



What Is “Culture” and Can Scientists and Technologists Really Do Anything with It?

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Systems and People Meet"
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Culture: What is it and how can we use it?

- Kroeber and Kluckholm (1952) listed more than 200 definitions of “culture”¹
 - length of this list has only increased since then
 - still much contention among anthropologists
 - no right or wrong definition...only what best suits problem at hand, i.e., **operational definition**
- Theory of the world shared in its broad design and deeper principles by members of a society
 - what one needs to know in order to behave like a “native”
 - entire details are not usually known (or can always be articulated explicitly) by anyone
 - consists of those things that all members understand all others hold to be true
- Highly-structured, rich form of knowledge
 - coherent conceptual system (embedded logic) that tends to persist as a unit, i.e., is passed-on and learned

¹Kroeber, A.L. & Kluckhohn, Clyde (1952) "Culture: A Critical Review of Concepts and Definitions." *Papers of the Peabody Museum of Harvard Achæology and Ethnology, Harvard University* 42(1). Cambridge, Mass: Museum Press.



Framework and Key Concepts

Culture:

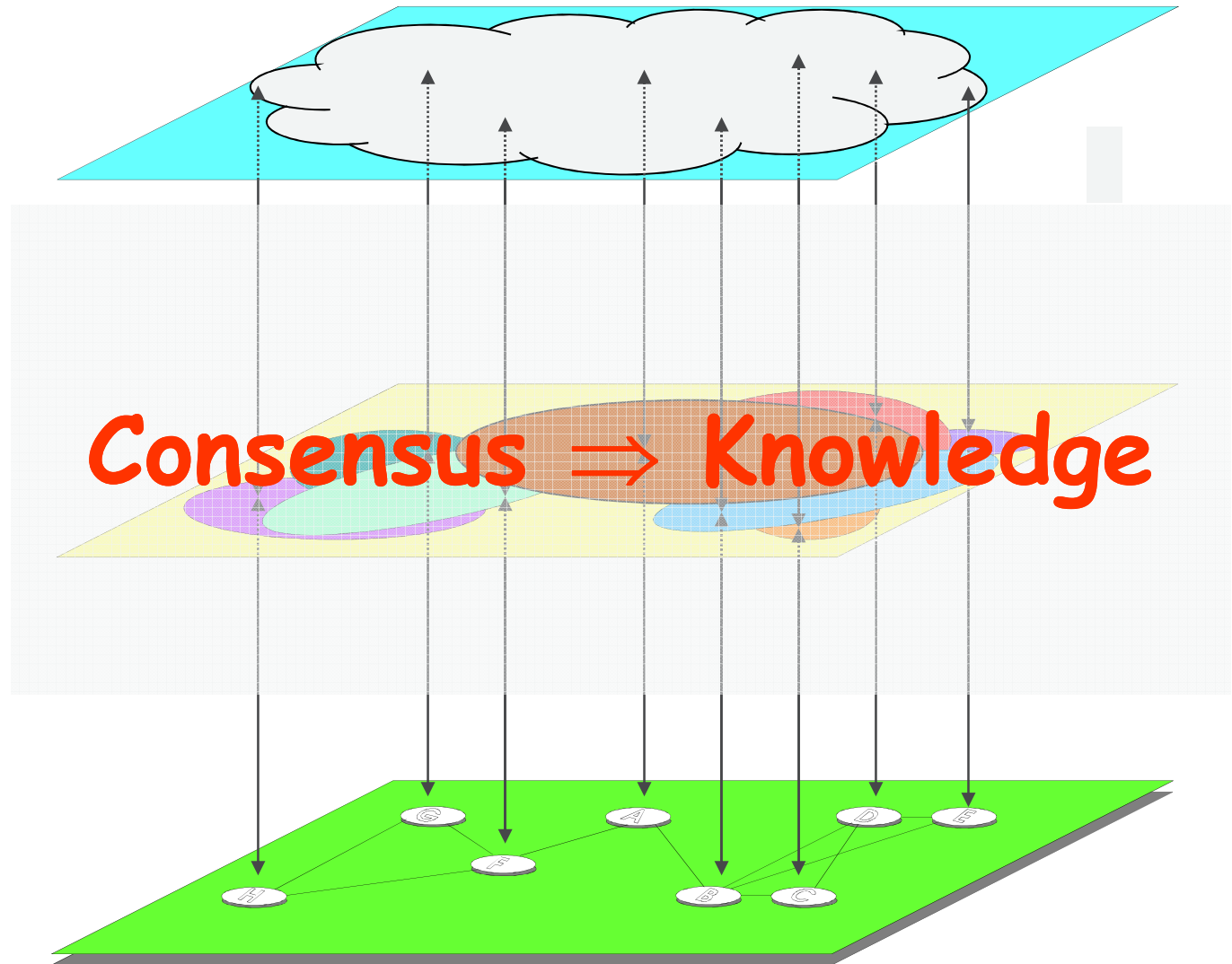
Shared Knowledge

Cognition:

Individual Knowledge


Behavior:

Information Sharing among Individuals in a Society





Applications for Culture in CS and Systems Design

- User Interface Design
 - Icons, labels, layout, use of windows, e.g., what does  mean?
 - Query languages and search, e.g., highly-contextualized semantics
 - See a “fish,” eat “fish,” or “fish” for information.
 - Veo un “pez,” pero como “pescado”, y ????
- System Architecture
 - Representations such as data models, ontologies, schemas
 - Network designs for facilitating collaboration and knowledge-building in the forms of information exchange and recommendation, e.g., Amazon, ebay, Facebook, and Wikipedia.
- Modeling Human Behavior and Cognition
 - Agent-based modeling of social-cognition in multicultural society
 - Role of shared representations in learning and situational awareness
 - Embedding of knowledge in behavioral artifacts, e.g., books, databases, machines