

# CogSpace

## A Collective Mind Map of Cognitive Science and Consciousness Studies

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VERSION: 1.0  
MEDIUM: Interactive Vision-Logic Interface  
WEB SITE: www.cogspace.net

### **Brief Description:**

CogSpace is a navigable 3D conceptual model of the knowledge domains and sub-domains of Cognitive Science and Consciousness research distributed by collective consensus within a semantic-color-space matrix.

### **ABSTRACT:**

*This model is an examination of consciousness through an interactive visual representation of the interdisciplinary knowledge domains of Cognitive Science and Consciousness Studies. As a visualization of the various scientific and academic approaches toward understanding mind and consciousness, a unified and comprehensive overview is achieved that orients our collective approach in the field of consciousness research as a whole.*

*The model is based on a 3-dimensional conceptual framework that assigns six (6) formally established primary knowledge domains of interdisciplinary Cognitive Science (namely: Psychology, Anthropology, Neuroscience, Computer Science, Philosophy, and Linguistics) to the geometric Cartesian coordinate system ( $x, y, z$ ), and to a correlative color system (based on gradient scales of red, green, and blue), resulting in a semantic-color-space matrix for ontologically representational coordination of the topic contents. More specific knowledge areas are plotted within this axiomatic framework as sub-domains (such as Analytical Psychology, Artificial Intelligence, Cognitive Semantics, etc). The precise positions of sub-domains are determined by metric averages derived by consensus survey of a diverse group of people, and is therefore also a representation of a collective perspective of consciousness research (not just the perspective of a single individual or isolated disciplinary field).*

*With this dynamic arrangement of organizational factors, the model renders a unique integral perspective and informative cartography of the "terrain", and provides a "navigational instrument" for our explorative traversing across the frontier of consciousness research. By plotting each sub-domain in scope of the relative positions of all other domains, areas of knowledge and research concentration and lack of concentration ("unexplored regions") become apparent. When referencing any particular disciplinary sub-domain within the manifold model, where it is at and what color it is can suggest something about it's qualitative proximity to either more discrete and concrete or more continuous and abstract types of knowledge and research. For example, a sub-domain that is extremely neurobiological will be far less philosophical, and is placed on an extreme exterior boundary of the model (color saturation is more additive toward extreme hues). Inversely, a sub-domain that is a hybrid, somewhat*

*balanced in interdisciplinary collaboration between linguistics and computer science, psychology and anthropology, and philosophy and neuroscience, is placed closer to the center of the model (color saturation is subtractive toward gray). The exterior of the model therefore represents the diverse areas of the more discrete and concrete--portrayed as the bright "rainbow" spectrum of colors. The interior of the model represents hybrid areas of the more continuous and abstract--portrayed figuratively and literally as the "gray area". The closer a sub-domain is to the exact center, the closer it is to blending and fusing with an absolute, unified, and direct knowing and application of consciousness itself.*

*The overall result of the model is a "mind map" of the collective processes involving the differentiation and unification of interdisciplinary oppositions--the amalgamation of Interior and Exterior, Science and Art, Matter and Spirit, East and West--toward a realization of a coalescent whole.*

### **Overview:**

CogSpace is an interactive, multimodal, and collectively formulated visual mind map of Cognitive Science and Consciousness research. The model can orient people to an integral perspective of mind and consciousness based on *a unified view of our collective approaches toward understanding mind and consciousness.*

The model is based on a multi-dimensional conceptual framework that assigns six formally established primary knowledge domains of interdisciplinary Cognitive Science (namely: Psychology, Anthropology, Neuroscience, Philosophy, Linguistics, and Computer Science) to the Cartesian coordinate system, and to a correlative color system. Many more specific knowledge areas are inserted as sub-domains (for example: Artificial Intelligence, Analytical Psychology, Cognitive Semantics, Psychophysics, Synesthesia, Human-Computer Interaction, etc.) into the axiomatic model framework. The precise positions of sub-domains are determined by query of a variety of individuals within a diverse group of people.

### **Ontological Color-Space Matrix:**

The six primary knowledge domains are naturally matched as dual sets, placed in diametric polar positions, and associated as complimentary field gradients with correlative spacial and color quantities : *\*\*\* confirm orientation*

<b>Psychology</b>	< ----- >	<b>Anthropology</b>	+/- y : red
<b>Computer Science</b>	< ----- >	<b>Linguistics</b>	+/- x : blue
<b>Neuroscience</b>	< ----- >	<b>Philosophy</b>	+/- z : green

This arrangement creates a multi-dimensional semantic-color-space matrix and framework for manifold data representation.

All disciplinary sub-domains are appropriately distributed within the semantic-color-space framework by each sub-domain's relative association to the six primary knowledge domains. Each sub-domain is portrayed as a discrete visual node assigned with a mixture of red, green, and blue color properties that are proportionally relative to spacial coordinates ( $xr+$ ,  $xr-$ ,  $yg+$ ,  $yg-$ ,  $zb+$ ,  $zb-$ ) resulting in a unique color signature that is directly correlative to the node's position in space. This method creates a perfect correlation between semantic context, spacial position, and color value--delivering a type of synesthetic representation of the entire model.

### **Collective Formulation:**

The evaluation of the metric positioning of each sub-domain is determined by a process of collective consensus. A diverse group of people (including scientists, artists, scholars, independent thinkers, laypersons, and others) are invited to participate in "voting" for the placement of each specific knowledge sub-domain within the model. Participants can also introduce new knowledge sub-domains into the field for collective review and placement. On-going consensus results will determine the representation of the model: a continuously evolving "democratic" or "collectively intelligent" cartography of our collective approach to understanding mind and consciousness.

### **Perspective Orientation:**

The overall arrangement of the model renders an interesting orientation and perspective around our collective approach into the frontier of Cognitive Science and Consciousness research. When referencing any particular disciplinary sub-domain of knowledge, *where it is at* and *what color it is* can suggest something about it's proximity to *an absolute comprehension of consciousness*. For example, a sub-domain that is extremely *neurobiological* will be far less (if not absent of) *philosophical* content, and will be placed on an extreme exterior fringe of the model (color saturation will be more additive toward extreme hues). \*\*\* Inversely, as another example, a sub-domain that is in somewhat of a balanced interdisciplinary collaboration or hybrid between *linguistics* and *computer science*, *psychology* and *anthropology*, and *philosophy* and *neuroscience* will be placed closer to the center of the model (color saturation will be subtractive toward grey). The exterior boundary of the model therefore represents a diverse topology of concrete and discrete aspect knowledge and applications. The interior of the model therefore represents the blending and fusion of interdisciplinary knowledge and applications--and the exact center represents an absolute, unified, and direct knowledge and application of consciousness itself (there does not appear to be any currently clarified disciplinary domain that resides at this exact center). The closer a disciplinary domain is to the center, the closer it may be to an actual knowing of consciousness. This central area is figuratively and literally the "gray area". This trend is representative of our collective approach from "the

exterior" toward the frontier of "the interior", while also including the coalescent amalgamation of the whole.

### **Multimodality:**

- As a *mind map of the study of mind upon itself*, it is a uniquely expressive compound symbol of the epistemological aspects of cognitive methods (i.e., mental processes of knowing) and of consciousness itself in form, function, and content--with significant emphasis on the iteratively self-reflective and multi-dimensional qualities of "mind" in the form of computation and multi-media representation.
- As the representational formulation is determined in part by group participation and consensus via the internet, it is a *mind map constructed by a collective mind* (as opposed to just a singular individual mind).
- As a model resulting in synesthetic representation by the semantic-color-space framework, it is a *mind map that plots new territory between and around both rational and phenomenological ways of knowing and perceiving*.

### **Model Features:**

- a conceptual framework based on the primary axiomatic knowledge domains of interdisciplinary Cognitive Science.
- placement of knowledge sub-domains are determined by a collective consensus process, portraying a unified and dynamic representation of a pluralistic perspective.
- an extensive and synesthetic "mind map", an instance of a type of "vision-logic interface", that represents a complex system of associations into a more comprehensible form.
- an interface for navigating and accessing actual information and knowledge about Cognitive Science: each knowledge domain is represented as a discrete visual node that can be interactively selected ("clicked") to then unfold with more information on the content of that knowledge domain (data extracted thru an always up-to-date Wikipedia API).

### **Presentation:**

CogSpace is presented here in it's current stage of development (not all features are yet available):

<http://www.cogspace.net>



**Author's Bio:**

Michael Gaio is a multi-disciplinary social entrepreneur, interaction designer, information architect, ontological engineer, philosopher, archetypal cosmologist, noospheric researcher, inventor, and multimedia artist.

He has worked in interactive media primarily within the Lifestyles of Health and Sustainability (LOHAS) market for the past eleven (11) years honing multiple talents in Flash Visual Design, Animation, Interaction Design, User Interface Design, Information Architecture, ActionScript Programming, Web Development, and Innovation for social evolution. He has produced over 100 projects primarily in support of ecological, sociological, or culturally creative organizations and initiatives, such as: Harvard University's Center for Health and the Global Environment (CHGE), the California Institute of Integral Studies, the Institute of Noetic Sciences, the Buckminster Fuller Institute, United Nations World Environment Day, Julia Butterfly's Hill's Circle of Life, EarthDance International, PlanetWork, Species Alliance, Duane Elgin's Awakening Earth, Dave Ellis' Leadership Training, Richard Tarnas' Cosmos and Psyche, and AutoDesk. He has conducted classes on Virtual Reality development to grade-school children, and instructed a full series of Flash design and programming courses at the Center for Electronic Arts in San Francisco. He has initiated multiple innovative entrepreneurial projects that combine principles in Information Technology, Transpersonal Psychology, and Archetypal Cosmology to promote social evolution.

Michael holds an M.A. in Philosophy, Cosmology, and Consciousness from the California Institute of Integral Studies (2006).

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