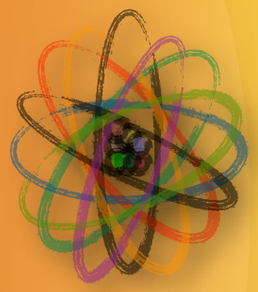
Pursuing Value-Infused Design thru Thriving Systems Theory

Projecting the choice properties of Thriving Systems Theory onto the entire design cycle of models and systems

Les Waguespack©2013 Computer Information Systems Department Bentley University

intention

from the beauty in nature



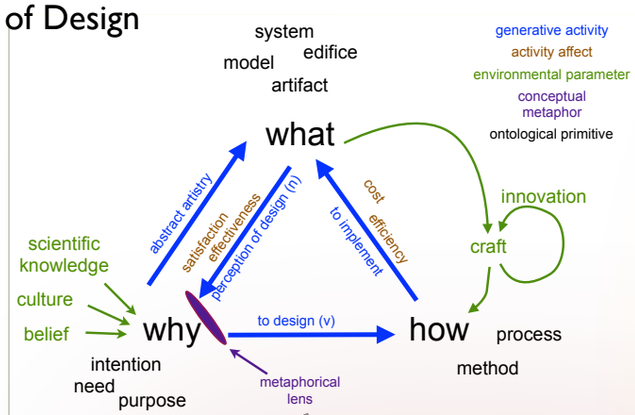
Christopher Alexander's properties of order in nature

The value we experience in systems is the reflection of our intentions that we perceive in the artifact. That value is achieved in the alignment of our intentions with the properties of the artifact. We perceive value in an object's design (noun). We achieve value by faithfully infusing our intentions in the object's design (verb.)

A system thrives when it promotes the unfolding of the choices that support and align with the stakeholders' current intentions; and it promotes the unfolding of those intentions through the conceptual clarity and efficiency with which it represents them.

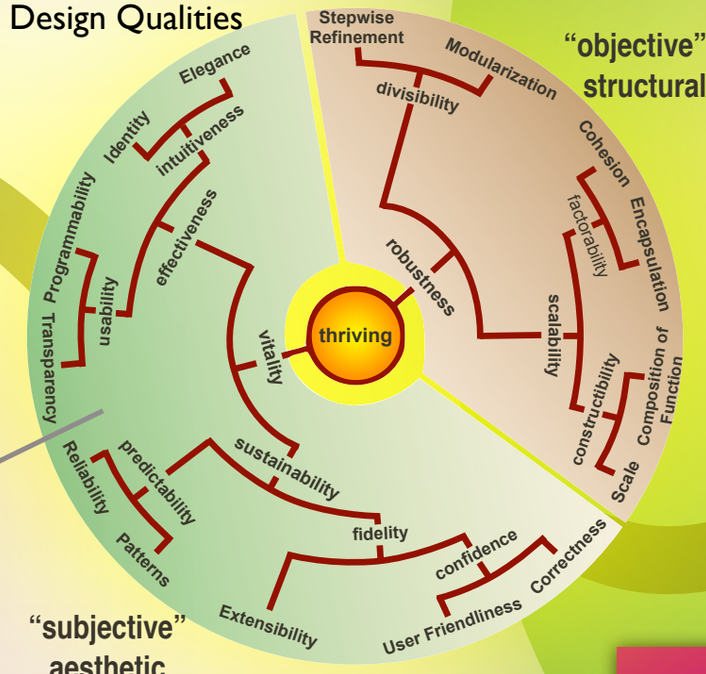
The fifteen choice properties of system quality can be perceived in information system artifacts, but can also be instilled and strengthened through the enlightened application of the ontology and/or vocabulary that defines the nature of the system domain. The confluence of the properties inform the experience of value, quality, in the artifact.

A Special Ontology of Design



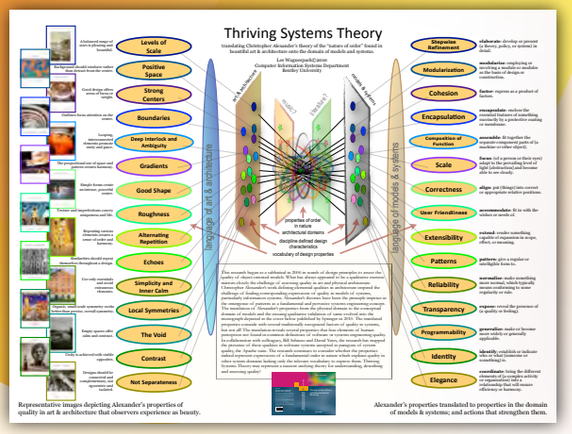
The metaphorical lens through which the designers both express the desired values as their intentions and then perceive the results of the artifact realization mediates the quality experienced, their satisfaction. The Thriving Systems Theory Properties provide both a vocabulary and taxonomy of design that informs the value-proposition and the evaluation of the artifact affording a means of faithfully fulfilling the designers' intentions.

Thriving Systems Choice Properties Conflate as Design Qualities



artifact

to the quality in systems



Representative images depicting Alexander's properties of quality in art & architecture that observers experience as beauty.

Alexander's properties translated to properties in the domain of models & systems; and actions that strengthen them.

Since 2010, Les Waguespack in partnership with Bill Schiano and David Yates continues exploring the question of a fundamental, universal, underlying theory of systems quality. The work thus far has mapped the choice properties of Thriving Systems Theory to object-oriented modeling, relational data modeling, and explained the extraordinary success and resilience of the Apache web server. Since then we've explored the architectural qualities of agile project management methodologies (i.e. SCRUM), system security and the design implications of the choice properties on the perceived quality of management information systems.

The successful extension of Thriving Systems Theory's aesthetic characteristics of quality to these broader domains of information systems leads us to try more systems paradigms as a way to investigate quality in those domains and to further substantiate and refine the underlying Thriving Systems Theory.

Thriving Systems Theory Scholarship

Waguespack, Leslie J., Yates, David J., Schiano, William T. (2014) "Towards a Design Theory for Trustworthy Information Systems," Hawaii International Conference on Systems Sciences, Hawaii, HI, January (2014) (to appear!)

Schiano, William T., Yates, David J., Waguespack, Leslie J. (2013) "Apache Web Server: Applying Lessons from Physical Architecture to Enable Systems to Thrive," The International Journal of Design management and Professional Practice, (to appear) accepted 27 August 2013.

Babb, J.S. and Waguespack, L.J., (2013) "In Search of Design-Focus in IS Curricula," Information Systems Education Conference, San Antonio, TX, (to appear Nov 2013).

Schiano, William T., Yates, David J., Waguespack, Leslie J. (2013) "Apache Web Server: Applying Lessons from Physical Architecture to Enable Systems to Thrive," 7th International Conference on Design Principles and Practices, Chiba, Japan, 6 March 2013.

Waguespack, Leslie J. Jr, Schiano, William T. (2013) "Thriving Systems Theory: An Emergent Information Systems Design Theory" in 46th Hawaii International Conference on Systems Sciences, January 2013.

Waguespack, Leslie J. Jr, Schiano, William T. (2012) "SCRUM project architecture and thriving systems theory" in 45th Hawaii International Conference on Systems Sciences, January 2012.

Waguespack, L. J. (2010). Thriving Systems Theory and Metaphor-Driven Modeling. London: Springer-Verlag.

12 October 2013