STS in the Digital Era:
Renewed Conceptual Foundation for SmarT Organization Design

(Part I: Foundational Perspectives)

Bert Painter, Douglas Austrom and Carolyn Ordowich

October 29, 2020

STS RT
SOCIOTECHNICAL SYSTEMS ROUNDTABLE INC.

SMART ORG-DESIGN GLOBAL NETWORK

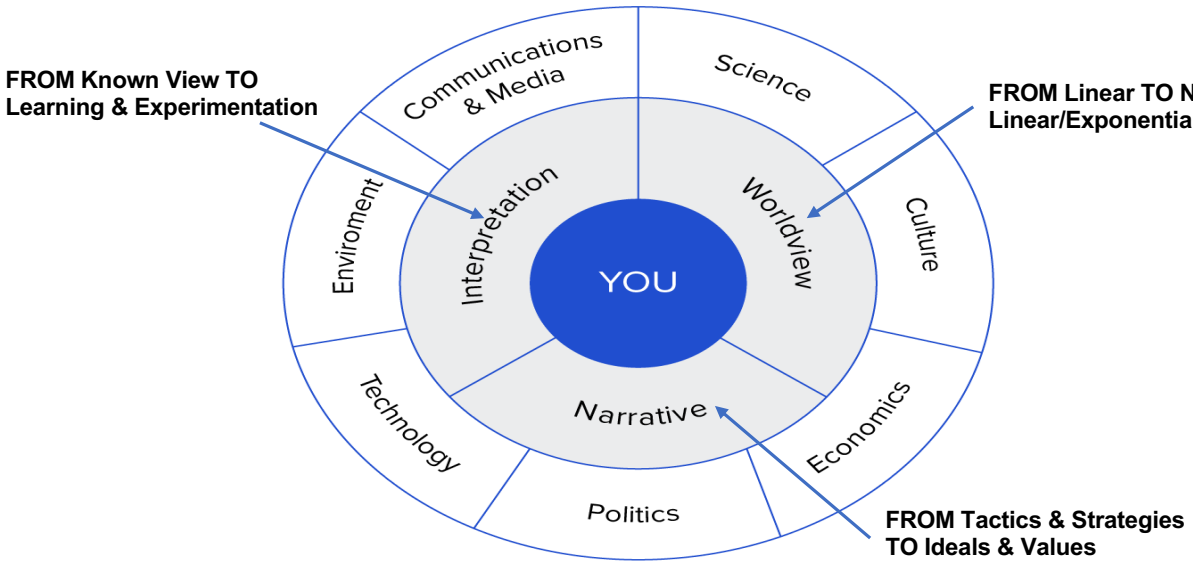
AGENDA

- **October 29th webinar**
  - Objective – To present a renewal of fundamental theory for STS Design in the Digital era
  - Topics –
    - ❖ Context for reframing designing
    - ❖ First principles for humanistic designing
    - ❖ Three perspectives for whole systems 'sense-making'
  - Process – Presentation of each topic followed by Q&A
- **November 5th webinar**
  - Objective – To present a meta-methodology of dynamic designing and explore 'fit' with yours' & others' design approaches

WIDE-ANGLE VIEWPOINT = holistic and inclusive wellspring for designing

PARADIGM SHIFTS IN MAKING SENSE OF CHANGE

How People Make Sense of Changing Conditions



How we respond to changes in our objective conditions is a function of our worldview, the narrative we tell ourselves about what is happening and our interpretation of our experience of what is happening.

Source: Prescient 2019

Revised from Prescient 2019 – How People Make sense of Changing Conditions

Paradigm Shift Responding To Change

FROM Linear/Predictive/Known Ways

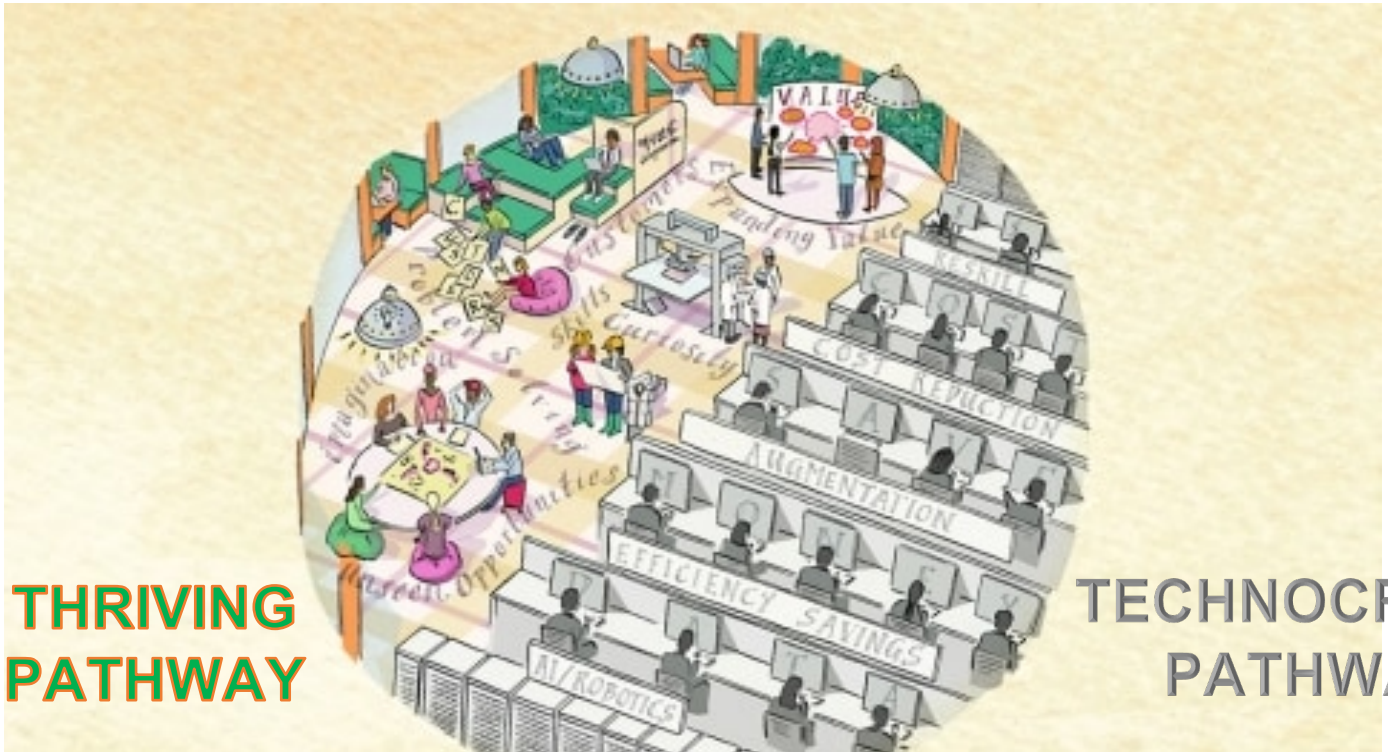
- Focused on outcomes for a new steady state of higher performance
- Designed for predictability & scalable efficiency
- Solving existing problems
- Purpose founded on threat-based narrative
- Change is 'managed' episodically with a beginning, middle and end [punctuated equilibrium]
- Sharing knowledge
- Prescribed roles
- Transformation of 'aspects' of the system and its relationship with its environment

TO Exponential/Ideals-driven/Learning Ways

- Focused on impact to exponentially expand opportunities to create more value
- Designed for scalable learning & innovation
- Imagining desirable futures
- Purpose founded on opportunity-based narrative
- Adaptation is an ongoing process of learning, discovery and experimentation
- Creating new knowledge
- High-impact connections
- **Transformation of the whole (eco) system at 3 levels – ecosystem institutional logics, organizational design/culture and individual/group behaviors all at the same time**

Choice for Humanity

Collaborative Design



Traditional Design

Meet Today's Organization Designers

- Network engineers
- Data modelers
- Network architects
- Software engineers
- Data scientists
- Internet applications specialist
- Enterprise architects
- Application developers
- Chief Technology Officers

- Network engineers
- System architects
- Data analysts
- Applications engineers
- Chief Information Officers
- Intranet applications manager
- Systems analysts
- Web developer

Design choices based on the implicit logics of control and uniformity

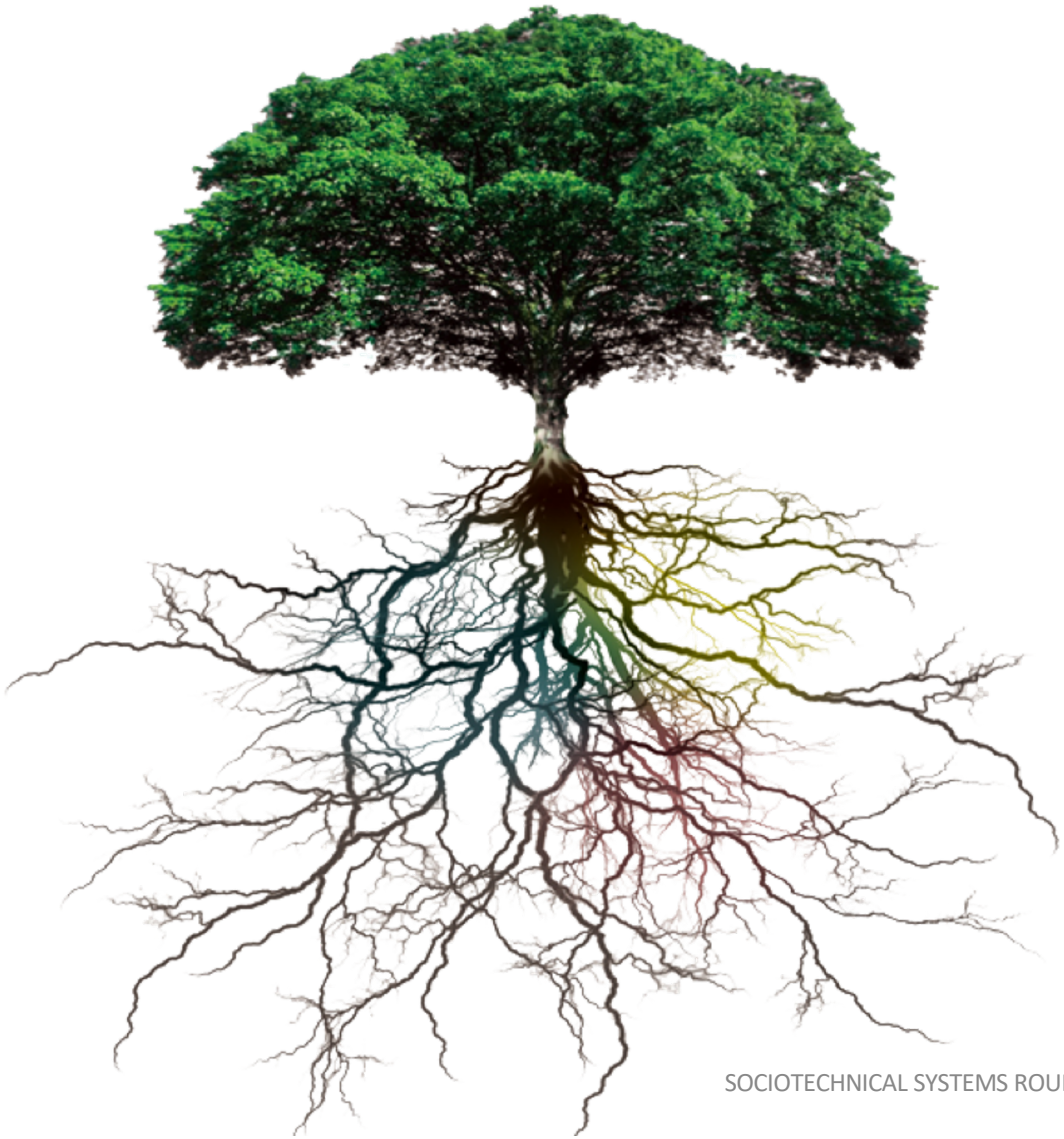
First Principles for a Humanistic Orientation to Design

$$\frac{dy}{dx} = \lim_{h \to 0} \frac{f(x+h) - f(x)}{h}$$

The first basis from which a thing is known.

Aristotle

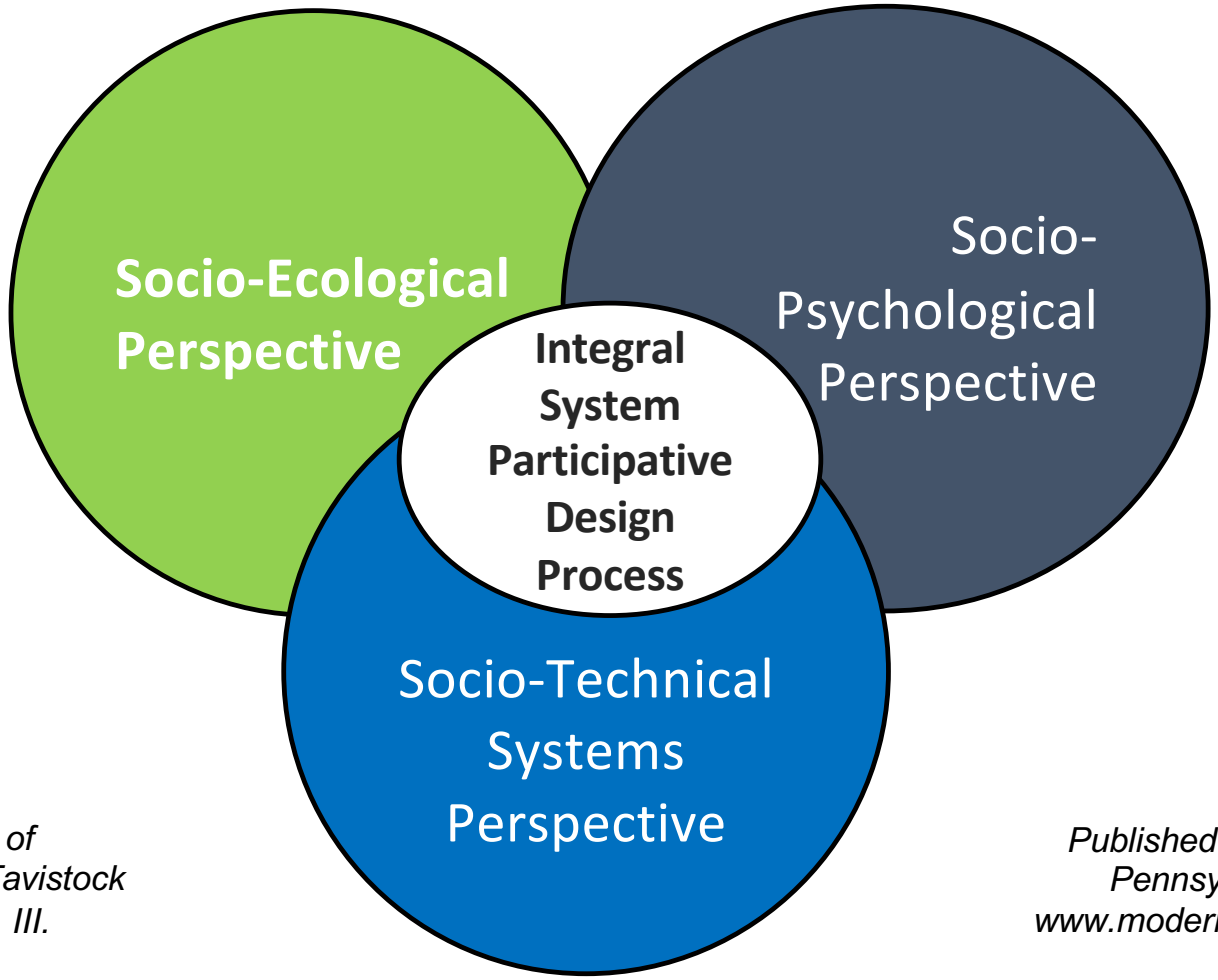
- Human dignity
- Self-determination - responsible autonomy, voice, and choice
- Co-determination through dialogue
- Reciprocity and mutual benefit
- Wholeness and whole systems thinking



Discussion

- Questions …
- Thoughts …

Conceptual Foundation



Trist et al., (1990-1997), "The Social Engagement of The Social Sciences: A Tavistock Anthology", Volumes I, II, III.

Published by the University of Pennsylvania Press and www.moderntimesworkplace.com.

Our Heritage of 'Whole/Integral System' Organization Design

Our Heritage of
Three Inter-related Perspectives for Whole/Integral System Organization Design

Socio-Ecological Perspective

Understanding both the unity of the organization and its environment as well as their respective underlying dynamics, thereby enabling strategies, relationships, and processes for future opportunity.

Key Design Parameters:
- Purpose
- System boundary
- Mutual benefit

Socio-Technical Systems Perspective

Organizing for work/value creation through structures and processes that jointly optimize both the social and technical features in an integral system.

Key Design Parameters:
- Value creation
- Work system
- Jointly Optimizing Technical & Social features

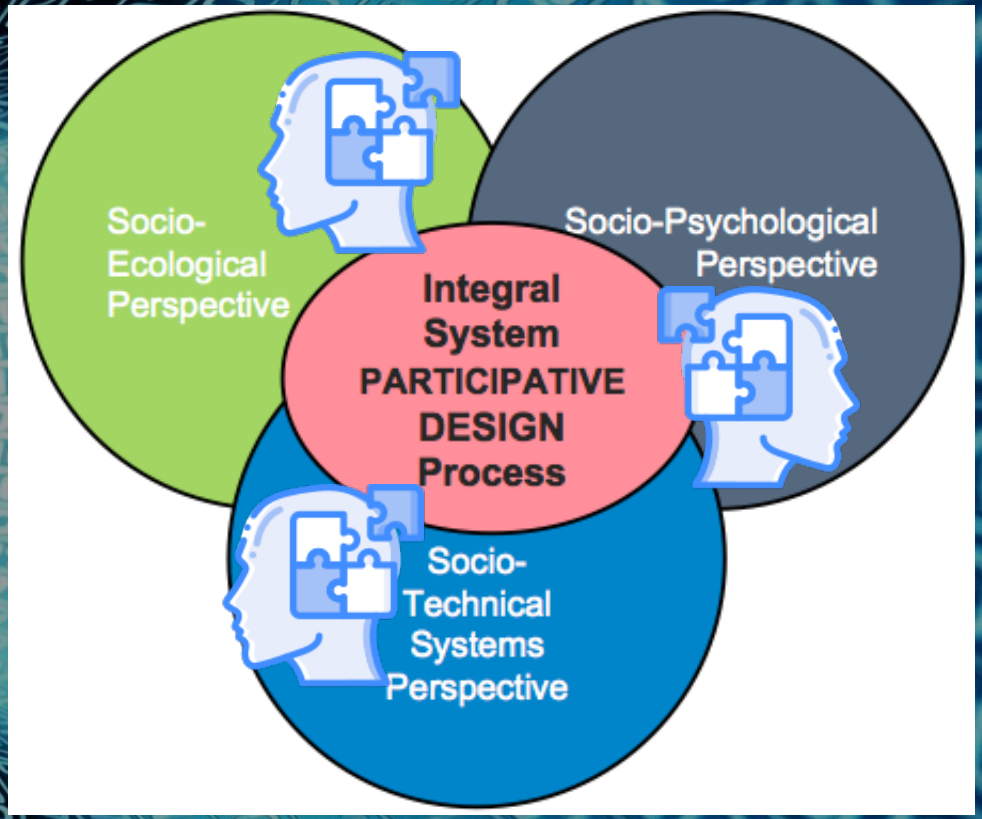
Socio-Psychological Perspective

What individuals need for agency to thrive as a group, with culture as the 'bridge' in the dynamic relations between the individual and the social entity.

Key Design Parameters:
- Group Dynamics
- Culture
- Leadership

Renewed Foundational Perspectives in Digital Era

In our Instantaneous,
Hyper-connected,
Limitless,
Nonlinear,
Dynamic World



First Principles for Humanistic Designing

Renewed Foundational Perspectives in Digital Era

**In our Instantaneous,
Hyper-connected,
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Socio-Ecological Perspective

Is *both* about a continuously evolving *negotiated order* of system boundary and purpose among diverse interacting institutional actors

and

their simultaneous pursuit of *alternate futures*

First Principles for Humanistic Designing

Renewed Foundational Perspectives in Digital Era

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Socio-Technical Systems Perspective

Is *both* about *self-organized work systems* with an optimal combination of human and digital-technical capability for value creation

and

a *learning infrastructure* for scaling learning to the entire ecosystem to maintain rapid innovation.

First Principles for Humanistic Designing

Renewed Foundational Perspectives in Digital Era

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Socio-Psychological Perspective

Is *both* about culture enactment as a *'stable bridge'* for continuous development and growth of trust among diverse individuals and groups within bounded organizations and their ecosystem

and

culture enactment as a *'disruptive force"* to build new bridges to people with different thinking for a rapid pace of innovation.

Three inter-related Perspectives for SmarT Organization Design in the Digital Era

Socio-Ecological Perspective

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First Principles for Humanistic Designing

3 Inter-related Perspectives & Dynamic Designing

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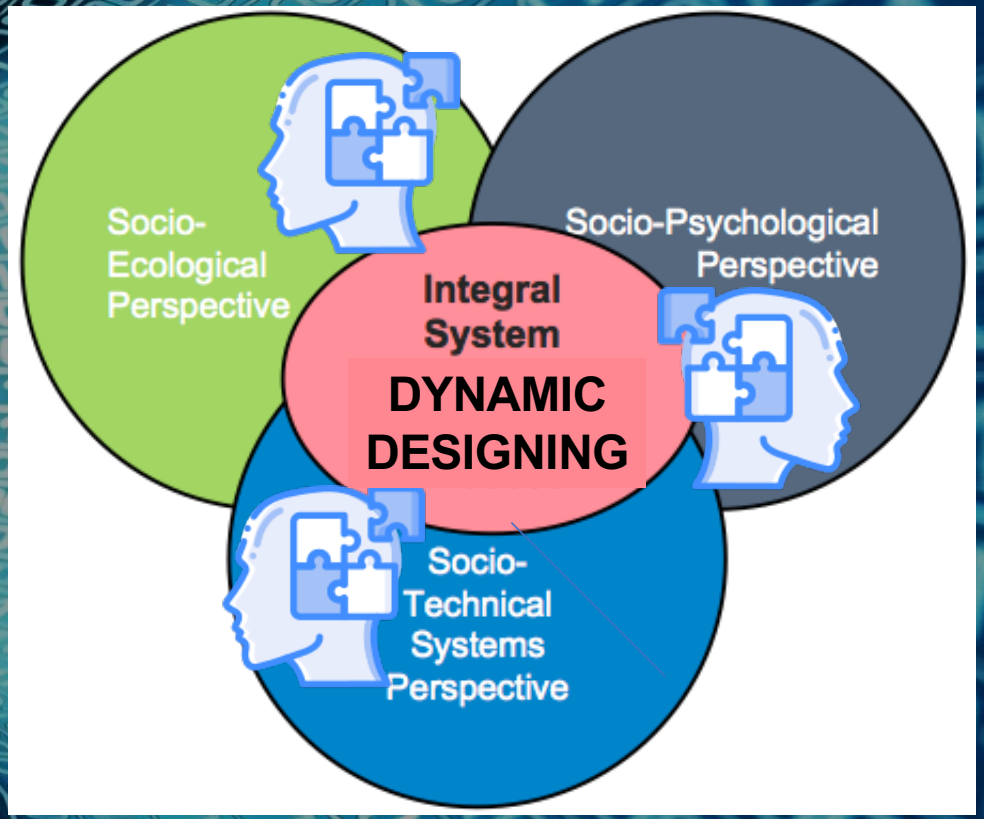
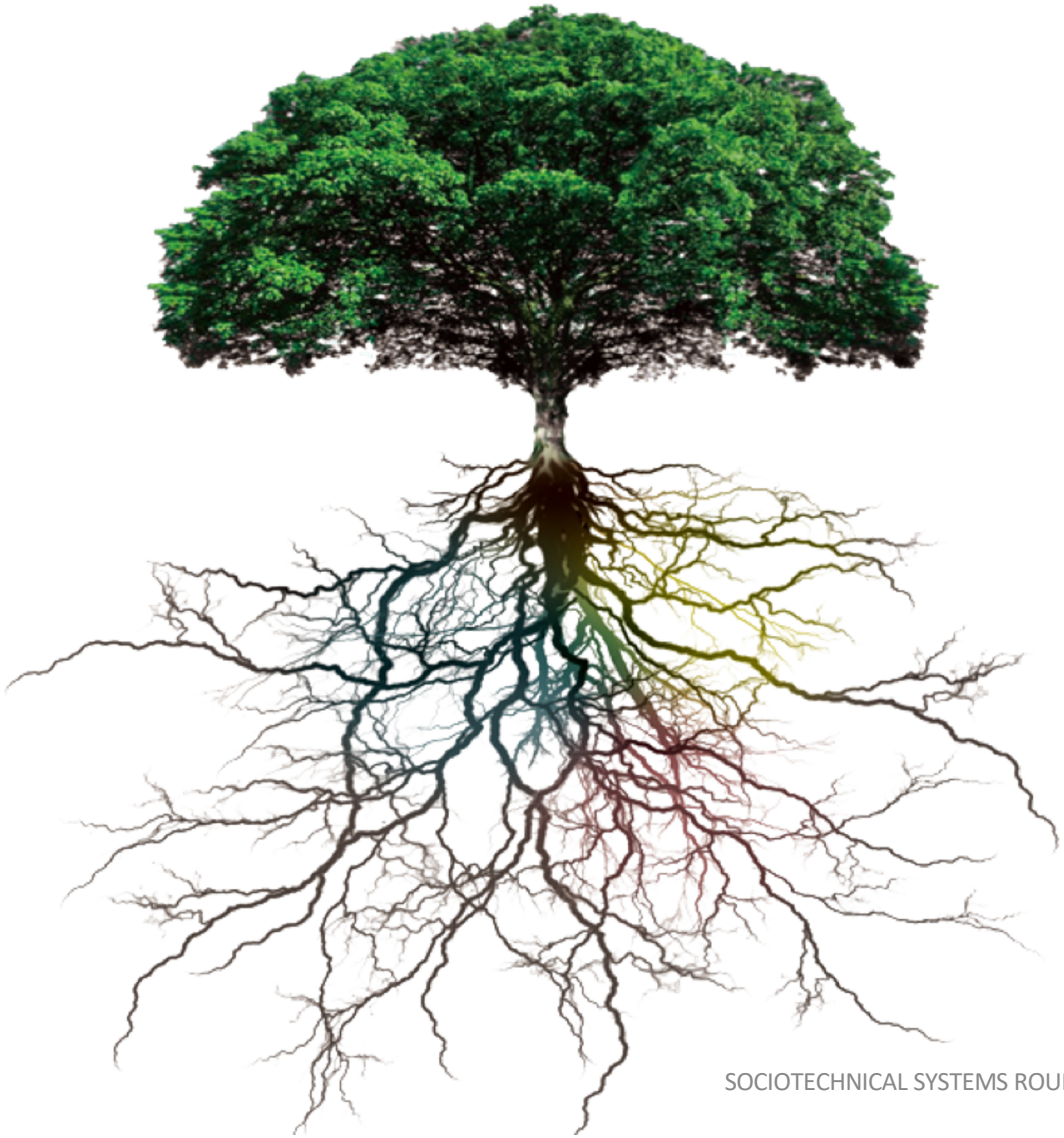


First Principles for Humanistic Designing



Discussion

- Questions
- Thoughts

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November 5, 2020

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November 5th Webinar

- **Objectives** – To present a meta-methodology for dynamic designing and to explore the 'fit' of the first principles and the three perspectives with your design approaches you use in your design practice
- **Topics** – Explore the sense-making premises of your preferred methodologies and approaches for designing given the first principles and the three perspectives for whole systems 'sense-making'
- **Process** – Using the first principles and the three perspectives from socio-ecological (context) to socio-technical systems (value creation) to socio-psychological (culture), we will work in ZOOM breakout rooms to exchange our own and other approaches that help whole system designers "make sense of" the whole (eco)system in which the system to be designed resides