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THE SYSTEMS DYNAMICS OF GEOSCIENCE CULTURE AND LEVERAGE POINTS TO EFFECT CULTURE SHIFT

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From a systems dynamics perspective, culture is an emergent, self-organizing property of complex human interactions. Once established, cultures persist through cultural activities and reinforcement of cultural mores, folkways, and norms specifically intended to perpetuate the culture. In the systems dynamics frame, culture persists through multiple interacting positive and negative feedbacks that operate collectively to reinforce culture and resist dramatic systemic changes. Norming (the establishment and maintenance of cultural norms) and sanctioning (formal and informal procedures to discipline cultural infractions) are feedback processes intended to preserve current cultural practices and maintain the cultural system. To effect significant change in dynamic systems like culture, one must intervene in the established system dynamics to drive the system toward new equilibrium states. While there are many leverage points to intervene in a system, not all leverage points have the same power to effect systemic change. To alter system states, one must engage leverage points with sufficient power to do so. Historically, the Geosciences community engaged low-power leverage points with minimal effects on Geoscience equity, diversity, and inclusion – decades of effort with minimal changes in Geosciences culture and demography. Geosciences Associated Societies Committed to Embracing & Normalizing Diversity (Geosciences ASCEND) aims to advance toward a more inclusive Geoscience Culture by utilizing high-power leverage points (re-orienting system structures and rules) such that new mores, folkways, and norms emerge to establish a new system equilibrium – i.e., culture.

Abstract ID#:

382560

Password:

734377

Meeting:

GSA Connects 2022 meeting in Denver, Colorado

Session Type:

Topical Sessions

Primary Selection:

T156. G-IRL: Collaborations and Conversations on Practicing Geoscience and In-Real-Life Applications for Dismantling Scientific Siloes

Final Session Number:**Abstract Title:**

THE SYSTEMS DYNAMICS OF GEOSCIENCE CULTURE AND LEVERAGE POINTS TO EFFECT CULTURE SHIFT

Preferred Presentation Format:

Oral

Discipline Categories:

Geoscience Education Geoscience and Public Policy Geoscience Information/Communication

Abstract Submission Fee:

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