

Approaching Design

Four Orders of Design

The Arts of Design

Integrated through rhetorical approach and manifested through the design disposition.

	FIRST ORDER COMMUNICATION	SECOND ORDER CONSTRUCTION	THIRD ORDER INTERACTION	FOURTH ORDER INTEGRATION
WORDS	2D WORLD: DATA, WORDS, SIGNS, SYMBOLS, IMAGES, INFORMATION			
THINGS	3D WORLD: THINGS, OBJECTS, ARTIFACTS, ARCHITECTURES			
ACTIONS	4D WORLD: ACTIONS, INTERACTIONS, SERVICES, PROCESSES, EXPERIENCES			
IDEAS	INTERCONNECTED WORLD: SYSTEMS, ENVIRONMENTS, CULTURES, ORGANIZATIONS			

Philosophic Variables

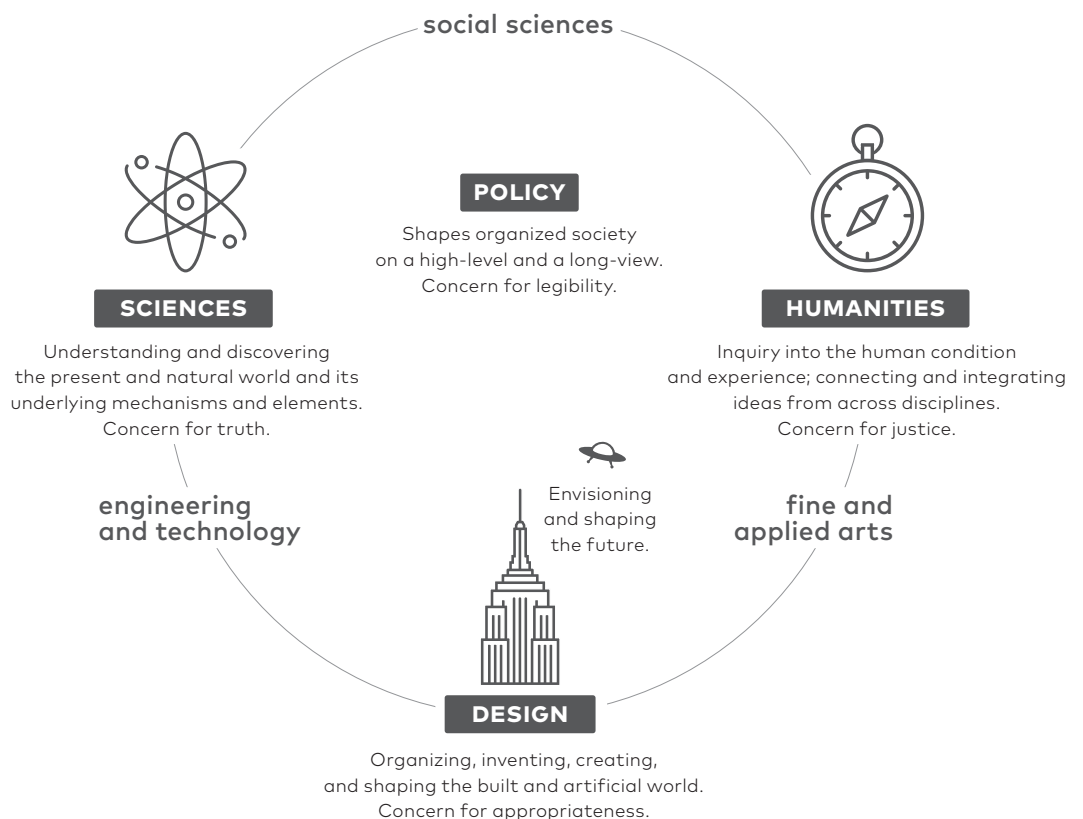
Modified version of Richard Buchanan's Four Orders of Design

Present	←	Near Future	→	Far Future
Tangible	←		→	Intangible
Tame	←		→	Wicked
Static	←		→	Dynamic
Parts	←	Relationships	→	Wholes
Existent	←		→	Emergent
Revisable Solutions	←		→	One Way Forward

Alexander R. Wilcox Cheek

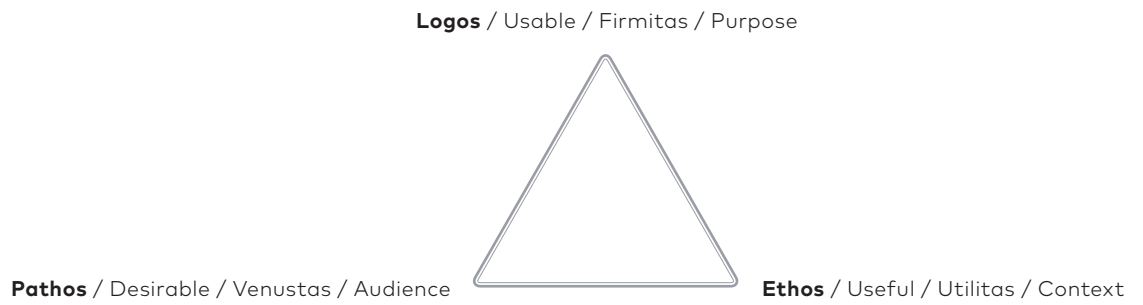
"The Many Cultures"

Cheek based on Nigel Cross, C.P. Snow, James C. Scott



Aristotle's Appeals /
Design Form /
Vitruvian Triad /
Rhetorical Stance

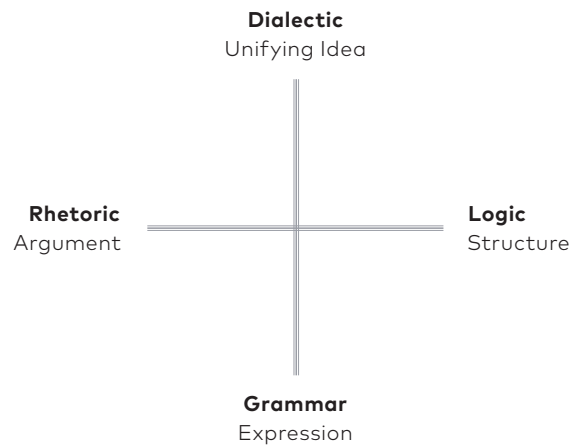
via Richard Buchanan



Communicative Objects

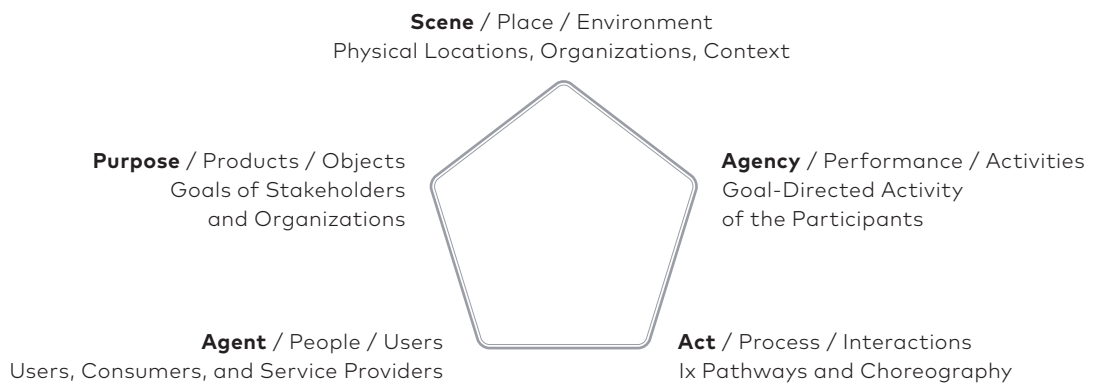
Richard Buchanan

based on Richard McKeon



Acts of Dramatism /
Service Experience /
AEIOUs

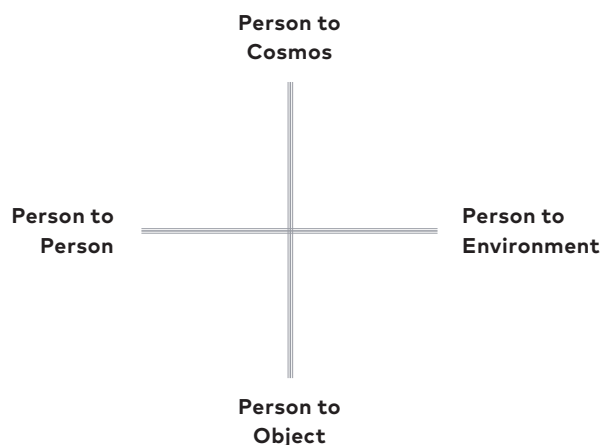
Kenneth Burke /
Shelley Evenson /
Bruce Hanington



Human Interaction

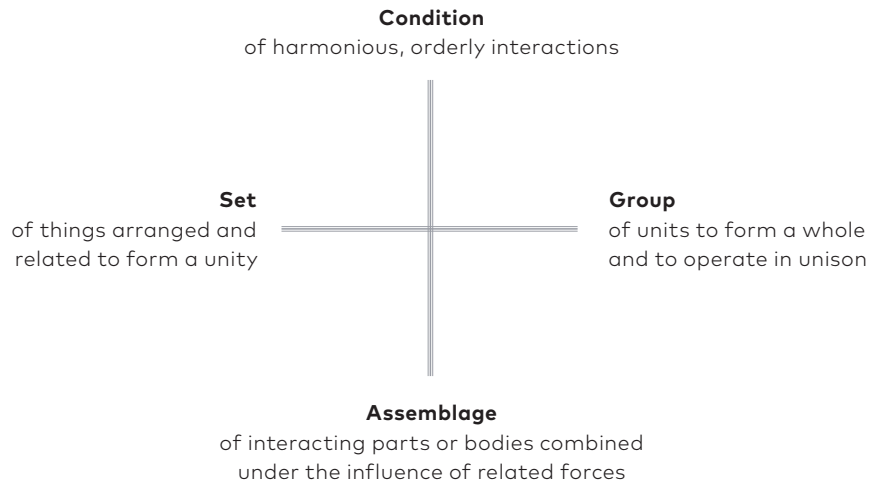
Richard Buchanan

based on Richard McKeon



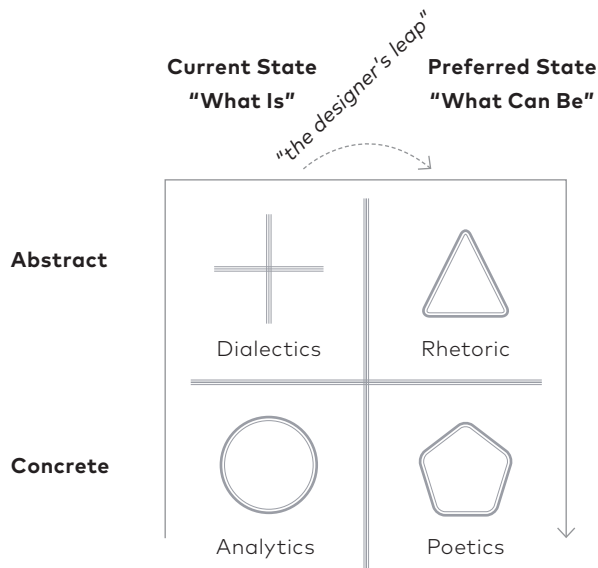
System

Richard Buchanan



Design Process Mashup

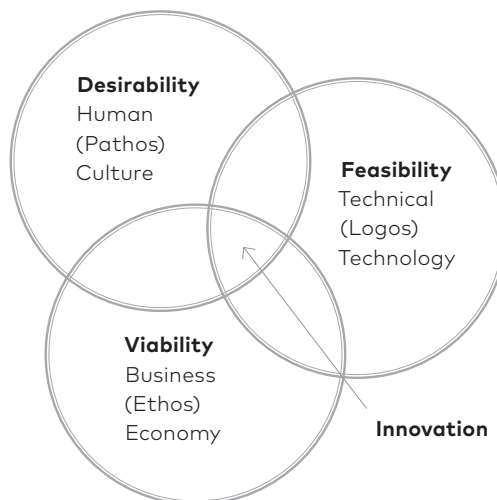
Al-Yassini, Cheek, Clapper, Selzer, Williams based on Christopher Alexander via Shelley Evenson



“Design Thinking”

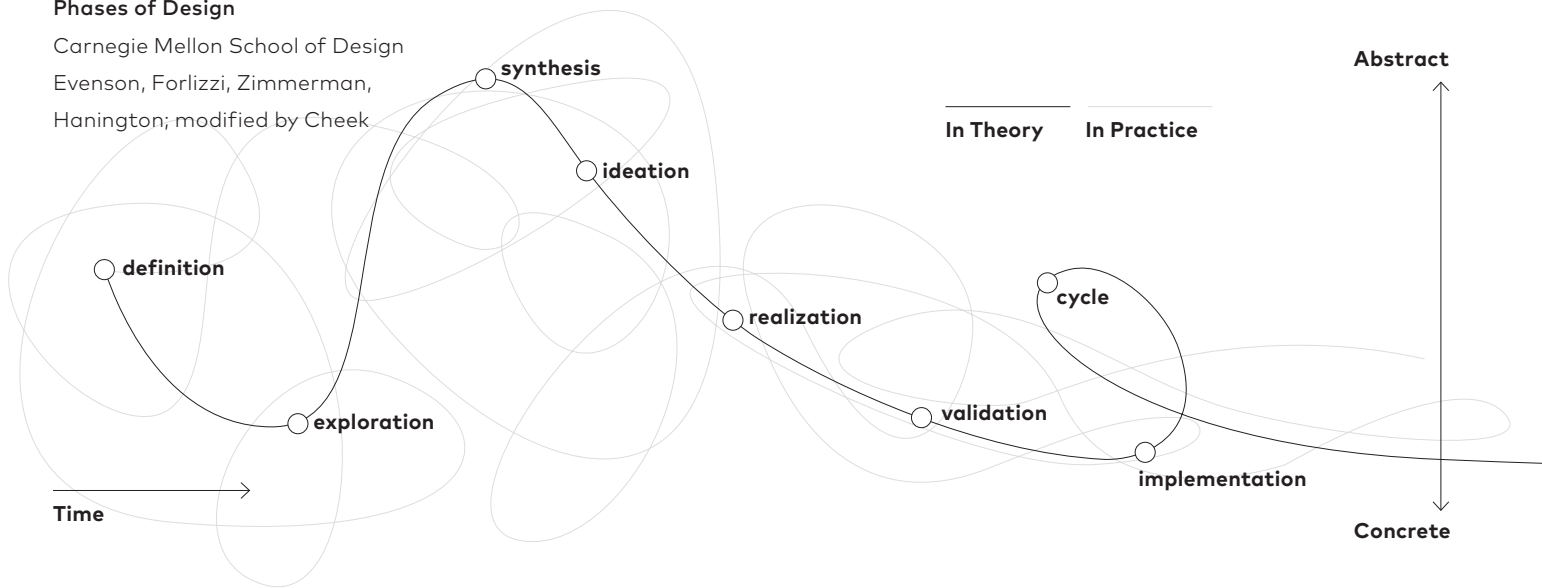
IDEO / Stanford d.School / SAP

“Design thinking” is a re-packaged version of centuries-long critical practice that has its roots in Aristotle’s Appeals (parenthesis) and the Vitruvian Triad (previous page). While the term originates with Herb Simon and later used by Peter Rowe, it was popularized by IDEO in the 21st century.



Phases of Design

Carnegie Mellon School of Design
 Evenson, Forlizzi, Zimmerman,
 Hanington; modified by Cheek



Definition

Designers explore the various ideas surrounding the subject matter in the most objective ways possible and listening to as many stakeholders as they can. Visualization techniques help to map out the problem space. Definitions can be fluid or concrete, depending on the complexity of the space.

Exploration

Requires a suspension of opinion as to what the “problems” are. Through a variety of research methods, designers develop a deeper understanding of the space at hand. Methods may include contextual inquiry, directed storytelling, blueprinting, shadowing, surveys, diaries, touchpoint tours, environmental descriptions, stakeholder maps, identification of core competencies. Designers may also develop an understanding of the technologies, materials, and other ideas out there (competitive analysis).

Synthesis and Ideation

Informed by research insight, designers develop a wide range of concepts that respond to the context and stakeholders. Prototyping activities should engage the same or similar research subjects from prior phases. Designers often times work one-on-one with participants and co-design with them.

“The Designer’s Leap”

This space is sometimes referred to as “the designer’s leap,” the moment when one shifts their weight from current state to future possibility.

Realization to Implementation

Designers evaluate their strongest concepts through further participatory design activities and validation methods.

 Good design remains engaged beyond implementation, cycling back, iterating, and re-designing as contexts change and evolve.

And remember...

It's Always More Complicated Than It Appears.