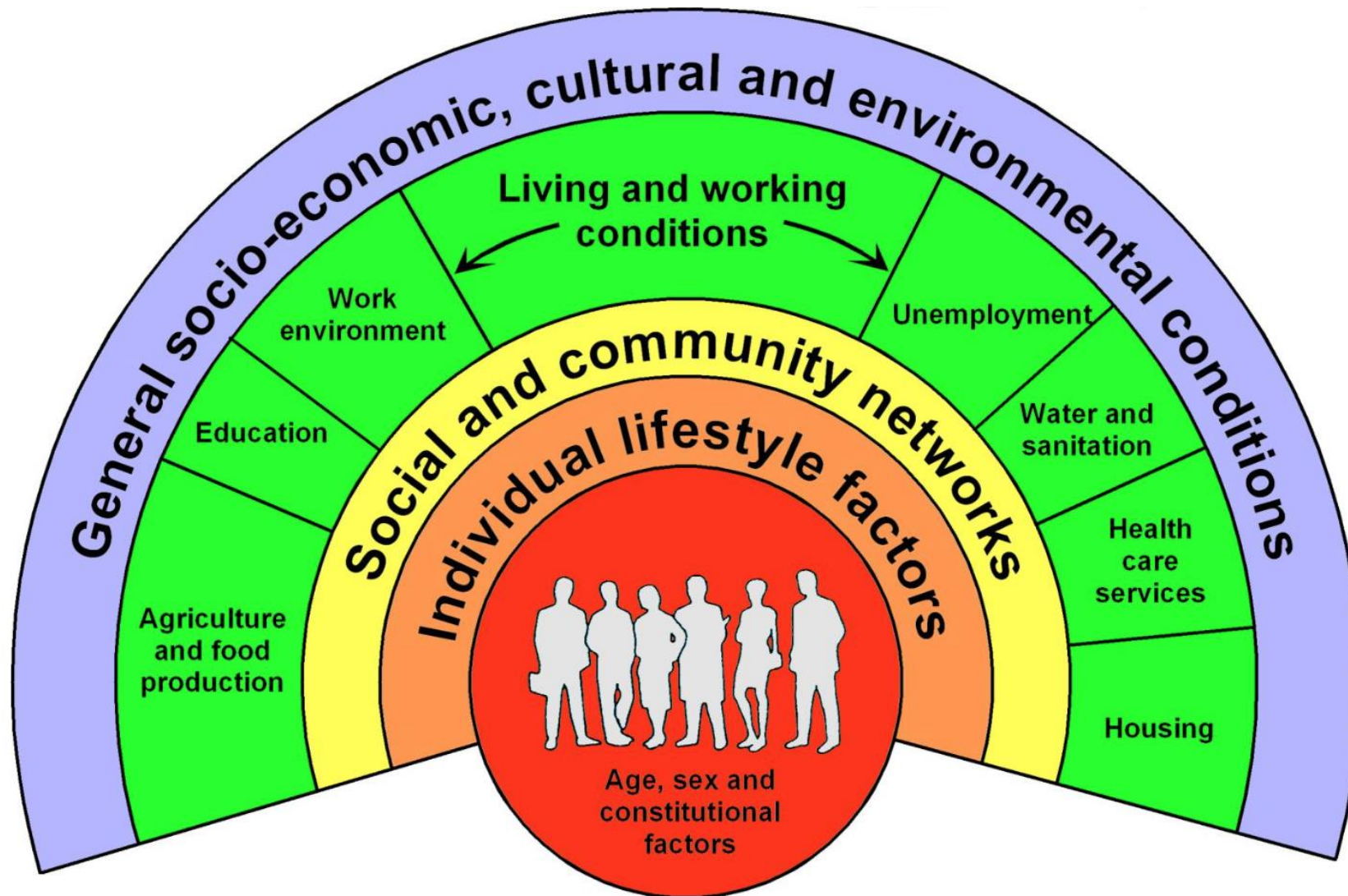
Emerging framework with multiple disciplinary perspectives

- Bronfenbrenner (1977) bioecological model
- Dahlgren & Whitehead (1991) proximal and distal influences
- Krieger (1994) embodiment/ecosocial approach
- Kuh & Ben Shlomo (1997) lifecourse framework
- Hertzman (1999) biological embedding
- McEwen (2006) protective and damaging effects of stress mediators: central role of the brain
- Kubansky, Seeman & Glymour (2014) biologically plausible mechanisms
- Harris & Schorpp (2018) integrating biomarkers in social stratification and health research

Bronfenbrenner bioecological model



Dahlgren & Whitehead proximal and distal influences

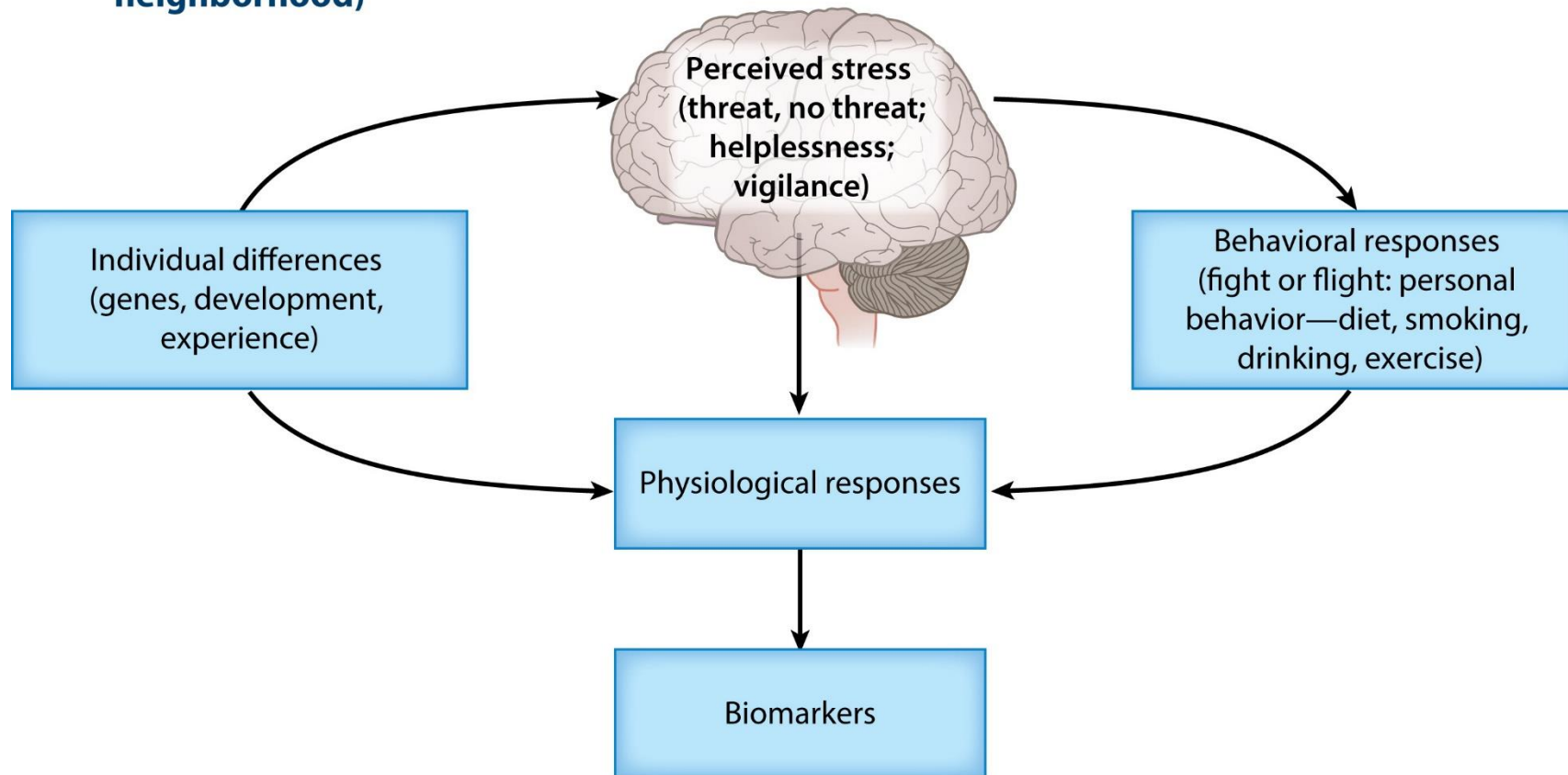


Harris & Schorpp integrating biomarkers in social stratification and health research

Environmental stressors
(work, home, school,
neighborhood)

Major life events

Trauma, abuse



Physiological and behavioral response to stressors.

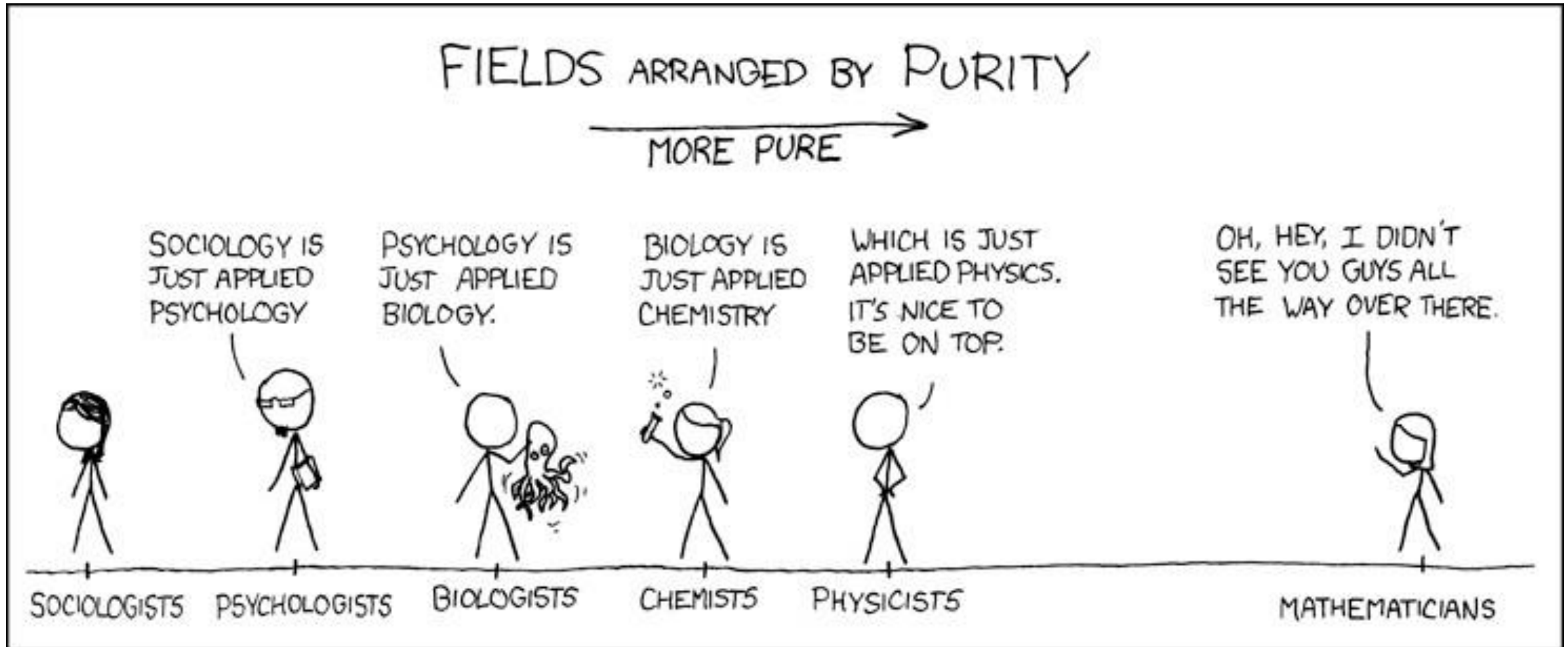
Shown here is an adapted stress process model for different types of environmental and experiential stressors.

Perceived stress results in physiological responses that can be measured by biomarkers and behavioral responses that, in turn, affect physiology.

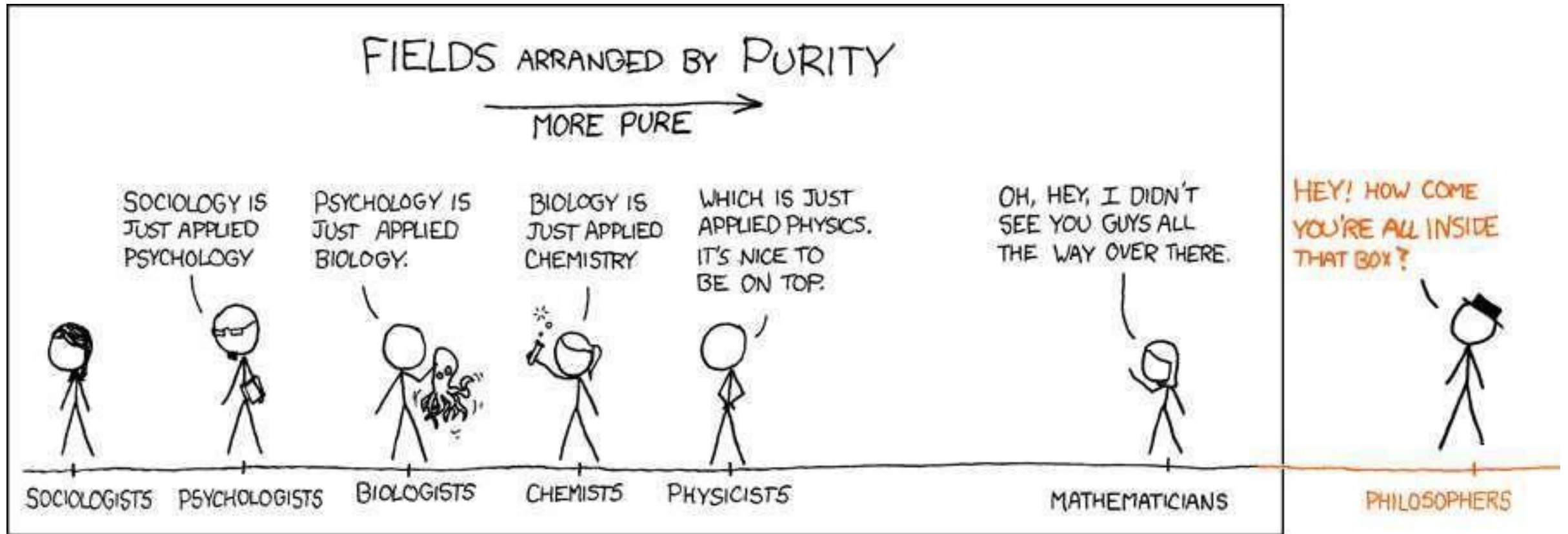
Individual differences influence both perception of stress and the physiological and behavioral responses to stress.

Adapted with permission from McEwen (1998).

Disciplinary rankings by purity



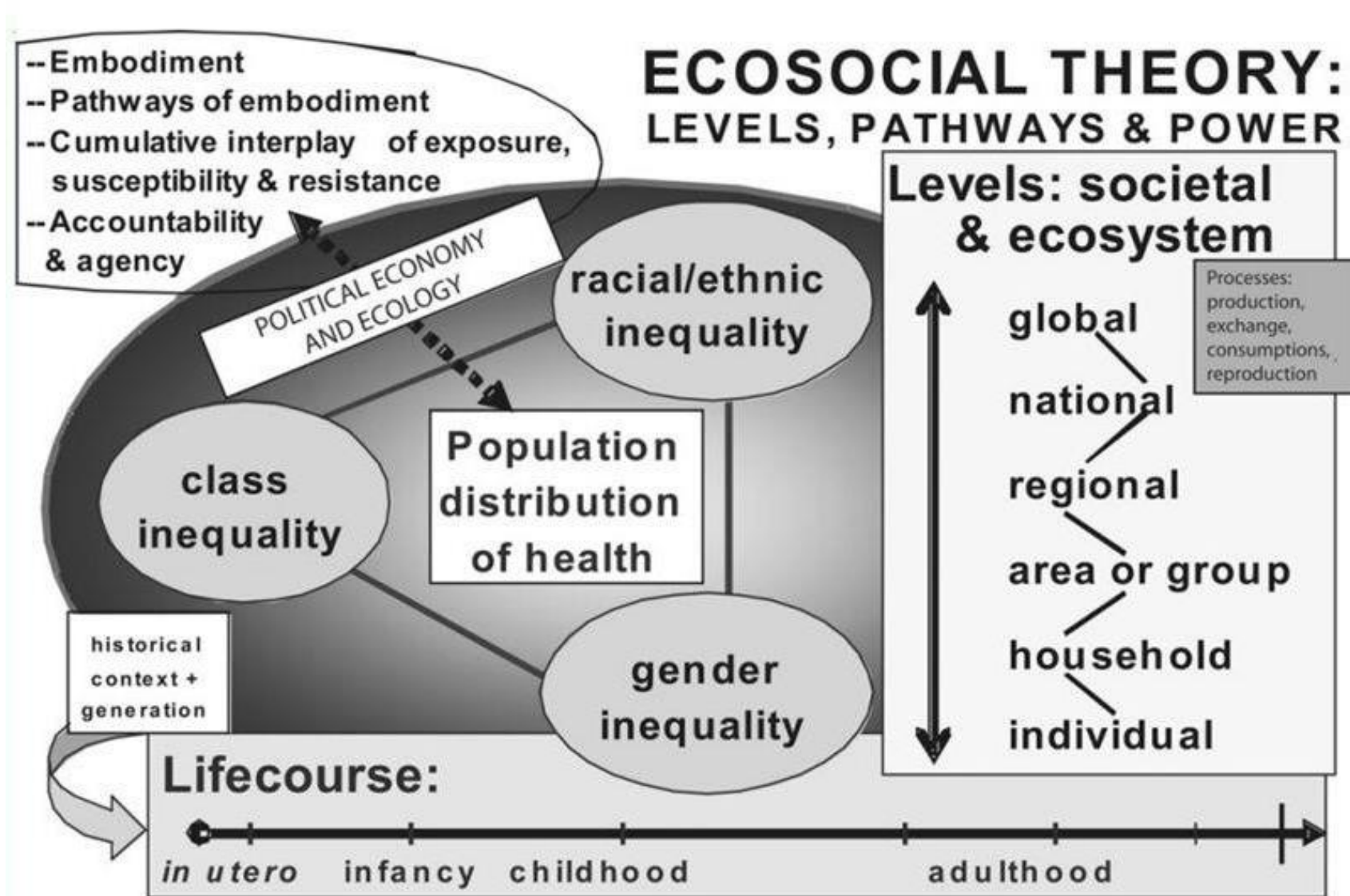
But it's good to think outside the box



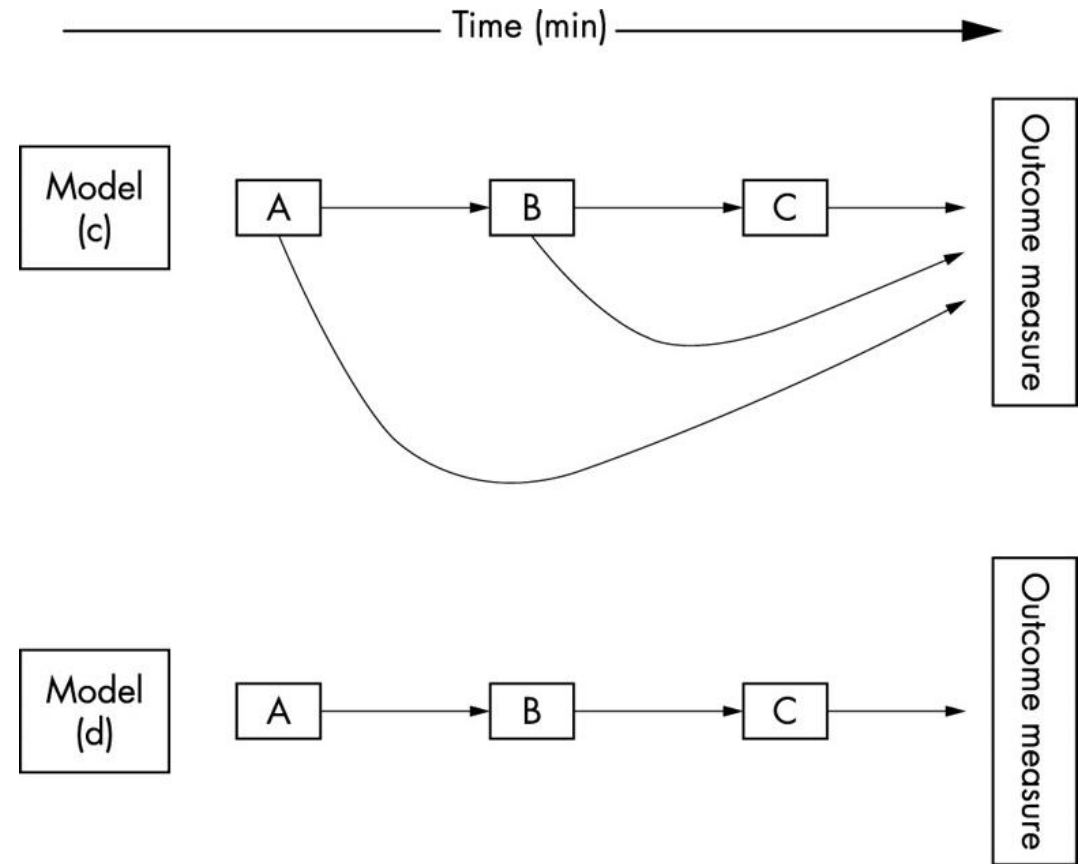
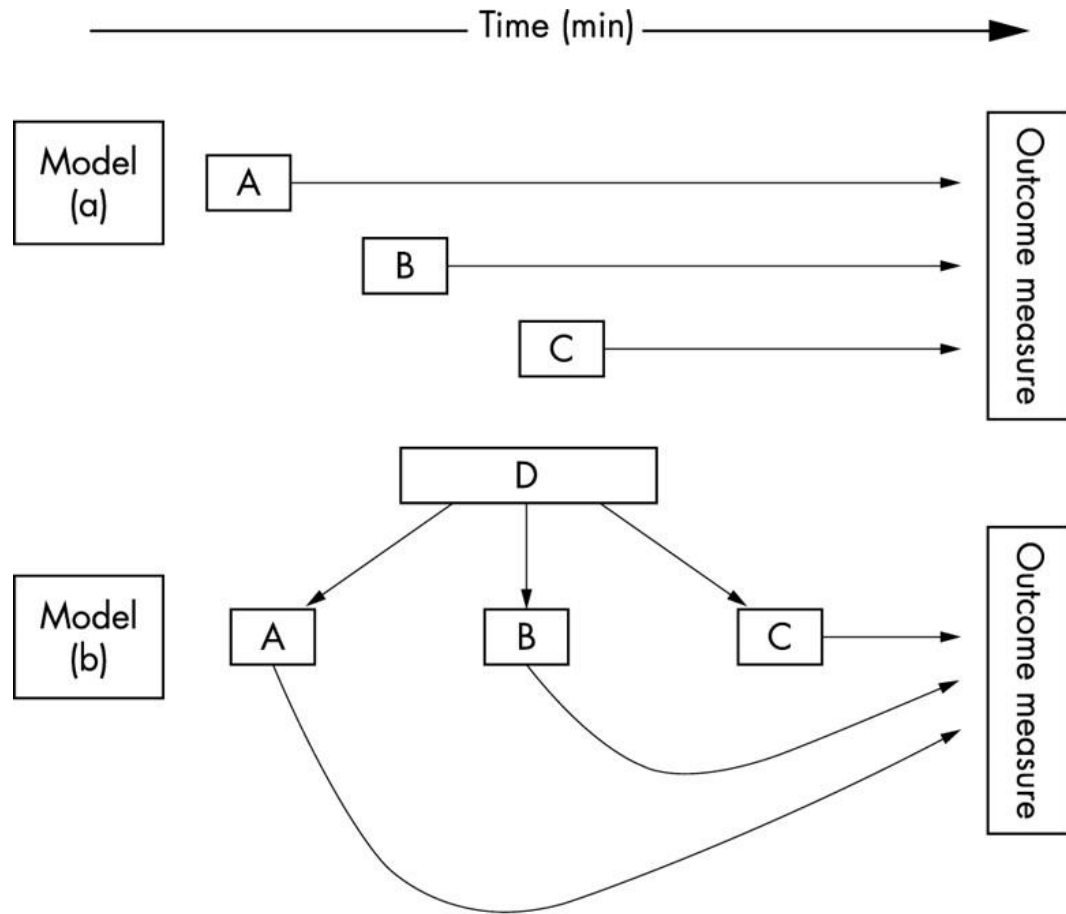
References

- Bronfenbrenner U. Toward an experimental ecology of human-development. *American Psychologist* 1977; 32: 513-31
- Dahlgren G, Whitehead M. Policies and strategies to promote social equity in health. Stockholm: Institute for Future Studies, 1991
- Hertzman C. The biological embedding of early experience and its effects on health in adulthood. *Annals of the New York Academy of Sciences* 1999; 896: 85-95
- Krieger N. Epidemiology and the web of causation: has anyone seen the spider? *Social Science and Medicine* 1994; 39: 887-903
- McEwen BS. Protective and damaging effects of stress mediators: central role of the brain. *Dialogues Clin Neurosci.* 2006;8(4):367–381.
- Kubansky LD, Seeman TE, Glymour MM. Biological Pathways linking social conditions and Health. In Eds. Berkman LF, Kawachi I & Glymour MM. *Social epidemiology*, Oxford University Press, 2014
- Kuh D, Ben Shlomo Y. A lifecourse approach to chronic disease epidemiology. Oxford: Oxford University Press, 1997
- Harris KM & Schorpp KM. Integrating Biomarkers in Social Stratification and Health Research. *Annual Review of Sociology* 2018; 44: 361-386

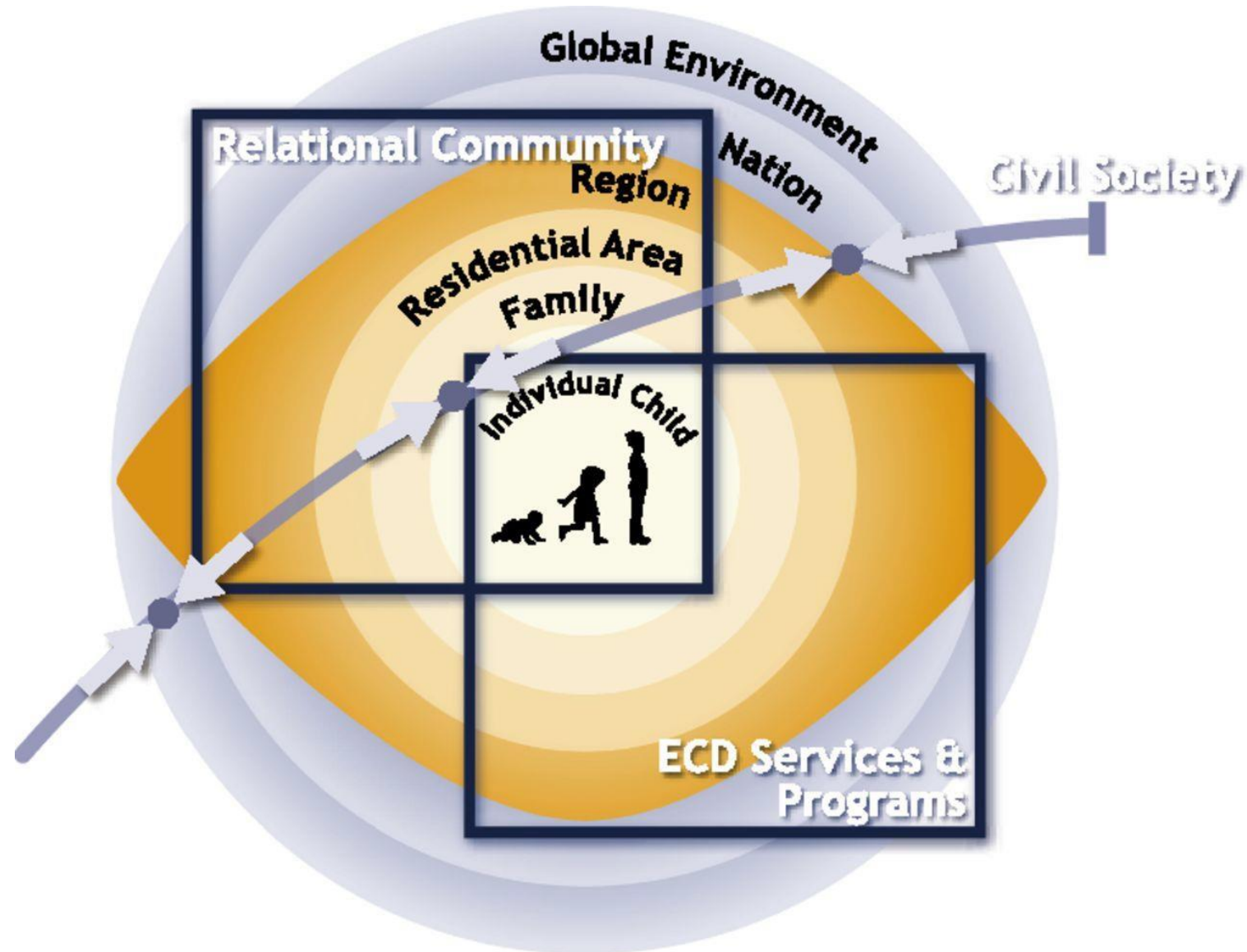
Krieger embodiment/ecosocial approach



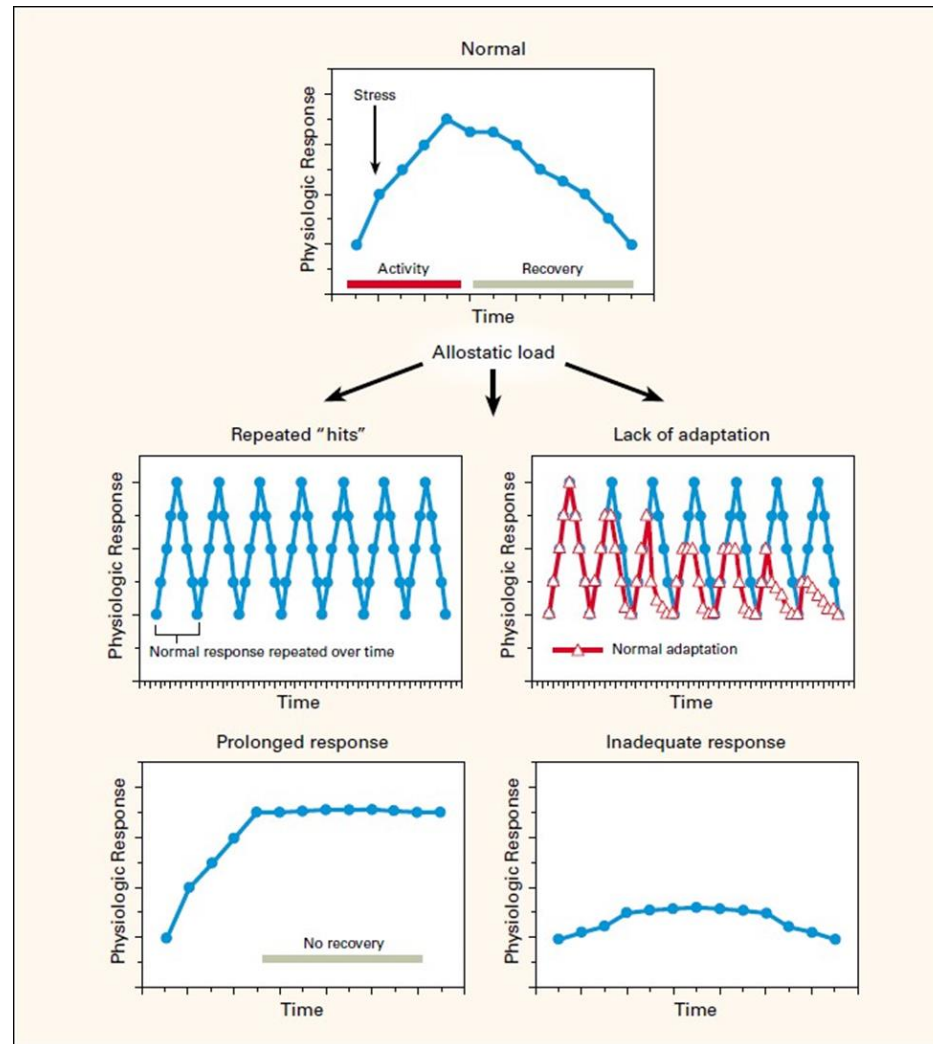
Kuh & Ben Shlomo lifecourse framework



Hertzman biological embedding



McEwen Protective and damaging effects of stress mediators - Homeostasis, Allostasis, Robustness, and Weathering



Kubansky, Seeman & Glymour biologically plausible mechanisms

