OPPORTUNITY TENSION AT THE CENTER: POSITIVE ORGANIZATIONAL BEHAVIORS, PARTICIPANT CAPITAL, AND SOCIAL EMERGENCE

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ABSTRACT

This theoretical essay connects 1) collaboration in voluntary groups that create social value, 2) interpersonal behaviors of the participants, and 3) various forms of "capital" participants bring to opportunities for which they are highly motivated. Positive behaviors and accumulation of participant capital mutually reinforce the sense of opportunity and motivation participants feel for a given project and increase the attractiveness and sense of opportunity for others. This "opportunity tension" grows in a non-linear fashion resulting in increasingly disruptive participant action that ultimately drives the production of emergent social value. A complex systems lens emphasizes mutual reinforcement at multiple scales and containment that bounds interaction. Support for the argument comes from a wide range of literature and peer-reviewed journal articles citing empirical evidence for the individual effects between the various factors. By understanding these dynamics social sector collectives can proactively design their interaction to become more effective in responding to the serious challenges we increasingly face.

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Keywords: opportunity tension; positive organizational behavior; social capital; generative emergence; collaborative emergence; social emergence; multilevel mutual causality

The relationship between the individual and the collective is one of the most fundamental issues in sociological theory. (Sawyer, 2005, p. 63)

This spontaneous emergence of order at critical points of instability, which is often referred to simply as "emergence," is one of the hallmarks of life. It has been recognized as the dynamic origin of development, learning, and evolution. In other words, creativity—the generation of new forms—is a key property of all living systems. (Capra, 2005, p. 33)

INTRODUCTION

Purpose

This essay applies a complex systems lens of emergence to an aspect of transformation and social change. An understanding of the mechanisms involved enable a more intentional approach to developing leverage points to affect change. The essay draws together two rich fields of inquiry: 1) positive organizational behavior and 2) social emergence. Lichtenstein's (2014) "opportunity tension" can be used as a mediating construct tying these together. The process and outcome of social emergence are described as multilevel changes across a continuum of micro, meso, and macro units of analysis, and these changes can be the source of significant amplifying mutual reinforcement leading to a tipping point of change in behavior or structural form. Existing sociological scholarship acknowledges bi-level aspects of emergence (e.g., collective behavior emerging from individual behavior) but generally does not explicitly specify simultaneous, mutually reinforcing multiple levels of emergence as a fundamental characteristic of social emergence.

Definition of Key Terminology Used in this Study

The following is a brief orientation to concepts used in this paper, presented in the order they will be introduced. Deeper explorations will occur in subsequent sections.

- **Emergence** Order creation in complex systems. Persistent patterns that arise in one behavioral domain level usually from the interaction of elements at another level.
- Emergence, Social A type of emergence in complex social systems that explicitly involves human structures of culture, organization, small groups, individual relationships, or ways of interacting. They can arise spontaneously or be intentionally created for a purpose (Sawyer, 2005).
- **Emergence, Collaborative** A type of social emergence typically at the relational and interactive level that may be ephemeral (e.g., modes of discourse) or stable (e.g., protocols, procedures). It often comes about unintentionally (Sawyer, 2005).
- **Emergence, Generative** A type of social emergence typically at the institutional level, often associated with start-ups or other intentionally

- constructed social entities by entrepreneurs, that emerge with an identity of their own (Lichtenstein, 2014).
- **Social Sector** The sector of production that prioritizes social value above other types of value and often employs volunteer resources in its realization (Abu-Saifan, 2012).
- Community of Practice "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger, McDermott, & Snyder, 2002: 4)
- **Adaptive Tension** Contextual or environmental forces operating on a system that create stress affecting every element and relationship in the system in a general way (McKelvey, 2003).
- Opportunity Tension The combination of felt, feasible opportunity to innovate and the motivation to do so. Specifically the context is entrepreneurial actions undertaken by the individual or the collective but is extended in this essay to be related to a sense of initiative in any type of social emergence (Lichtenstein, 2014). "Feasible" is in the eyes of the entrepreneur or actor, and exists as a felt sense.
- **Positive Organizational Behaviors (POBs)** In this study, POBs are defined as those behaviors that are central to the body of POS, especially the behavioral aspects of HQCs and positive emotions. HQC behaviors are actively energetic, mutual, and positive. Positive emotions not only signal well-being but behaviorally produce optimal individual and organizational functioning.
- Positive Organizational Scholarship (POS) "especially positive outcomes, processes and attributes of organizations and their members," and a "focus on dynamics that are typically described by words such as excellence, thriving, flourishing, abundance, resilience, or virtuousness" (Cameron, Dutton & Quinn, 2003, p. 4). POS is often, but not always, associated with traits instead of states as in POBs.
- Participant Capital All the forms of capital (fiscal, physical, human, social, cultural) that participants in an endeavor bring and make available to a collective (Bourdieu, 1986).
- **Social Ecology** "The material, energetic, and informational ecosystem that contains the components and resources that get organized into an emergent entity" (Lichtenstein, 2014: 202). Participant capital can be seen as a subset.
- Container Anything that constrains the degrees of freedom a system might have, especially as felt by the agents within and the resulting interdependencies that drive co-adaptation between those agents (Corrigan, 2015; McKelvey, 2003; Sawyer, 2005). Examples vary widely and include social norms, turn-taking in meetings, discourse types, power and privilege, physical space, activities, goals, performance accountability, technic ways, time pressure, budgets, etc.
- **Mutual Reinforcement** Bidirectional causal effects between factors that amplify the effects of the other in a reinforcing spiral (Meadows, 2008).
- Multilevel Factors and Analysis The notion that most complex phenomena (especially in organizations) are the result of a web of causal factors at multiple levels across multiple domains of analysis, and across a range of time horizons.

- Analysis of such phenomena is best done using analytic tools that have a (requisite) variety similar to the phenomena under study (Kozlowski, et al., 2013).
- **Social Capital** "Social capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor" (Adler & Kwon, 2002: 23).
- **Generalized Reciprocity** –A system of mutual exchange and benefit among members of a community in which no one expects an immediate return. It is a pool of goodwill that allows people to contribute to the community while they will benefit in a similar fashion (Baker & Dutton, 2007).

Approach

If the opportunity tension participants feel in the emergence of social sector change plays a significant part in its development, what are the contributions to that opportunity tension of positive organizational behaviors and the supporting role of participant capital and the containers that hold them? Do these effects manifest at multiple levels?

A complex systems lens is used to view these constructs. An overview of the system of interest is described, its component parts, their interactions, and a focus on the two claims made in this paper (opportunity tension at the center and its effects involve multilevel mutual reinforcement). Next, each component is examined in detail and support for the paper's claims are made using theory from the literature and the empirical evidence it depends on. Finally, implications for emergence in the social sector are discussed.

A COMPLEX SYSTEMS LENS

How does a complex systems lens help explain what emerges in the social sector when people work together entrepreneurially to discover and act with common intent? Successful social entrepreneurial action by definition typically involves a *variety* of individuals and groups *co-adapting* as they *connect* and establish *interdependent* relationships (Goldstein, Hazy & Silberstang, 2009; Abu-Saifan, 2012). Scott Page (2009) has noted that those four elements—variety, adaptability, connection, and interdependence—are hallmarks of complex adaptive systems. When the levels of those factors are sufficiently high, a system will move far from equilibrium to the edge of chaos where novel forms are likely to emerge. At higher levels the system may shift or transition into chaos.

The complexity lens provides a robust view of social systems by focusing on the mechanisms and relational dynamics of organic living systems and emergence rather than employing the causal, reductionist thinking embedded in the traditional Structure-Agency debate of sociology. The Structure Paradigm (top-down causation; impersonal collective entities; relations between individuals and society; structural-functionalism) was prevalent in the sociology of the 1950s-1960s. The more constructivist Interaction Paradigm (bottom-up causation; people as creative agents; communicative interaction

rather than structure or the individual) arose in the 1960s-1990s. Sawyer (2005) posited that the Structure Paradigm has no capability to explain emergence because it is missing the critical theory of interaction between individuals and that the Interaction Paradigm doesn't explain how interaction influences social structure. The complexity lens goes beyond simple causal relationships to embrace a web of mutual causality (Meadows, 2008). It extends our view across multiple levels of analysis and scale (Ahl & Allen, 1996; Csermeley, 2009; Hackman, 2003). It recognizes not just state and form but the dynamism of evolving states and forms. It focuses on the relationships *between* entities as they evolve.

Two key forms of social emergence discussed in this essay, Sawyer's *collaborative* emergence (ephemeral and stable forms of interaction structure) and Lichtenstein's generative emergence (intentional creation of social institutional structures), are solidly embedded in complexity theory. Emergence is about order creation in complex systems and is at the center of the complexity paradigm. Systems may self-organize as dissipative structures when they are energetically far from equilibrium. Dissipative structures are those that emerge with increased capability to dissipate material, energy, and information through them as they are simultaneously sustained and re-created by that flow, much in the same way the vortex of a tornado channels and dissipates an enormous energy in a way that merely turbulent airflow cannot (Lichtenstein, 2014; McKelvey, 2001). All living systems are energetically far from equilibrium. They are open systems "defying" the laws of entropy that apply to closed systems near equilibrium by drawing energy and information from outside themselves to self-organize stable structures. The structures that persist are the ones that succeed on a fitness landscape of some sort (Kauffman, 1996), but the constant co-adaptation between agents mean that the rules of the fitness game are changing at every moment causing this fitness landscape to be "dancing" and therefore highly unpredictable (Kauffman, 1996; Page, 2009). In the realm of social emergence, an agent's intentionality to form persistent structures intensifies co-adaptation to increase their fitness. The tools and concepts of complex adaptive systems are most apropos when studying these types of systems.

OVERVIEW: OPPORTUNITY TENSION AT THE CENTER

People choosing to work together in the social sector are attracted by common purpose, and, among other things, an opportunity to create social value. According to Benyamin Lichtenstein (2014), an entrepreneurship researcher with 30 years of complexity science scholarship, the entrepreneurial perception of realizable *opportunity* combined with the *motivation* to bring it to fruition, can create an "opportunity tension" that drives entrepreneurs into action. If they are successful, those actions result in the emergence of something novel and persistent, delivering the value they envisioned to serve their purpose. From that perspective opportunity tension can be seen as playing an essential role in social emergence.

The thesis of this paper, that positive organizational behaviors function in producing social emergence through opportunity tension, is defined by three themes in the relationships diagrammed in Figure 1. First, opportunity tension is greatly influenced by

several interdependent factors: the presence of positive organizational behaviors (POBs), the accumulation of participant capital around the opportunity, and the formation of a container that can develop and hold the tension. Second, these factors create a web of mutually reinforcing, generative effects that enhance opportunity tension in a nonlinear way. Third, opportunity tension acts as a mediator that amplifies participant organizing activity in ways that create disequilibrium, which pushes the system towards a realm where emergent forms become more likely. This is true for social emergence in general, and both collaborative and generative emergence in particular.

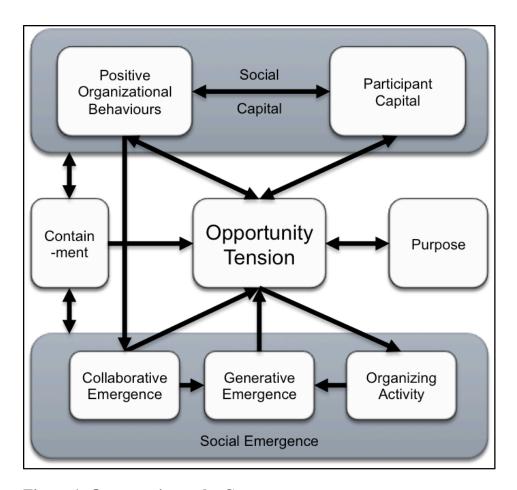


Figure 1: Opportunity at the Center.

Opportunity tension stimulates organizing activity resulting in a disequilibrium that eventually resolves the opportunity tension through the generative emergence of novel system structures (i.e., when purpose is satisfied the opportunity tension is likely to dissipate). Resources (participant capital), POBs, and containers tend to be reinforcing and amplify the opportunity tension that drives action. The figure offers a richer sense of the phenomena surrounding opportunity tension and social emergence and is the anchor for the subsequent discussion. All six of the main constructs—opportunity tension, purpose, containment, positive organizational behaviors, participant capital, and social emergence (collaborative, generative, and organizing activity)—support a characteristic reinforcing relationship with the other constructs. It is argued that this results from two

key attributes of these factors that are supported by the literature: 1) the highly interdependent mutually reinforcing causal effects within and between them, and 2) the multilevel (cross-level) effects between the micro (individual), meso (group), and macro (organizational or cultural) manifestations of these behaviors. These multilevel effects – the smallest of interactions like an empathetic smile in response to some personal vulnerability at the human dyad level; awareness of that interaction by someone else in a triadic relationship with them; increasing levels of safety in the group field as a whole; the sense of opportunity individuals and the collective feel as positive emotions broaden and build capacity and resilience in the group; and the knowledge that is created in an atmosphere where exploration and fast failure allow the novel combination of ideas to evolve in new ways-heighten the sense of opportunity and increase participants' motivation to take action. This multilevel perspective, vis a vis opportunity tension, casts a new light on the nature of social emergence. This is the classic picture of complexity in which the construct of emergence is located-multiple, diverse multilevel sources of interdependence, connection, and dynamic adaptation (Page, 2009). The subsequent sections consider these constructs in greater detail starting with the context in which these processes are embedded.

CONTEXT: SOCIAL VALUE AND VOLUNTEERISM

This study centers on how opportunity tension drives the social emergence of value. The Lichtenstein model of generative emergence is that of an entrepreneur (or collective of motivated participants) driven by opportunity and passion that organizes their social ecology to provide value that can be exchanged for financial return. What role does opportunity tension play when the passion a collective has is about producing social value instead of primarily financial value? Or when there is no organizational contribution of resources to the social ecology? Or when the participants volunteer their energy, passion, creativity and resources without any financial compensation? An example might be a community of practice (CoP) structure as described by Wenger, McDermott, and Snyder (2002). CoPs are abundant in our lives, mostly informal but some formal. Specific examples include managerial or frontline peer groups in organizations who help each other with common problems, crafts circles, gangs, artist salons, support groups, etc. In a well-functioning CoP, Wenger, et al. says there are a core of highly motivated individuals that ensure sustainability, a ring of active contributors, and a periphery of inactive but potential participants. Each ring is separated by a commitment threshold that requires some effort to cross in either direction but ultimately allows participants to engage at whatever level of intensity they choose. Voluntary participation is a key factor in CoPs. In the words of Harrison Owen, originator of the group facilitation technique Open Space Technology, "Being a volunteer is the prime prerequisite for the full expression of passion and responsibility" (Owen, 2008: 24).

It is this context of volunteerism that heightens the importance of opportunity that participants feel and that motivates and attracts them to engage. Daniel Pink's book on intrinsic motivation, *Drive* (2009), cited a growing open-source movement (volunteer, no formal organization) that goes beyond its wide-spread presence in the software development industry to include efforts like Wikipedia, cookbooks, textbooks, car design,

medical research, legal briefs, stock photography, prosthetics, credit unions, cola and beer production, etc. This distinction about highly motivated volunteerism in pursuit of opportunity to deliver social value opens the door to thinking about resources that a participant brings or expects to get from an engagement in a more general way—as various forms of capital like human, social, cultural, psychological, emotional, etc. An especially effective means of harnessing participant capital is found in *cross*-sector solutions (private, public, social/volunteer) that are increasingly viable approaches providing a variety of resources that may be customized/configured/grown for particular situations. This kind of sourcing is in itself socially innovative. It can be seen as an increasingly critical response to social challenges not being met by private or public sector efforts alone.

The mechanisms of generative emergence and its reliance on a contextually local social ecology from which opportunity tension is experienced by participants may be a viable model for activity based on volunteerism to produce social value. Positive organizational behaviors and participant capital are argued to be potent factors for supporting opportunity tension as a driver of social emergence.

EMERGENCE: SOMETHING NEW

This section works towards a definition of emergence to anchor the other constructs of interest. Emergence is at the heart of complex adaptive systems (Byrne & Callaghan, 2014; Goldstein, Hazy, & Silberstang, 2008; Sawyer, 2005). "Emergence is the creation of order, the formation of new properties and structures in complex systems" (Lichtenstein, 2014: 1). Emergent properties arise at a different level from the interaction of the elements of a system. These levels have distinct ontologies—constructs that have their own causal relationships.

The Lichtenstein framework for emergence offers extensive scaffolding for the complexity theorist and the entrepreneurship scholar-practitioner. Lichtenstein (2014: 45-55) defines a typology of emergence prototypes that help distinguish between various emergent phenomena from physics, chemistry, biology, ecosystems, and agent-based simulations with those directly associated with human social interaction:

- Collaborative emergence (Sawyer's conversation structures; social practices)
- Generative emergence (social institutions derived from intentional agency)
- Collective action (social structures from groups collaborating with groups; aggregates)

The three types are specifically associated with human social structures and together are referred to as "social emergence". Generative and collective action emergence is explicitly driven by human intention, or aspirations that participants have to exploit an opportunity or respond to a threat. Although Lichtenstein and Sawyer see collaborative emergents (structures that form from the process of emergence) as simply a by-product of individual interactions, they may sometimes be intentionally encouraged especially when

there is a desire to increase the collective social capacity of a group to innovate and perform. Sometimes a distinct shift or phase transition of system behavior or structure marks these types of social emergence, but this is not always the case. Many, but not all, involve dissipative structures that persist as long as energy flows into the system and are adequately dissipated by the structure. Dissipative structures are the key metaphor Lichtenstein uses to base the generative emergence of social organization. In most systems, dissipative structures exhibit a marked change in the system's capacity to mediate information or energy flow or transform inputs. Across all types of emergence there are some commonalities—interdependence of large numbers of interacting agents, rules or norms that constrain behavior but amplify their effects, and a system operating far from equilibrium. Lichtenstein further defines emergence with the following characteristics: qualitative novelty that includes but transcends its elements, non-reducibility to constituent elements or their interactions, mutual causality (up, down, and peer), "structioning" or co-adaptive coordination among elements, and increased capacity.

Collaborative, generative, and collective action social emergence prototypes—based on work by Ashmos & Huber, Boulding, Deacon, Ellis, Goldstein, and Sawyer cited in Lichtenstein (2014)—set the stage for deeper characterizations of emergence. Lichtenstein (2014) reviewed schemes by Bar-Yam, Bedau, Ellis, Goldstein, McKelvey, and Mihata, all of which distinguish between patterns that emerge horizontally within a system level from vertical emergence at a new system level. He defines four degrees of emergent outcomes (Lichtenstein, 2011):

- Zero-degree (no emergence)
- First-degree ("horizontal" patterns within the existing system)
- Second-degree ("vertical" patterns at a higher level without affecting the lower level)
- Third-degree (patterns at a higher level with downward affects)

Kozlowski and Klein (2000) define a similar typology using the terms *isomorphic* composition or convergence when elements in the system become more alike at the collective level (e.g., individual beliefs and attitudes converging in a group) and discontinuous configural compilation or divergence to denote bottom-up changes in pattern (e.g., development of psychological or organizational climate). The authors made the case that this kind of construct definition is critical for matching methods and analysis for empirical studies and for identifying markers to track changes.

In addition to the type of pattern changes seen in emergent behavior, a second critical aspect of any formulation of emergence as a construct is the transition between the unit levels of analysis. Lichtenstein"s focus on third-degree generative emergence is situated on the entrepreneur and the formation of sustainable new business entities. His concern is with the actionable process by which this happens rather than a microscopic view of the emergence itself. Sawyer's focus on collaborative emergence bridged the individual-social gap by positing an ephemeral emergent layer on a base of individual interaction, and a layer of stable emergents based on that. Ephemeral emergents within a single time-

boxed interaction comprise micro-moves such as conversational interaction frames, participation structure, relative role and status, creation of collective context, etc. Stable emergents last more than one encounter and include group learning, group development, peer culture, collective memory, language, catchphrases, trends, tastes, jokes, stories, etc. (Sawyer, 2005: 213-216). This essay argues that POBs operate at this juncture within single interactions, persist across encounters at both the individual and collective levels, and increase the sense of opportunity and the capacity to act at both levels. In effect, this collaborative emergence stimulates and helps enable generative emergence.

In terms of outcomes and process, Lichtenstein's model addresses the process mechanism of generative emergence with regard to entrepreneurship and the emergence of new firms as the emergent outcome. The Lichtenstein model says an entrepreneur works with resources in the local social ecology available to her, opportunity tension drives the entrepreneur to act, amplifying even more opportunity tension in a reinforcing loop, and at some point causing sufficient disequilibrium in a system that new structures of order emerge. The perception of opportunity tension for the entrepreneur is reduced in a negative feedback or balancing loop as the new order emerges and diminishes the tension. The focus of this essay is on POBs as antecedents and outcomes with opportunity tension at the center as in Lichtenstein's model for entrepreneurship, and using the same process chain. In the next section the concept of opportunity tension is explored in detail.

OPPORTUNITY TENSION

Our common experience is that opportunities motivate us at every level. A smile invites interaction. An opening on the basketball court invites a drive up the middle. An unexpected job opening may initiate a career change. Living systems are wired to recognize, create, and act on opportunity across scale and across time horizons. The more complex and sophisticated the perceiver of the opportunity space, the more potential benefit there is, and the more able are they to exploit it. Opportunity is a powerful and universal component of creative action. Robert Fritz's (1989) "structural tension" captures this notion when a person or group perceives tension created by recognition of their current reality in comparison to a result they want to create, and opportunity they want to exploit. The elements of structural tension are difference, opportunity, and desire. Tension, by its nature seeks resolution. It is a simple concept that matches the capacity of the actor with the context presented and is easily aligned with whatever fitness landscape exists. Senge et al. (1994) named this creative tension as the key to personal mastery of any sort, pointing out that people learn best and perform most exceptionally when there is something that draws their aspiration, their passion, their energy, and creativity. This endogenous force is highlighted in Lichtenstein's model of generative emergence.

Opportunity tension is a construct that Lichtenstein (2014) posits as the driving source for entrepreneurial activity. Lichtenstein's in-depth review of the entrepreneurial literature reveals a dual focus on the entrepreneur's recognition of a viable *opportunity* that will bring value, and a *motivation* to enact that opportunity. He envisions this process in

which an entrepreneur is motivated by a desired, feasible opportunity to produce value by drawing on resources in their accessible "social ecology". In the entrepreneurial arena opportunity tension creates disequilibrium that ultimately results in the emergence of an enterprise that can produce that value. Although Lichtenstein talks about the entrepreneur as an individual driven by opportunity tension, his empirical research includes collectives.

Opportunity tension is not a static property but diminishes and expands dynamically as the entrepreneur or participants act. Every participant in an endeavor brings a collection of capital of various types—skills, experience, energy and time, who they know, the advantages of their position in their own social networks, their emotional and relational intelligence, and the unique values and perspectives of their cultural backgrounds. Each resource revealed or offered to the collective shifts the current social ecology and especially the opportunity each individual perceives and the collective as a whole perceives. The opportunity potential expands in surprising and unexpected ways and the motivation to enact is likely to also. The surface of the opportunity space isn't smooth and linear but rather rough and fractal, increasing nonlinearly, more like an ecosystem full of burgeoning niches and possibility.

Key characteristics of opportunity tension, the contribution of participant capital, the presence of POBs, and the effect of containment, are constructs operating at multiple levels and over a range of time horizons simultaneously, and they are mutually reinforcing. Mutual reinforcement across many dimensions means amplification, which according to Lichtenstein's process description contributes to increased motivation and opportunity to engage in organizing activity resulting in disequilibrium and generative emergence that resolves the tension.

POSITIVE ORGANIZATIONAL BEHAVIORS: THE UPWARD SPIRAL

This section describes some major POBs and explores aspects of their general nature that support the notion that POBs contribute to increased opportunity in a collective. A huge body of research (much of it from scholars at the University of Michigan) has arisen since the original coherent exposition of POBs within the field of positive organizational scholarship in 2003 (Cameron, Dutton, & Quinn, 2003; Cameron & Spreitzer, 2012). Four themes emerge as general characteristics of POBs that are of importance to this essay: 1) the relationship of POBs to positive outcomes and opportunity, 2) POBs as candidate collaborative emergents (ephemeral and stable), 3) the mutually reinforcing aspect of these POBs and the resulting positive upward spiral of their effect, and 4) the multilevel nature of their manifestation. All four of these characteristics, previously alluded to, have a bearing on the opportunity tension a participant might sense in a social context of innovation.

Positive organizational scholarship is an over-arching term used to include studies of the "positive" in the dynamics of inter-human relationships. POBs comprise individual and collective attributes, strength and virtues, positive emotions, positive relationships, and positive organizational practices that support such behaviors. The field derives from

humanistic and positive psychology at the individual level but is the bridge between levels of analysis—the individual, the individual-in-relationship with two or more others, and the effects on the collective. Unlike positive psychology, positive organizational scholarship has arisen not so much to redress the imbalance of studies of negativity in organizations, but rather to examine areas of the human condition in organizations centered on well-being. Some definitions help give a sense of the domain including, "the states and processes that arise from and result in life-giving dynamics, optimal functioning, and enhanced capabilities and strengths" (Dutton & Glynn, 2008: 693); "the study of especially positive outcomes, processes and attributes of organizations and their members," and a "focus on dynamics that are typically described by words such as excellence, thriving, flourishing, abundance, resilience, or virtuousness" (Cameron, Dutton & Quinn, 2003: 4). These positive effects are most often studied in an organizational context and the scholarship applied denotes the rigor with which this inquiry is now being pursued. POBs comprise positive emotions, high-quality connections, knowledge creation, and specific attributes like flourishing, creativity, positive identity, proactivity, curiosity, trust, forgiveness, humility, compassion, hope, courage, justice, integrity, positive ethics, and virtuousness. The following offers a more detailed look at specific POBs.

Positive Emotions

Barbara Fredrickson put positive emotions on the map as a categorical area of study in 1998 with a paper entitled "What Good are Positive Emotions?" She has continued to be at the center of a robust stream of scholarship in this area. Positive emotions are a collection of pleasant emotions—like *joy, interest, contentment, gratitude*, awe, amusement, *pride*, hope, *love*, challenge, and others. Positive emotions are pleasant and range from low to high levels of arousal.

Of particular interest for this essay's research question about the relationship of opportunity and POBs comes from Shiota, Keltner, and John (2006: 67) who showed a strong correlation of positive emotions with extraversion, one of the "Big Five" personality traits. A "reward orientation" or response to opportunities in the environment is a known feature of extraversion and "the proposal that reward orientation is at the core of positive emotion is consistent with several findings cited in the argument for the dimensional approach to emotion." The authors went on to cite neuroscience evidence for reward pathways in the brain that are associated with the "recognition of opportunity" and the positive emotions. The significance for this essay is that there are multiple threads of evidence for opportunity, motivation, and positive emotions being strongly linked.

Fredrickson's contributions are many. First, by naming this as a legitimate area of study she has created an umbrella for researchers to house their work on individual positive emotions and the inter-relationships between them thus stimulating scholarship.

Second, she advances the theory of how positive emotions in general tend to "broaden and build" the capacity of individuals and the collectives where positive emotions are

pervasive. Broaden-and-build theory is the positive counterpart to traditional "specific action tendencies" that urge a person to narrow their momentary thought-action possibilities for quick and decisive action in life-threatening situations. Broaden-and-build refers to the opening of a person's thought-action repertoire when feeling safe and content, to consider a variety of options and novel information that enhances long-term survival. There is also a tendency to build enduring capacity both at the individual and interpersonal levels though momentary positive interactions (Sekerka, Vacharkulksemsuk, & Fredrickson, 2012).

Third, Fredrickson (2003) and other researchers have seen positive emotions involved in mutually reinforcing (positive feedback) loops that amplify. Numerous studies confirm these virtuous cycles or upward spirals as Fredrickson called them. Upward spirals are similar to the well-documented downward spirals of depressed mood that narrow the thought-action repertoire in the individual and reciprocally between people through emotional contagion. It appears that emotional contagion (positive or negative emotions) operates through a variety of mechanisms at a range of scales from mirror neurons responding to micro features of body and facial expressions, to discourse structures, to cultural dispositions (Gallese & Sinigaglia, 2011; reviewed in Stephens, Heaphy & Dutton, 2011).

Rhee and Yoon (2012) noted that emotion (intense, short-lived) and mood (diffuse, longer lasting) operate on a spectrum of time scale. The authors included high-arousal affects like joy and enthusiasm as well as low-arousal affect (contentment, calm). They reviewed two significant threads of research on shared positive affect, one on the temporary emergent properties during participant interactions, and the other being more stable properties exhibited at the group level. This evidence evokes Sawyer's collaborative emergent layers, ephemeral and stable. Additionally, they cited evidence in which the shared positive affect spirals upward through mutual reinforcement in groups. Walter and Bruch (2008) called this "positive group affect spiral."

This rich body of research provides abundant evidence that positive emotions are linked to a sense of expanded opportunity, demonstrate collaborative emergence, are involved in mutually reinforcing upward spirals, and operate at many scales (behavior types, units of analysis, and time scales).

High-Quality Connections

Jane Dutton has captured some of the essence of positive relationship in the notion of high-quality connections (HQCs). While positive emotions describe what is going on in the individual, for multiple individuals, or even within the field of a group, HQCs are about the micro- and meso-interactions *between* individuals in dyads and triads and within the network of relationships as a whole in a collective. Similar to the focus of positive emotions on pleasant rather than unpleasant affect, HQCs are life-giving rather than life-depleting. A high-quality connection "allows the transfer of vital nutrients; it is flexible, strong, and resilient" (Dutton & Heaphy, 2003: 263). Stephens, Heaphy, and Dutton (2012) asserted the importance of HQCs by noting people are social and have a

need to belong, connections are dynamic, the work we do is built on social processes, and that these critical connections vary in quality. The authors further explained

First, theorizing about HQCs emphasizes positive, mutually developmental experience of being in connection, rather than exchanges of resources and rewards. Second, by attending to the structural qualities of connection quality, we highlight how HQCs are associated with the capacities that affect individual and dyadic performance, helping to explain why HQCs are associated with positive outcomes. (p. 386)

HQCs can be characterized by the positivity of the subjective experience (thoughts and accompanying emotions)—vitality, positive regard, and mutuality. Additionally, they can be characterized by attributes of the connection itself—emotional carrying capacity (ability to tolerate greater inter-personal emotional variation, positive and negative), tensility (resilience or the ability to recover from an emotional spike), and degree of connectivity (generativity and openness to novelty).

Positive outcomes of HQCs at the individual relationship level and at the collective level abound. Stephens, Heaphy, and Dutton (2012) reviewed the cognitive, physiological, and behavioral effects of HQCs. Speed of cognitive process and memory are improved. Cardiovascular, neuroendocrine, and immune system mediation of well-being is affected by brief, high-quality interactions. Adaptation to loss, speed of recovery from illness, and career transitions are enhanced. From a behavioral perspective, growth and development, enriched identity, attachments, and learning and inquiry are supported. Empirical evidence for enrichment at the collective level include increased trust and psychological safety in groups which support greater learning from failures, cooperation, trustworthiness, task coordination and error detection. It's easy to see how individuals might be attracted by the opportunity to work with others that offer high-quality interaction and groups in which such interactions are the norm.

It is worth noting that these types of emergent outcomes generally develop and persist across shorter time frames than typical group level emergents cited by Kozlowski et al., (2013). Examples of these emergents include team climate, goals, identity, cohesion, collaboration and interaction, and so forth. Some of the stable emergents, extending beyond a single encounter, may endure. Koehler (2001) offers empirical evidence in the political sphere for this notion of a "fractal time ecology" in which dynamic patterns at a micro, meso, and macro-level time scale interact with each other in reinforcing and constraining ways contributing to emergent effects. In another context Gunderson and Hollings document similar cross-level effects of events operating with different time scales in their adaptive cycle work with ecologies (Gunderson & Holling, 2002). A brief digression is instructive:

...the adaptive cycles were nested in a hierarchy across time and space (Gunderson et al. 1995a). That expansion [to organizational and social contexts] seemed to explain how adaptive systems can, for brief moments, generate novel combinations that are tested during longer periods of capital

accumulation and storage. These windows of experimentation open briefly, but the results do not trigger cascading instabilities of the whole because of the stabilizing nature of nested hierarchies. In essence, larger and slower components of the hierarchy provide memory of the past and of the distant to allow recovery of smaller and faster adaptive cycles. (p. 20)

The interactions across scale are real and important in the ecological realm. Empirical data across scale in the social realm, while anticipated, is scant. Finally, Dutton and Glynn (2008) offered a remarkable and growing catalog of mutual reinforcement among POBs, outcomes, and a host of multilevel constructs that have figured centrally in sociological research on individual and collective behavior. In summary, positive organizational scholarship is opening new doors and is a rich space for studying social emergence.

PARTICIPANT CAPITAL: THE RICH GET RICHER

It is in fact impossible to account for the structure and function of the social world unless one reintroduces capital in all its forms and not solely in one form recognized in economic theory. (Bourdieu, 1986: 241)

Pierre Bourdieu made the case that capital can take many forms (physical, human, social, cultural) and, except for physical capital, are not consumed but are rather converted from one form to another. Roland and Landua (2011) refine the concept by defining eight types of capital, classes of conversion between types, and platforms of exchange (currency). Beyond Bourdieu's categories they define human capital in terms of knowledge, skills, abilities, and others (KSAOs), then delineate emotional capital (emotional intelligence), intellectual, spiritual, and psychological. In a review of psychological capital literature Dutton and Glynn (2008) call out an amalgam of characteristics—efficacy, hope, optimism, and resilience. These aspects of capital dovetail with the POBs and their outcomes and can be seen as an aspect of the social ecology that entrepreneurs draw on, contributing to the opportunities of superior group dynamics and motivation to be a part of those dynamics. In this sense participant capital can be envisioned as part of a web of mutually reinforcing factors that include POBs and opportunity tension.

If capital is seen to have an opportunity investment aspect, then thinking about capital in this way allows us to see its relational complexity and how the capital participants bring to an endeavor can increase the sense of opportunity other participants feel. Acknowledging inter- and intra-capital flows lends further credence to the idea of mutuality and reciprocity. New opportunities become possible for the participants by mixing and matching resources as the social ecology becomes richer and accessible in ways it hadn't previously. Again, the "opportunity surface" is no longer a smooth expanding sphere but a rugged fractal surface of possibility expanding nonlinearly as it

grows. Zaid Hassan, the co-founder of Reos Partners, a high-stakes consultancy, relates that the successful *outcomes* of the social labs that Reos regularly facilitate comprise physical, human, social and intellectual capital. Furthermore, he says "we have to deploy capital to allow diverse stakeholders to find the opportunities latent in all crises" (Hassan, 2014: 86). Fiscal capital is just one motivation that draws people to the opportunity, it is only one of the desired outcomes, and value comes from investment in all forms of capital. Again, the open-source movement is an exemplar of this notion.

Referring back to Figure 1, a significant dynamic is of a positively reinforcing loop of opportunity tension and participant capital—new capital creates opportunity and opportunity attracts participants and their capital.

Social capital in particular has a direct impact on POBs especially in terms of HQCs. Ron Burt (1992), a sociologist and network theorist pointed out that social capital has the special quality of not being owned by individual agents but is jointly owned by the collective, and that specific network position grants the agent specific privileges. Social capital is concerned with relationship and connection creating a reinforcing (even mutually reinforcing) effect on positive organizational behaviors, which compound the positive effects of opportunity tension. A particularly apt paper tying social capital, HQCs, and reciprocity as enablers of motivation and opportunity structures (i.e., opportunity tension) is offered by Baker and Dutton (2007) in Dutton and Ragins' 2007 compilation Exploring Positive Relationships at Work. This book cites numerous multilevel studies as well. Baker and Dutton use HOCs to focus on the dyad level connections and "generalized reciprocity" (Putnum, 2001: 134) for group-level behavior. Dutton uses the term connection rather than relationship because these interactions can be momentary and short-term yet lead to lasting emergent effects of durability, resilience, and trust. They have high emotional carrying capacity and mutuality that lead naturally to generalized reciprocity, the collective level structures that offer something to others with the expectation that unspecified resources are likely to be available to participants at a later unspecified time. Both are aspects of social capital and both serve to amplify opportunity tension for the participants individually and as a collective.

In summary, there is empirical evidence that the forms of capital that participants bring to an endeavor create opportunity and create the sense of opportunity that in turn attract more participant capital in a reinforcing cycle. Intra- and inter-capital exchanges can be mutually reinforcing. How we show up (psychological, emotional capital) affects the levels of empathy, trust, vitality, and energy of the group dynamic, and affects the quality of our relationships. The connections between participant capital, POBs, and opportunity tension are seen to be very rich.

SUMMARY AND CONCLUSION

This essay places opportunity tension at the fulcrum between the reinforcing and multilevel effects of POBs, participant capital, appropriate containment, and social emergence. It characterizes opportunity tension as a non-linear construct driven by non-linear constructs that enhance its viability as a source of emergence. It also places

collaborative emergence as mediator between POBs, containers, and generative emergence, suggesting that collaborative emergence is spawned directly by them.

This essay suggests there is sufficient tangential evidence to warrant a direct investigation into the relationship of opportunity tension and POBs, participant capital, and containers and that this relationship is important because opportunity tension stimulates action that can lead to social emergence. Furthermore, these constructs operate at multiple levels and there are pervasive generative reinforcing effects between them. These effects are documented in the literature in a piecemeal fashion. This essay posits a general theory that suggests all of these factors are operating across scales, are mutually reinforcing, and are essential aspects of the increased opportunity tension that drive social entrepreneurs and collectives to create emergent outcomes.

There remains a significant opportunity to gather empirical evidence using multilevel methods that shed light on the interplay of these factors and centers on an operationalization of the opportunity tension construct. Network science methods that naturally span the levels of the individual and the collective may be good candidates to augment narrative accounts in collectives that are actively undergoing a transformative experience. The end result may be a richer understanding of the complex relationship between opportunity tension and the myriad modes of emergence that contribute to vibrant social sector innovation.

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