Just as each person has their own set of cognitive, linguistic, and lexical repertoires, every discrete community of interest has a unique information environment.[1]The various definitions concur that information environments are dynamic ecosystems incorporating the entire universe of information learned, shared, and acted upon within each community of interest. They encompass all of the language and communication modalities, physical environments, social and culture norms, and entities (work, educational, religious, cultural, etc.) utilized by those within (and who are impact by) each environment.[2] [3]

They are unique ecosystems of facts, data, and social conventions that surround us daily as we move through these different contexts—home, work, or social activities—each requiring specific knowledge and skills to navigate successfully [4] [5] [6] by enabling and constraining our interpretation and response to information.[7] [8] Each person is exposed to, and engaged in, a multitude of information environments based on factors such as age, family, community, formal and informal education, employment, and interests such as religion, sports, or music. [9] [10] [11]

The glue for every information environment is the factors that create a cognitive and language community, including (but not limited to) family, community, age, occupation, faith-based, education, culture (music, literature, theatre, etc.), and sports.[12] [13] [14] [15] [16] Thus every person can be in, and influenced by, many information environments,[17] including their personal information environment.[18] [19] [20]

Every information environment grows out of it's needs and culture, and is calibrated as experience challenges the values and responses.[21] [22] Our emerging age of ubiquitous computing is being studied and employed under the umbrella of digital ecosystems.[23]

As with all complex systems information environments have multiple, interoperable, and mutually dependent operating subsystems and components.[24] [25] [26] [27] [28] There seems to be agreement that more of those subsystems and components are related to context (physical, cultural, and communication modalities) than to what we normally think of as language (words, grammar, etc.).[29] [30]

Memory is one of the subsystems in every information environment. Those memories can be stored in the brain of each individual, in the social and collective memory of those interacting within each information environment, or in the myriad of formats now available that are external to the human mind.

And now the vast expanse of the Internet is a common component of this extended human memory.[31]

[1] ‘Information exchange in virtual communities: a typology’ by Gary Burnett. *Information Research*, Vol. 5 No. 4, July 2000.

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[4] ‘Assessing National Information Ecosystems: A Framework for Analysis’ by Alicia Wanless, Samantha Lai, and John Hicks. Washington, DC: Carnegie Endowment for International Peace. February 11, 2025. See page 3.

[5] National Institute of Standards and Technology (NIST), Information Technology Laboratory, Security Resource Center, Glossary, accessed 2022-09-25 at https://csrc.nist.gov/glossary/term/information_environment#:~:text=information%20environment%20Definition%20%28s%29%3A%20The%20aggregate%20of%20individuals%2C,that%20collect%2C%20process%2C%20disseminate%2C%20or%20act%20on%20information]

[6] ‘U. S. Government Accountability Office. Highlights of GAO-22-104714, a report to congressional addressees - Information Environment : Opportunities and Threats to DOD’s National Security Mission’. Accessed 2025-09-20 at: https://www.gao.gov/assets/gao-22-104714.pdf.

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[10] *The Information Environment and its Effects on Individuals and Groups: An Interdisciplinary Literature Review* by Paul Röttger and Balazs Vedres (2020). Oxford Internet Institute, University of Oxford.

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