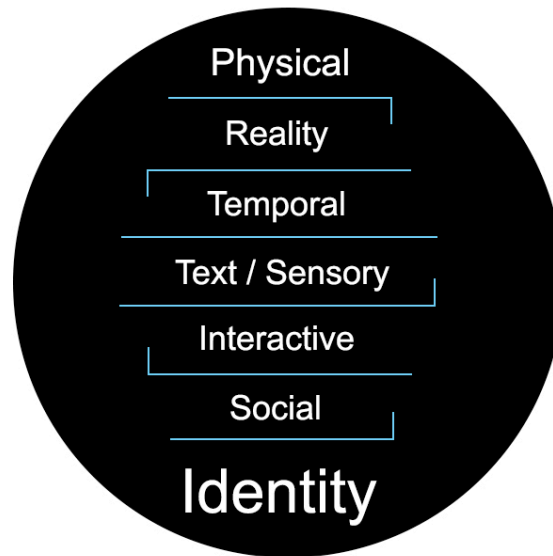# The Eight Dimensions of Cyberpsychology Architecture

A Transdisciplinary Model of Digital Environments and Experiences

John Suler, Rider University, 2016

Cyberspace is Psychological Space

Cyberpsychology Architecture is a transdisciplinary model for understanding the psychological impact of different digital environments. It is based on the premise that cyberspace is psychological space, a projection or extension of the individual and collective human mind. This space can be conceptualized as an intersubjective or interpersonal field, a transitional or transformational space, a territory that is part me, part other, that interacts with the in-person world in complex ways, and provides a venue for self expression, interpersonal discovery, play, creativity, and, unfortunately, the acting out of psychopathology.

This article summarizes the model, with a more complete description appearing in John Suler's *Psychology of the Digital Age: Humans Become Electric* and in *this chapter* from the book (Cambridge University Press, 2016). See also:

Suler, J. (anticipated 2016). Cyberpsychology. In S. Akhtar and S. Twemlow (Eds), Textbook of Applied Psychoanalysis, Karnac Books.

Suler, J. (anticipated 2016). The Eight Dimensions of Cyberpsychology Architecture. In J. Gackenbach (Ed), Boundaries of Self and Reality Online: Implications of Digitally Constructed Realities. Academic Press.

The Eight Dimensions

Cyberpsychology can examine the psychological architecture of digital spaces according to eight different dimensions. Each one reflects computer-generated aspects of how a particular online environment operates, as well as how the human mind itself works. Different environments – such as email, social media, video-conferencing, games, and avatar worlds - combine the different dimensions with varying emphasis. The eight dimensions intersect to form different types of online habitats, each with its own unique architecture and corresponding psychological experience. The essential question concerning any particular environment is what dimensions it minimizes or maximizes, and in what specific ways.

In the course of human evolution, cyberspace has become powerful because it allows unprecedented versatility in combining and manipulating these eight dimensions, sometimes in unexpected ways, with a highly synergistic influence on the in-person world. In addition to psychology, a variety of other disciplines – such as sociology, philosophy, neuroscience, biology, and human-computer-interactions (HCI) – can help elucidate the dimensions, as well as how they overlap and interact with each other and with the in-person world. Many disciplines focusing on internet research tend to specialize in a subset of the dimensions, although the model suggests that consideration of the other dimensions can enrich that research.

1. The IDENTITY dimension includes the possibilities for self presentation that occur in a particular online environment, including how people consciously and unconsciously use or avoid them, as well as the types of healthy and pathological aspects of identity that they manifest in that environment.

2. The SOCIAL dimension includes the possibilities for creating, managing, and aborting relationships with individuals and groups, including accurate and distorted interpersonal perceptions, varying levels of intimacy, and conflict versus collaboration.

3. The INTERACTIVE dimension entails how well a person can understand, navigate, and control a digital environment, including the sense of presence and immersion in that place, learning curves, and tendencies to anthropomorphize the device.

4. The TEXT dimension of an online environment is the extent to which it relies on text communication, the type of text communication (long to short forms), and the psychological effects of communicating via text.

5. The SENSORY dimension entails how the environment activates each of the five senses, especially the psychological effects of auditory and visual stimulation (pictures), but also the possibilities for tactile, kinesthetic, and olfactory stimulation.

6. The TEMPORAL dimension is the use and experience of time in a digital environment, including the synchronous/asynchronous spectrum, options for slowing, speeding, reversing, looping, and freezing time ("recordability").

7. The REALITY dimension entails how much a digital environment creates experiences based on fantasy and how much it is grounded in the familiarity of the everyday world.

8. The PHYSICAL dimension is how a digital environment involves the physical world and the corporeal body, including bodily sensations and movements, the impact of devices on one's physical surroundings, and physicality that is "dissociated" or "integrated" with digital experiences.

Using the Model in Research

The dimensions of cyberpsychology architecture serve as a useful conceptual framework for understanding different digital environments. Any environment can be analyzed on each of the dimensions, including the extent and ways in which each dimension has deliberately been designed, as well as how it is actually used and experienced by the inhabitants of that environment.

Some domains in cyberspace are unique in their emphasis on or development of particular dimensions. The power of VR comes from its emphasis on the sensory and reality dimensions. Twitter was unusual in restricting the text dimension to 140 characters per post. Snapchat and Vine both creatively manipulated the temporal dimension, with the former creating short-lived communications and the latter enabling time to loop. In the physical dimension Yik Yak limited its users to communicate only with others in a very local geographical area, which made it popular for speculating about the supposedly anonymous identity of nearby people. The principles of Cyberpsychology Architecture help explain the psychological impact of such unique applications of the eight dimensions.

The model is useful for investigating particular research topics by offering a broader, more comprehensive framework for understanding them. For example, the concept of "presence" in a digital environment can be examined according to personal identity, social engagement, the interaction between user and device, the use of text, the degree and type of sensory stimulation, the use and experience of time, the manipulation of reality, and the role of the physical body and one's physical surroundings. As another example, consider how these eight dimensions help explain the behavior of online predators.

Using the Model to Assess a Person's Digital Lifestyle

The eight dimensions of cyberpsychology architecture can serve as a foundation for a comprehensive and holistic assessment of one's lifestyle in cyberspace, including the interaction between that lifestyle and one's in-person world. The identity dimension lies at the core of the assessment with all the other dimensions converging on it. Some questions might lead into anxiety-provoking areas, such as inquiring about when someone chooses to be anonymous or invisible, and if the person does things online that he or she does not typically do in the "real" world. Unconscious expressions of identity might be inferred from online behavior as revealed in the assessment of the other seven dimensions.

IDENTITY DIMENSION
- What do you reveal and hide about yourself in your different online activities?
- Which communication tools do you use or avoid when expressing yourself?
- How do you create an idealized version of your identity?
- What hidden, perhaps negative aspects of your self sometimes slip out?
- When do you choose to be anonymous or invisible?
- How do your different online selves compare to the ways you are in-person

SOCIAL DIMENSION
- Why do you choose to communicate with some people online, but not others?
- When do you perceive other people accurately and misperceive them?
- Why do you choose to participate in some online groups, but not others?
- What roles do you play in your online groups?
- How do your groups affect you and others in positive and negative ways?

INTERACTIVE DIMENSION
- How do you feel about the interface of the online environments you use?
- What skills do you have, or lack, when participating in them?
- How do you react when your environments are not doing what you want?
- How do you react to the challenge of mastering a new environment?
- How much do you control your devices, and how much do they control you?
- How do you feel about cyberspace and technology in general?

TEXT DIMENSION
- What types of text communication do you like and dislike in cyberspace?
- How do you express yourself with text compared to being in-person?
- How do you react to other people with text as compared to being in-person?
- What are your feelings about using text versus photographs?

SENSORY DIMENSION
- How do you rely on seeing pictures in cyberspace, including photographs?
- How do you rely on hearing sounds and voices?
- How do you rely on tactile stimulation?
- How do you visually format text to express yourself?
- When do you prefer to eliminate visual, auditory, or tactile stimulation?

TEMPORAL DIMENSION
- How do you use synchronous and asynchronous communication?
- When does time seem to go fast or slow in cyberspace?
- Why do you save or delete some things from cyberspace, but not others?
- How do you feel about things that happen briefly, then disappear?
- When and how often do you go online?

REALITY DIMENSION
- In what ways do your different online environments feel real to you?
- In what ways do your different environments feel like fantasy?
- How do you tell the difference between reality and fantasy in cyberspace?
- How do you react to places that are real versus imaginary?

PHYSICAL DIMENSION
- How does your use of a computer or phone negatively affect your body?
- When does your physical activity coincide with what you are doing online?
- When does your physical body disconnect from what you are doing?
- Where do you use your mobile device and how does that affect you?
- How do you use devices to interpret your environment and your reaction to it?
- Where do portals into cyberspace appear in your everyday environments?