



Global Grassroots
CONSCIOUS SOCIAL CHANGE FOR WOMEN

SPOTLIGHT ON: SENSE OF COMMUNITY & BELONGING

A Preliminary Review of the Scientific and Scholarly Literature on
Personal Transformation and its Relationship to Social Change



INTRODUCTION

Global Grassroots is an international non-governmental organization (NGO), founded in 2004, which operates a mindfulness-based leadership program and social venture incubator for women survivors of war in East Africa. Over the last 15 years, we have invested deeply in the personal growth, inner leadership, wellbeing, hard skills, and the ideas of our change agents. We have witnessed their personal transformation as they have advanced their own solutions for the betterment of their community. We embarked upon this literature review to help us understand the link between personal transformation and social impact. The key question we were eager to answer through this review was: in what ways does the cultivation of human qualities such as mindfulness, agency, wellbeing, social intelligence, belonging or compassion contribute to a prosocial orientation and positively influence the advancement of positive social change?

To answer this question, we need to understand how various domains of personal transformation are defined, what happens within individuals and community when it takes place, how it transforms the people who experience it, and what outcomes result that may be relevant. Over the course of six months, Global Grassroots conducted a review of scientific and scholarly research on the topic of personal transformation as it relates to societal transformation. For the purposes of this paper, we define:

personal transformation as the process and experience of undergoing positive inner change towards personal growth and self-realization. Personal transformation can take place as the result of intentional effort over time, as well as a significant life changing experience that shifts our beliefs about ourselves and our relationship with the world.

social change or social transformation as a significant and positive shift in the functioning and wellbeing of society. This can result from changes in societal norms and values; changes in the behavior, beliefs and relations of the members of that society; the alleviation of a social ill; and/or through alterations of the systems,

institutions, and structures making up that society.

We explored more than 370 key academic and scientific articles across the following five domains:

- 1. Mindfulness:** “the capacity to pay attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p. 4).
- 2. Wellbeing and Resilience:** Wellbeing is “a state of being...where human needs are met, where one can act meaningfully to pursue one’s goals, and where one enjoys a satisfactory quality of life” (ESRC Research Group on Wellbeing in Developing Countries, 2008, p. 4). Resilience is a positive adaptation despite adversity that leads to growth and greater wellbeing (Fleming & Ledogar, 2008; Luthar et al., 2000; Richardson, 2002).
- 3. Social and Emotional Intelligence:** Emotional intelligence is the ability to be aware of our own and others’ feelings in the moment and use that information to inform one’s action in relationship (Goleman, 1995a; Salovey & Mayer, 1990). Social intelligence is “the ability to more deeply understand people by perceiving or experiencing their life situations and, as a result, gain insight into structural inequalities and disparities” (Segal, 2011, p. 266).
- 4. Empowerment and Agency:** Empowerment is the ability to choose, including the existence of options and a capacity to make purposeful choices in a changing context where little power once existed (Alsop & Heinsohn, 2005; Kabeer 1999; Samman & Santos, 2003; Sidle, 2019).
- 5. Community and Belonging:** A sense of community includes a feeling of belonging, a sense of mattering to the group, a feeling that needs will be met by shared resources, and having a shared emotional connection (McMillan & Chavis, 1986).

It has been our empirical observation, as practitioners in the field of personal transformation and social

change, and our theory from wide-reaching conversations in the social change sector that personal transformation is important for and takes place as an integral part of most long-term, sustainable, positive social change. But, it is not easy to measure these intangible experiences themselves, and there is little consensus on how to define the nature of personal transformation or the metrics with which to assess it. As such, there was a need to conduct a systematic review of the literature to help explain what is known about the process and experience of inner change and how it might be relevant to social change.

We explored a range of literature, including clinical studies, meta-analyses, literature reviews, analyses of scholarly discourse, reviews of measurement tools, proposed operational definitions and mechanisms, and working papers from practitioners. Our criteria included those studies that provided insight and critique on the definition, measures, mechanisms, outcomes, and potential evidence of the social impact of person-

al transformation.

We chose these five domains because they are the areas of personal transformation we have witnessed most on an ongoing basis and because there already exists a body of clinical work trying to understand the mechanisms and outcomes of each of them. We have

undertaken this study at this time because there is a growth of interest in expanding from an exclusive focus on the external and concrete measures of social progress to including the contribution of more intangible, personal shifts towards long-term social change. Our contemporaries in the social justice and international development arena know that something is transpiring

among the individuals and communities with whom they work. They believe that the internal condition of people matter, that relationships between them drive connection and community, and that their beliefs and values shape how institutions serve or disadvantage others - and change. Our approach and intention with

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this literature review, then, was to understand within each of these themes: the consensus definition of each concept; the documented mechanisms of such transformation; potential outcomes; measurement tools for and concerns with measuring each concept; future recommendations for research; and, the scientific and academic evidence for any relevance to social change.

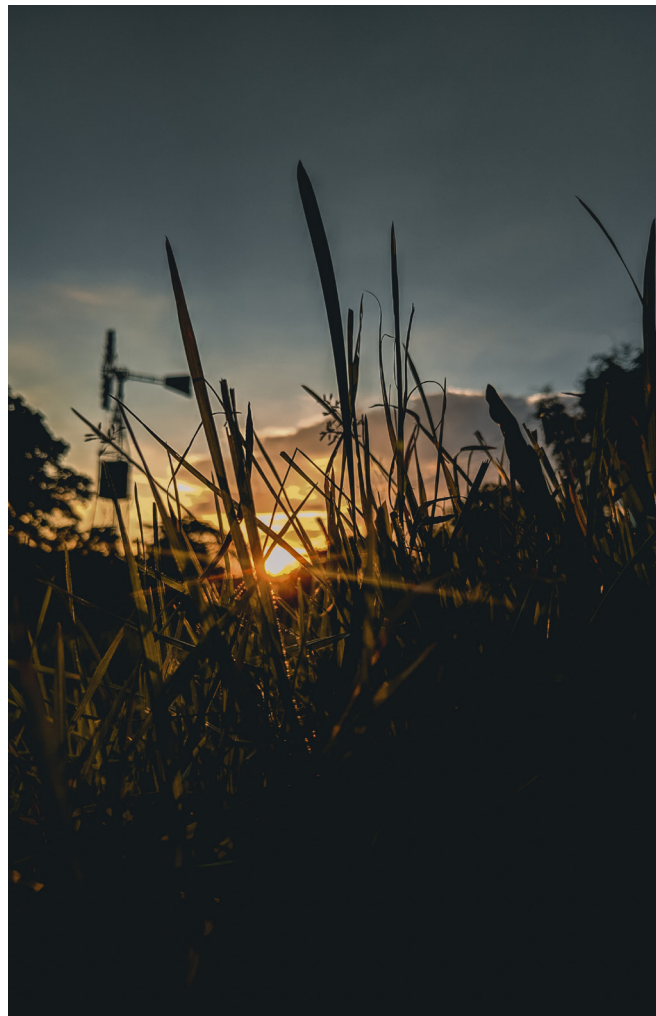
Following are our general key findings and then the more specific review of literature within the domain of a sense of community and belonging.

Key Findings

Some of our key, cross-cutting findings from exploring this relationship include:

- There is little consensus on the definition, metrics and measurement methods for most domains of personal transformation, aside from the assessment of post-traumatic stress.
- There are a wide range of tools that have been developed for evaluating components of personal transformation, which can help begin to assess whether such transformation has taken place.
- Each domain is multi-faceted, usually involves a component of self-determination, and is context dependent. Tools can measure a range of elements, including self-assessed perspectives, observed behavior, neural activity, or external, material conditions. Therefore, no single tool is likely to be adequate on its own without deeper qualitative evaluation.
- Personal transformation is influenced by and has a direct impact on the nature of the community or external environment in which a person's transformation occurs. As such, the relational field - connection to some form of community or a sense of belonging or relationship with another – is often critical, even for a process of individual, inner transformation.
- Personal transformation involves a fundamental change in the structure and functioning of the brain and physiology, resulting in a more positive orientation towards self and the surrounding world.
- The domains of personal transformation

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reviewed have overlapping interrelationships and effects. Yet, the interpretation of data and outcomes are equally challenging. It is not always clear the directionality of impact between the personal, relational, and societal levels.

- The domains of mindfulness, wellbeing, social and emotional intelligence, empowerment and agency, and a sense of belonging and community help foster prosocial behavior (including helping, charitable altruism, concern, intrinsic motivation to act for the common good, and social communications.) This is influenced by the underlying capacities of self-awareness and self-regulation, compassionate understanding and connection with others, and developing a prosocial orientation for engagement. It is through this pathway that personal transformation is most likely to drive positive social change. *Read more about this pathway in our conceptual map of how personal transformation results in the positive conditions for the advancement of social change.*
- At this time though, there is little research documenting evidence that prosocial behavior itself translates into deep, systemic social transformation. This is likely largely due to the fact that most of the clinical research is conducted short-term in clinical settings versus the actual, practical application of personal transformation by practitioners in the social impact field that would allow us to see longer-term structural or systemic change.

In the following review, we focus on one individual domain of personal transformation, exploring its (a) history, (b) definitions, (c) any relevant practices and outcomes, (d) mechanisms, (e) measurement tools and approaches, (f) challenges with measurement, (g) future recommendations for research, and (h) applications for social impact. In a complementary text we propose a conceptual model for how the domains of personal transformation interrelate and influence social change, attempting to draw together from the evidence presented, a theoretical, operational model for this relationship. We have also compiled a sample list of the most commonly used measurement tools and a list of key studies for each topic. Finally, we share a

survey of what actual organizations are finding from integrating inner work and personal transformation into the ways in which they deliver their social change programming. You may download this spotlight study [here](#) or access the full literature review [here](#).

Limitations

There are limits to our exploration that we wish to acknowledge. Most of the clinical and scholarly study of these concepts that we were able to access through our search of known databases were predominately conducted by Western researchers in mostly clinical settings. More diverse studies, tools, and perspectives from the Global South and other less represented groups are needed for a comprehensive picture. Additionally, we would have liked to find more studies that focus on non-clinical applications among practicing organizations in the social change sector. We also know that our exploration could not possibly be exhaustive, given the explosion of works that have populated the field in the last decade. We acknowledge the risk that by emphasizing the inner shifts through this research, it might be inferred that concrete, material progress may not be necessary - that if someone finds happiness and life satisfaction, that they no longer need a pathway out of poverty. To the contrary, we believe that the most significant pathway towards long-term sustainable change requires the personal transformation that enables complex change on a deeper level. Our purpose through this initial work is to move the dialogue forward by assessing what is known and what more needs to be explored to understand and measure the relationship between personal transformation and social change.

Gratitude

This literature review was financially supported by the Omidyar Group. Founded by Pierre and Pam Omidyar, The Omidyar Group is a diverse collection of companies, organizations and initiatives, each guided by its own approach, but all united by a common desire to catalyze social impact. We extend our gratitude for their partnership.

We thank Gretchen Ki Sreidle, Rachel Bellinger, Porter Nenon, Sara Taggart, and Susan Patrice for their invaluable contributions to the research, writing, and editing of this paper.

Spotlight on: Sense of Community & Belonging

History of Community and Belonging

The literature on community, especially in international development discourses, is much less extensive than the academic research on empowerment and agency. Much of the early literature explored loneliness and alienation in Western culture and the decline in a sense of community due to urbanization, individualism, industrialization, and imbalances between centralized bureaucracy and local autonomy (Durkheim, 1964; Glynn 1981; Stevens et al., 2011). There has also been a longstanding interest within social psychology in understanding what it means to have a sense of community, and it is well-documented and increasingly discussed that feelings of belonging are important aspects of mental health and community wellbeing (Herman, 1994; Fullilove, 2017; Norris et al, 2007; Sherrieb et al., 2010; Steidle, 2019). This has been particularly relevant to the realms of community resilience and participatory development, where processes that draw upon the participation of and adaptive capacities of community as a whole are a desired outcome of development interventions (Arnstein, 1969; DFID, 2012; Norris et al, 2007).

Definitions of Community and Belonging

Community is somewhat difficult to define as a single, narrow concept, as it is multifaceted and self-determined. But it almost always involves some form of common thread that binds its members through relationship, if not also place. Community is conventionally defined as existing within a geo-political boundary, such as a county line (Sherrieb et al., 2010). Yet, in an age where displacements from war and natural disaster continue to rise, a sense of community is increasingly understood as context-dependent, not necessarily always place-based. As such, community can also be defined by common experience between individuals (e.g., veterans) or a form of connection fostered through webs of alternative networks, like online social networks.

In addition to establishing the concrete boundaries of what defines community membership, definitions also involve the multidimensional nature of what makes

up a *sense* of community. Kitto (1951) offers, “A sense of community was present in its ideal form in the [ancient Greek] *poli* and was based on loyalty, commitment, and primary interactions among people” (Glynn, 1981, p. 791).

The McMillan and Chavis (1986) definition of a sense of community (SOC) is most often cited, and includes four primary components: (1) membership: a feeling of belonging or relatedness, (2) influence: a sense of mattering or making a difference to the members of the group and vice versa, (3) reinforcement: an integrated feeling that the members needs will be met by shared resources through membership, and (4) shared emotional connection. Membership involves boundaries that dictate in-group and out-group belonging, which provides emotional, if not physical, safety against social threats to those who are members so as to allow needs, feeling, and connection to develop (McMillan & Chavis, 1986). A personal investment in the group as well as common symbols of membership (e.g., language, dress) contribute to feelings of membership and SOC (McMillan & Chavis, 1986). There is then, a strong pressure to conform that is seen with group cohesiveness, even while there is often still space to appreciate individual differences (McMillan & Chavis, 1986). Reinforcers of group membership include status, competence, rewards, shared values, and other resources that meet individual needs (McMillan & Chavis, 1986). Finally, shared emotional connection is built on a community’s history, quality of interactions, investment of its members, intimacy, rewards that honor versus humiliate, and spiritual bonding (McMillan & Chavis, 1986). In general, emotional safety and feelings of belonging lead to someone investing in their community and then feeling that they have earned their place as a member (McMillan & Chavis, 1986).

SOC seems to be made up of the values, relations, and other social capital that help foster community bonds and the degree of social cohesion (Chavis & Pretty, 1999). Social capital can be defined as the shared group resources among the network of relationships that allow that community to function. It is often divided into two categories – (1) structural social capital, which involves the various organizations and networks that contribute, and (2) cognitive social capital, which includes the mental processes and perceptions that

reinforce cooperative behaviors, including perceived fairness, perceived helpfulness, shared identity, social support, shared norms, values, and beliefs, community bonds and trust (Jeeyon et al., 2020; Kawachi et al., 1997; Norris et al., 2007; Office of Disease Prevention and Health Promotion, 2020; Sherrieb et al., 2010). Social cohesion denotes the strength of those relationships and a sense of solidarity, shared purpose, trust, and support that extends from them (Jeeyon et al., 2020; Kawachi & Berkman, 2000; Office of Disease Prevention and Health Promotion, 2020). Jeeyon et al. (2020) identify six of the most commonly measured qualities of social cohesion that contribute to the sense of shared trust and purpose and a willingness to cooperate in order to thrive together: trust, collective action norms, belonging, common group characteristics, attitudes toward out-groups and civic participation to improve the collective wellbeing.

Glynn (1981) studied what contributed to a psychological SOC among three different towns, finding that the strongest predictors of a SOC include how long one expects to live in a community and the number of community members that one can identify by first name. These same variables in addition to not having to need a car to get around in the community also drove community satisfaction and community competence (Glynn, 1981). The conclusions from the Glynn study suggest that a SOC is something that varies based on its members' behaviors, needs and perspectives, giving the collective the power to cultivate SOC intentionally (Glynn, 1981). For example, if not having a need for a car is a predictor of a greater sense of community, urban planners can work to create more connective infrastructure like foot paths, public transportation or bike paths to foster interconnection within community.

Hand in hand with the definition of community is the definition of belonging, and how we define a sense of being a part of something larger than ourselves, including community. In particular, people need frequent positive interactions within an ongoing relationship or bond, and resist the dissolution of such relationships (Ryan & Deci, 2000). Belonging has been critical to our evolutionary flourishing, because being accepted and included within a group means we partake in the collective resources that enable us to survive, if not thrive (Lieberman & Eisenberger, 2008).

It is here where the individual and societal level is bridged.

Belonging involves a sense of connectedness among a set of significant relationships, which can be found in two forms. Belonging can be defined by strong interpersonal and interdependent relationships built on common bonds (e.g., a parent-child relationship or the relationship between people who are members of a small, connected group) or belonging can be defined by a common identity (e.g., membership in a larger political party or being a cancer survivor), which involves a depersonalized sense of self and collective identity (Brewer & Gardner, 1996). “[T]he belongingness hypothesis is that human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships” (Baumeister & Leary, 1995, p. 497). This requires emotionally-pleasant interactions on a frequent basis with a minimum number of other people to whom one feels connected, and the relationships must be stable, ideally reciprocal, and endure over time to produce a feeling of connection and membership (Baumeister & Leary, 1995).

It is important to note that belongingness goes beyond a need for simple affiliation. Belonging impacts our self-esteem, the relationships we form, and our sense of a collective self - the social groups with which we identify (Brewer & Gardner, 1996). Belonging may be at the root of a range of other needs, including the need for power, the desire for achievements that are valued by others, the need for approval, and intimacy (Baumeister & Leary, 1995). Finally, belonging and community have a bi-directional nature - individuals affect and are affected by community, and connection manifests both as “belonging” at the individual level and as “community” at a group level, sometimes simultaneously, but not always.

Mechanisms of Belonging

When we do not feel a sense of belonging

When people's need for belonging is not being met sufficiently, it is responsible for significant negative affect, including loneliness, jealousy, rejection, anxiety, grief or depression (Baumeister & Leary, 1995).

When people feel that they do not belong and are members of the “out-group”, they use up significant

cognitive energy being hypervigilant towards threats, including threats that might put them at risk of confirming a negative stereotype about themselves (Laldin, 2016). This anxiety uses up working memory, our short-term capacity to manage information.

Social threats seem to be processed in the brain the same way as a threat of real physical harm (Ladin, 2016; Eisenberger, 2013; Lieberman & Eisenberger, 2008). This includes (1) the activation of the amygdala, which manages threat processing and the expression of fear; (2) stimulation of the sympathetic branch of the autonomic nervous system (SNS), our stress response system responsible for our fight or flight response; (3) activation of the dorsal anterior cingulate cortex (dACC), which also increases the SNS response; (4) increased activity in the hypothalamic-pituitary-adrenal (HPA) axis, which secretes the stress hormone, cortisol; and (5) decreased activity in the hippocampus, which is responsible for learning, memory, and stress management (Eisenberger, 2013; Eisenberger & Cole, 2012). In essence, an experience of social exclusion activates the body's threat response system. The brain may have evolved to respond to threats of social rejection in the same way as other survival threats because it was more dangerous to exist alone (Eisenberger, 2013).

Also activated is the body's pain system, which involves (1) the somatosensory cortex, which helps identify where the pain is happening; (2) the insula, which provides insight into the overall physical state; (3) the dorsal anterior cingulate cortex (dACC), which is related to the distress associated with pain, and (4) the right ventrolateral PFC, which is associated with pain regulation (Lieberman & Eisenberger, 2008). It is possible to separate the experience of physical pain from the distress related to it, finding pain as more or less distressing, which is correlated with activity in the dACC (Lieberman & Eisenberger, 2008). In an experiment of social exclusion, those who felt excluded compared to when they were included demonstrated greater activity in the dACC and right ventrolateral PFC, indicating that social pain is processed in the same way that physical pain is (Lieberman & Eisenberger, 2008). Follow-up studies have shown that people with greater tolerance for physical pain also have greater tolerance for social pain, and, in contrast, those with greater sensitivity to rejection resulted in

greater activity in the dACC in response to social exclusion (Lieberman & Eisenberger, 2008). In summary, exclusion causes us real pain.

When we feel that we belong

When people experience feelings of belongingness, it results in positive affect including happiness, contentment, calm and elation (Baumeister & Leary, 1995). In fact, experiences of social connection appear to activate the reward centers in the brain that help inhibit our stress response and process a sense of safety (Eisenberger, 2013; Eisenberger & Cole, 2012; Lieberman & Eisenberger, 2008). The ventral striatum, the brain's reward system, is activated as strongly, if not more so, when experiencing social rewards (including fairness, choosing philanthropic altruism, and receiving positive feedback from others), as it is when receiving extrinsic rewards (e.g., money) (Lieberman & Eisenberger, 2008). Studies have also shown that the formation of bonds stimulate the brain opioid system, whereas the dissolution of such bonds impedes the opioid system, suggesting that social bonding is reinforced by neurochemical mechanisms (Baumeister & Leary, 1995).

The systems that process safety include the ventromedial prefrontal cortex (VMPFC) and posterior cingulate cortex (PCC). Activity in these regions reduce SNS activity, increase parasympathetic nervous system activity – the rest and relaxation system, and signal the absence of negative threats (Eisenberger, 2013). This can also be experienced as diminished fear and rewards. Two studies have shown that just seeing a photograph of a supportive relationship partner during both physical pain and a negative social experience can increase activity in the VMPFC and PCC, and decrease activity in the insula (Eisenberger, 2013). Experiencing social support enhances stress coping, which may be due to belonging mitigating the stress-inducing experience of a lack of belonging (Baumeister & Leary, 1995).

When we feel that we belong, our sense of identity can also be reshaped to represent the most salient features shared with others within the in-group, where a sense of social attraction involves a preference for in-group characteristics over out-group qualities (Brewer & Gardner, 1996). Individual and group self-concepts are stored in separate locations in

our brain; information about out-group members are organized on the basis of attribute and traits, whereas in-group information is processed on the basis of the person with whom there is a connection (Baumeister & Leary, 1995; Brewer & Gardner, 1996). This “collective self” involves internalizing the norms, values and characteristics of the group that are consistent with the self (Brewer & Gardner, 1996). Further, self-worth is developed in assessing the in-group’s status as compared with other groups (Brewer & Gardner, 1996). Once the definition of self is held in the realm of the group, the motivations also shift towards the group with a concern for and altruistic motivation to benefit others and contribute toward shared problems (Brewer & Gardner, 1996). This can happen even without interpersonal communications or attachment to group members, but simply from the knowledge of sharing a common group identity.

Yet, the more that assimilation between self and in-group takes place, this can also lead to the mistreatment of out-groups (Brewer & Gardner, 1996). People tend to be more optimistic or favorable about their closest relationships or in-group (Baumeister & Leary, 1995). Studies have shown that despite being organized into groups on a random basis, the preferential treatment of in-group members takes shape almost immediately (Baumeister & Leary, 1995). Group identities to which there is little opportunity to change your membership, such as race and ethnicity, are often the characteristics that experience the most common prejudice (Baumeister & Leary, 1995). In fact, a great deal of maladaptive and harmful behavior has to do with responding to perceived threats to belongingness or reacting from difficulty in establishing a sense of belonging (Baumeister & Leary, 1995). Studies have shown external threats improve social cohesion within the group, but interaction between groups tend to be, and are expected to be, more confrontational than interactions between individuals (Baumeister & Leary, 1995). One study found that 67% of college students gave in to an act of cheating, theft and lying to conceal their actions in response to the request of a group partner, and loyalty has been shown repeatedly as a driver of action overriding personal morals, including violence (Baumeister & Leary, 1995). As another example of harmful behavior, Baumeister & Leary (1995), noting the work of Hans Morgenthau, suggest that the pursuit of power may have at its core, the de-

sire to belong - individuals may be seeking to improve the sense of connection and overcome loneliness by bending others to their will. Mitigating the maladaptive behavior of groups, some interventions have helped decrease in-group bias with an increase in interaction with members of out-groups, although other interventions have not shown as much effectiveness (Baumeister & Leary, 1995; FitzGerald et al, 2019).

People invest energy in building relationships and forge them easily. It does not take much to form social bonds – even mere proximity is a significant factor, and just being in the presence of someone is comforting (Baumeister & Leary, 1995). People also strongly resist the dissolution of such social bonds (Baumeister & Leary, 1995). Not only do bonds result in positive emotions, but positive emotions may also help solidify the bond and be a key driver of the formation of small groups (Baumeister & Leary, 1995). Overall, helping and altruistic behavior seems to be improved by the strength of social bonds, especially a sense of familiarity and interpersonal dependency (Baumeister & Leary, 1995). Studies have shown that feelings of belonging can overcome unhelpfulness: In particular, the bystander effect – a phenomena where bystanders do not tend to come to the aid of someone in need when there are many people present out of a desire to avoid any negative impact to themselves – is strong among strangers, but the opposite is true among cohesive groups (Baumeister & Leary, 1995). Further, cohesive groups can build a sense of common duty - when people feel they can make a unique and meaningful contribution to a group, they are more likely to give beyond the minimal effort necessary to enjoy the benefits of the group (Baumeister & Leary, 1995). Another study showed that when people feel that they belong, they are less likely to use up collective resources for personal gain and instead retrain their needs for the good of the group (Baumeister & Leary, 1995).

Outcomes

Early SOC work found that when people feel safe, they desire greater neighbor interactivity, but not when people indicate a desire for greater privacy and anonymity (McMillan & Chavis, 1986). Studies show that SOC is driven by high behavioral rootedness (e.g., length of residency, owned home) and high social bonding (e.g., feeling satisfied and part of community, the number of neighbors that could be named)

(McMillan & Chavis, 1986). Further, the strength of interpersonal relationships within community contribute to satisfaction, commitment and loyalty to community, as well as more problem-focused behavior and community contributions in response to a perceived threat (McMillan & Chavis, 1986). Further, SOC also is associated with an individual's capacity to function competently within the community (McMillan & Chavis, 1986).

On an individual level, belonging has a significant, positive effect on emotional and mental processes, whereas a lack of belonging or the threat of the loss of a bond – from social exclusion to a child's separation anxiety - is shown to create significant negative affect and have negative impact on health and wellbeing (Baumeister & Leary, 1995; Glynn, 1981; Mellor et al., 2008). Belonging promotes wellbeing by reducing stress and generating happiness through relational bonds and a sense of meaning (Baumeister & Leary, 1995; Lambert et al., 2013; Pogosyan, 2017). One study showed that loneliness correlated to a decrease in immune functioning (Baumeister & Leary, 1995). Another study found that among people who report a higher need to belong, they also report higher levels of loneliness, and that the less satisfied people are with their relationships, the lonelier they feel (Mellor et al., 2008). Important in this study was that people have different needs for belonging and different experiences of loneliness, and that this is not determined by whether people live alone or with others, but if someone has unmet needs for belonging, it will dictate their feelings of wellbeing (Mellor et al., 2008). For example, among combat vets, a sense of social support was a significant determinant of whether individuals experienced PTSD (Baumeister & Leary, 1995).

In the international development field, it has been shown that participatory processes can foster a strong sense of belonging that help reinforce community bonds. Jupp & Ali (2010) present a significant case study of a community-based organization in Bangladesh called, The Movement, which started as a youth organization and grew to advocate for land rights for the poor and indigenous beginning over 40 years ago. Now, despite relatively meager gains on one level – less than a third of the members achieved successful outcomes – The Movement continued to grow and sustain its membership over time, reaching 543,000

members as of 2007. A study was undertaken to understand the benefits of the membership despite economic outcomes. The method involved a participatory rural appraisal process that ensured local members led the process, determined metrics, obtained the data and conducted the analysis using visual mapping, dialogue and local language that encourage unbiased, inclusive participation. Over 8000 insights helped clarify along 132 indicators what engendered the powerful bonds and collective empowerment, grouped into four categories (Jupp & Ali, 2010, p. 47):

1. Individual perceptions of increased power, including the ability to articulate and negotiate for their own outcomes in formal and informal decision-making,
2. The mutual trust, support, respect and equity of the group
3. Access and use of economic resources
4. Sense of the group's capability and independence

Within each category, the group mapped a spectrum of progression: "(i) awareness, (ii) confidence and capability, and (iii) effectiveness and self-sustaining" with an understanding of the time frame required to move from one level to the next varied between eight and eleven years (Jupp & Ali, 2010, p. 50.) The grassroots-led process itself was empowering and enlightening, and demonstrated the importance of the sense of community and belonging that sustained membership over the long-term. These member-defined indicators included the McMillan and Chavis requirements of membership, as sense of mattering, shared resources, and shared emotional connection and the social capital that incorporated both the structural and interpersonal that helped to foster trust, shared values and community bonds (Kawachi et al., 1997; McMillan & Chavis, 1986; Norris et al., 2007; Office of Disease Prevention and Health Promotion, 2020; Sherrieb et al., 2010). Outcomes in terms of empowerment and sense of community, and their impact on wellbeing and political engagement were significant: 99 percent of members voted, 80 percent followed up on complaints of human rights abuses, members from 63 percent of groups had been nominated for office, 88 percent of groups are sending their girls and boys to school regularly, and in 72 percent of groups they had influenced village level politics in favor of the poor, among other outcomes (Jupp & Ali, 2010). In

some places, the choices of one group were adopted and replicated by another group within The Movement. The successes were determined to be due to experiences of solidarity that catalyzed a sense of confidence and agency to act collectively to work towards change, defined according to the priorities of the local community (Jupp & Ali, 2010).

In the field of education, studies have shown a sense of belonging improves academic performance (Laldin, 2016; Walton & Cohen, 2011). This is due, in part, to a capacity to reappraise experiences from a non-threatening lens – seeing challenges as shared versus stemming from a personal deficit – which, in turn likely counters the impact of perceived social threats on stress, working memory, and higher thinking capacity (Laldin, 2016; Walton & Cohen, 2011). Similarly, four experiments conducted by Walton et al., (2012) found that various experiences of belonging from sharing a birthday to having similar preferences affected important aspects of self, resulting in greater motivation for achievement of a series of goals.

In health fields, research shows that social capital is a driver of social cohesion, which in turn, impacts community wellbeing through encouragement of positive behavior along social norms (Sampson et al, 1997; Uchino, 2006). One study tested four measures of social capital (perceived fairness, perceived helpfulness, group membership and trust) all of which were found to affect mortality (Kawachi et al., 1997). Other studies have shown that there is a greater incidence of heart attacks, cancer, tuberculosis and several other physiological and mental illnesses among those who are without a significant relationship than among those who are attached (Baumeister & Leary, 1995). Further, group therapy builds upon a sense of belonging and acceptance in its effectiveness (Baumeister & Leary, 1995).

Measuring Community and Belonging

Most measures of a sense of community or belonging are found in the realms of psychology and mental health as well as economics.

One of the early measures was the 40-Item Sense of Community Scale (SCS Doolittle and MacDonald, 1978), which attempted to differentiate between low, medium and high sense of community in their level of

informal interaction, safety, privacy, preferences for neighbor interaction and local participation (McMillan & Chavis, 1986). Other measures have included components such as feeling at home, agreement with common values, feelings of belonging, and interest in what goes on in the community (McMillan & Chavis, 1986).

Building out of this early work emerged the 12-Item short-form Sense of Community Index (SCI, Perkins, Florin, Rich, Wandersman & Chavis, 1990) based on the 1986 McMillan and Chavis definition of a sense of community. The SCI has been most widely used, and it attempts to blend both the internal, subjective perception of and role of individuals in the collective (Stevens et al., 2011). The SCI measures across 12 questions, four subscales, including (1) membership, (2) influence, (3) integration and fulfillment of needs, and (4) shared emotional connection (McMillan & Chavis, 1986; Stevens et al., 2011). These four categories are not necessarily independent, can be bi-directional, and are interconnected (e.g., shared emotional connection needs a sense of belonging), which also makes them challenging factors for measuring, especially as a cross cultural measure (Stevens et al., 2011). The SCI-2 (version 2) was developed to address these concerns, and offers a more robust and validated 24-item questionnaire (Chavis et al, 2008).

Another, revised, 8-item Brief Sense of Community Scale (BSCS, Peterson, Speer & McMillan, 2008) was crafted to refine the earlier version, which was found to have good reliability, but some weakness due to the limited number of questions per factor (Stevens, 2011).

A few other measures look at specific components that contribute to community wellbeing. This includes the Social Health Index (Shaw-Taylor, 1999), which assesses how well a community functions in caring for its most disadvantaged populations and the Gini Coefficient or Index that measures inequality in income distribution (Sherrieb et al., 2010). The Social Capital Assessment Tool (SOCAT) assesses variations of social capital, to include structural and cognitive social capital, across a wide range of contexts at the household, organizational and community (geographical) level to assess the level of economic and social wellbeing, social participation and support, as well as

community bonds (Sherrieb et al., 2010). Finally, the Social Vulnerability Index (SOVI, Cutter et al., 2003) measures demographic and socioeconomic data to assess vulnerability that is negatively correlated with economic development, social capital and community resilience measures (Sherrieb et al., 2010).

A new, comprehensive measurement tool designed for international community-driven development programs was developed by Mercy Corps and the World Bank. Built on a comprehensive survey of available literature and the evaluation of 2600 survey questions from existing tools utilized around the world, it proposes a 15-item survey for measuring social capital and social cohesion combined with a qualitative contextualization guide that helps to adapt the tool for a particular context (Jeeyon et al., 2020). Most common in the measurements of social capital and social cohesion are relationships, resources, level of trust, shared purpose (including belonging, shared identity, and attitude towards diversity) collective action norms, and civic participation (i.e., willingness to take action for the good of the group) (Jeeyon et al., 2020).

Another recent initiative – a working group of community-driven development organizations has been working to define Community Intelligence, called “CQ”, which brings together many of the aforementioned topics into one overarching scale. This concept draws upon standard concepts of IQ (human intelligence) and emotional intelligence to establish a new form of intelligence that involves a recognition and valuing of communities, a sense of being part of a bigger global network, and working collaboratively and participatorily to improve “the health, impact, and sustainability of the global philanthropic community” (Mercaldo, 2018). The CQ vision involves a global community of people and organizations who trust local communities to realize their ambitions, value the contributions of all, share power, and work with and for local communities to rebalance the distribution of power and agency (Mercaldo, 2018). The working group is now collaborating to develop a tool for actors to assess their CQ as High, Moderate, or Low, providing not just a set of metrics to evaluate the level of social capital and cohesion at a particular snapshot of time, but to suggest processes and roles that actors would be using to increase CQ across a continuum. Such examples include how research, programming, philanthropy,

market-based strategies, and government interventions are enacted with stakeholder participation, fostering trust, addressing inequities, investing in support mechanisms, and respecting or fostering positive local values, culture, systems and culture.

Challenges with Measuring Community and Belonging

Like many other measures of the intangible, there is a lack of consensus or consistency in the definition of and metrics for a sense of community.

The challenges are four-fold. First, there is a lack of clarity on what components make up SOC, which is multifaceted. SOC may not always relate to a geographical neighborhood, but may hinge on common identity, such as SOC among members of a minority group embedded within a larger dominant group environment (Chavis & Pretty, 1999). There is a need to understand further the differing impact of the material, systemic and relational components of community on an individuals’ perception of SOC (Chavis & Pretty, 1999). However, researchers caution in drawing conclusions on isolated conditions as indicators of SOC. Though they may contribute to some measures of *community wellbeing*, they may not have any relationship to the level of a *sense of community* (Chavis & Pretty, 1999). For example, owning one’s home in a longstanding neighborhood versus owning a home in a neighborhood that recently went through gentrification has different impact on SOC (Chavis & Pretty, 1999).

Second, it is unclear how the various factors in the various scales making up SOC relate to each other. The Sense of Community Index has been broadly validated across different types of communities, ages, and cultures, though its four subscales have not shown consistency, resulting in researchers picking and choosing those subscales that are most useful, limiting broader research (Chavis & Pretty, 1999).

Third, there is a need to understand more clearly how SOC manifests and differs on an individual versus collective level. For example, research has found that an individual perception of a sense of community is different from the overall community level of SOC measured through other conditions like crime level (Chavis & Pretty, 1999). Particular challenges include

the bidirectional relationship between a community and its individual members (Chavis & Pretty, 1999). For example, do strong communities produce good citizens or vice versa or both?

Finally, there is the question of *who* should be determining the definition and boundaries of community and community membership. In most cases, the idea of community and sense of community must involve some level of individual subjective perspective. But, as is true with all the self-report measures considered for personal transformation, there may exist inherent biases and inaccuracies. People are relatively good at reporting how they feel, but not skilled at identifying the reasons why they feel a certain way, relying more on judgments and causal theory over true introspection (Nisbett & Wilson, 1977). For example, self-report measures of a sense of belonging to a community may accurately determine that belonging exists, but may not be able to accurately assess the aspects of one's life and community that contribute to that sense of belonging.

Future Recommendations for Research

Research and the resulting definitions need to help clarify what constitutes SOC on an individual and community level, what to assess on an individual versus group level, and the relationship between individual belonging and SOC. There are other individual variables that need further study to understand their impact on SOC, including size of community, similar or diverse cultures, proximity to larger cities, rural versus urban, neighborhoods versus communities, and climate (Glynn, 1981).

There is also a need for more refined tools that can reliably study the interrelationships between category of factors (subjective perception, material resources, functioning and interrelationships) contributing to a sense of community (Stevens, et al., 2011). For example, if the facets of SOC can be defined, then what influences how strong a SOC is in a given community, and is there any correlation between satisfaction with SOC and people's competent functioning within that community (Glynn, 1981)?

Once the factors contributing to strong SOC are better defined, research can contribute significantly to understanding what actions or interventions support a

strong and positive SOC and belonging. For example, as practitioners increasingly adopt participatory and community-driven development approaches, further research can validate the impact of such processes in fostering belonging, social capital, and social cohesion as well as improvements in wellbeing.

Finally, there is a need to understand the outcomes from long-term experiences of SOC and belonging, or their absence. On an individual level, it will be helpful to study whether the current understanding of how neural networks respond to social exclusion as a threat or social inclusion as a reward are affected over long-term, chronic social experiences (Eisenberger, 2013). This may help understand how social experiences contribute to mental wellbeing (Eisenberger, 2013). Similarly, there is a need for more research in understanding the predictive capabilities of community. If we can measure what defines a community and how it functions, in what ways do its adaptive capacities predict functioning or resilience, and how does this drive future SOC, wellbeing outcomes or certain behavior?

Applications of Community and Belonging for Social Impact

By its very nature, a strong, positive sense of community is likely fundamental to improvements in collective wellbeing and social change. Trust and social support, both drivers of social capital and social cohesion, play an important role in a sense of collective efficacy, a community's ability to create change and influence behavior through social norms (Sampson et al, 1997). Studies have shown, high levels of social support can encourage people to make healthier lifestyle choices, like healthier diets (Uchino, 2006). Having a sense of community, including the relationships between members and the involvement of community institutions, has also been shown to be a driver of civic engagement (Chavis & Pretty, 1999). This depends on the interrelationship and interdependence between the individual and community. Areas where this is particularly evident include the realms of community healing, resilience, restorative justice, social capital, participatory development, and community intelligence.

Participation, or participatory development theory, involves the leadership of local communities in defining

priorities and designing solutions. Wall and Hedlund (2016) note that “‘Localisation’ is used across the [humanitarian] sector to refer to everything from the practice of increasing numbers of local staff in international organisations, to the outsourcing of aid delivery to local partners, to the development of locally specific response models.” (p. 3). Such localized, bottom-up solutions are increasingly advocated as more effective methods of development than top-down, outsider-imposed interventions (Chambers, 2009; Mercy Corps, 2010). Still, there is not always a clear delineation between the local level beneficiary communities and the international implementing bodies facilitating the work. Without care, these programs can easily morph from facilitation at the grassroots level to imposing solutions that are dictated from the top-down. Thus, in these approaches, the definition of community, like the concept of wellbeing, is ideally determined by the community (or person) itself (themselves) (Chambers, 2009).

Under a participatory approach, when outsiders are involved, they facilitate and listen, not lead. Methods and tools are shared, and rather than impose, experts invite and encourage local populations to identify and express their needs, ideas, and visions (Chambers, 2009). Under these approaches, the goal is sustainable wellbeing for all, including quality of life, economic, social, mental, spiritual, physical, and mental wellbeing, as defined by the person or community themselves (Chambers, 2009). Participatory methods work slowly to build trust, aim to ensure the marginalized come first, and that outcomes are economically, socially, institutionally, and environmentally sustainable (Chambers, 2009). Such models of community-driven development are critical in forming an understanding of the whole and building social capital, connection, and a sense of belonging. They ensure all stakeholders find ownership in the diagnosis and solution, and thus participate in the behavior required to achieve the desired outcomes (Steidle, 2017).

A 2010 Mercy Corps study in Iraq and Afghanistan reveal that community leaders and community members agree that community-led programs - and the more and different actors the better - lead to optimal outcomes. Three main reasons they have found such success include (1) participation allows ownership, (2) programs can be tailored more specifically to local

urgent needs, and (3) it builds trusting relationships (Mercy Corps, 2010). According to Mercy Corps, successful community-led approaches involve capacity-building through constructive collaboration, transparency, and high accountability; community-building through diverse stakeholder engagement, cooperation and minimal competition in addressing needs and identifying resources; and ownership-building to increase local willingness to participate and invest in benefiting the community (Mercy Corps, 2010). In surveys assessing the role of multiple actors, international NGOs were seen by local community members to play a significant role in building trust, reducing corruption, cooperating with officials, achieving outcomes that benefit the majority of community on time and at reasonable cost, and reducing local tension (Mercy Corps, 2010).

What are the corresponding mechanisms on an individual level? Studies have shown that intrinsic or internal rewards are significantly more effective than extrinsic or external rewards in motivating behavior and driving greater interest, persistence and performance (Ryan & Deci, 2000). For example, a child doing their homework because they enjoy the subject matter is likely to perform better, persevere when it gets challenging, and find satisfaction in doing so, more so than if they are just doing their homework because they know they are required to do so by school or their parents. Incidentally, though, there are factors that enhance intrinsic motivation that must take place within a relational context. These influencers include positive feedback, feeling supported, opportunities for self-direction, being given choice, and having personal feelings acknowledged (Ryan & Deci, 2000).

In particular, research in the realm of self-determination theory, which explores the importance of inner resources for the regulation of behavior and social development, has distilled these supportive experiences into three primary factors – competence, autonomy and *relatedness* – that drive self-motivation and mental health, and when absent reduce wellbeing and motivation (Ryan & Deci, 2000). Relatedness involves a close, secure and supportive connection to another. Relatedness, belonging and a sense of community, all hinge on the importance of connection and relationships. The key is that such supportive relationships reinforce intrinsic motivation only if they contribute

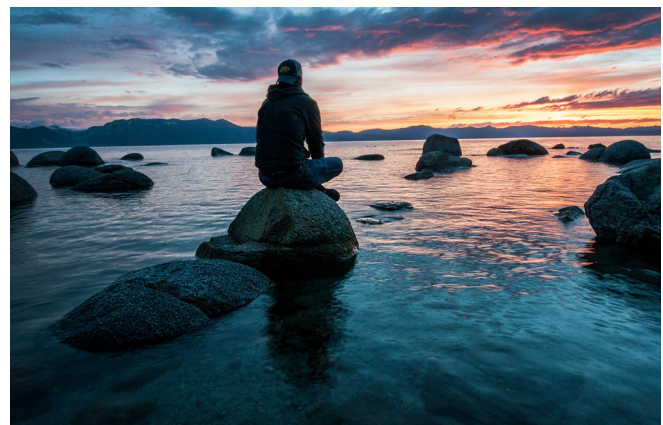
to a sense of internalized and integrated competency and perceived autonomy (Ryan & Deci, 2000). People who feel close and securely connected to other people, will see behavior modeled by those people, which they are more likely to adopt, especially if they feel competent and encouraged, and feel they have choice in doing so (Ryan & Deci, 2000). In contrast, though it seems natural to tell or pressure people to comply using punitive measures or incentives, these types of extrinsic rewards, threats and directives consistently sabotage intrinsic motivation, in part because they result in a sense of a loss of autonomy (Ryan & Deci, 2000).

In summary, relatedness and connection, fostered in relationships that offer positive support, honor autonomy, and enable individuals to feel competent, will then allow people to internalize the values and behaviors that are expected of them and find meaning in complying. This forms the collective self, resulting in a greater level of perseverance and sustainability of expected behavior, as well as better relationships and perceived well-being (Brewer & Gardner, 1996; Ryan & Deci, 2000). And so, feeling a sense of belonging and experiencing high levels of social support from a sense of community, can contribute directly to the intrinsic motivation that will result in behavior that is in alignment with the shared values and norms of that community, especially towards a greater social good.

Conclusion

Through this preliminary literature review of the scientific and scholarly writing on personal transformation, we have explored the existing knowledge and challenges of defining, measuring and understanding the mechanisms and outcomes of some of the more intangible aspects of human nature. Despite a lack of consensus on the precise definitions and metrics that would adequately capture all aspects of personal transformation, evidence suggests that it involves a process of self-development with a range of positive outcomes. The five domains of personal transformation reviewed tend to work through a five-part pathway to influence prosocial outcomes and potentially social change: (1) Mindfulness and emotional intelligence build the self-awareness and self-knowledge that enable us to (2) move into a place of greater

self-regulation. From this process of inner growth, we find greater agency and wellbeing, and (3) develop the capacity to understand others more completely. As we continue to invest in our inner development and relationships, we (4) find deeper connectedness and engage positively with others. As we continue to foster mindfulness, social and emotional intelligence, and a sense of belonging and/or community, we (5) cultivate the foundational prosocial orientation that motivates us to act on behalf of the common good. While the existing research reviewed does not yet demonstrate a direct, causal link between prosocial behavior and positive systemic change, we propose that personal transformation creates positive *conditions* for the advancement of social change as mindfulness, social intelligence, belonging, and agency combine to drive altruistic action towards greater collective wellbeing. We have outlined the details of this proposed conceptual model for the interrelationships between personal transformation, prosocial behavior and social change in an accompanying paper. Additional research, especially in non-clinical settings, is still necessary to determine whether and how prosocial behavior results in systemic social transformation. For now, we hope that this review engenders greater dialogue about what is known and what more needs to be explored to understand more deeply the relationship between personal transformation and social change.



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COMMUNITY & BELONGING MEASUREMENT TOOLS

The following table contains an index of some of the more common tools used to measure this domain of personal transformation and its subcomponents.

Tool	Author	Description and Note	Link to Find Tool
12-Item Sense of Community Index	SCI, Perkins, Florin, Rich, Wandersman & Chavis, 1990	Most frequently used measure of a sense of community in the social sciences based on the 1986 McMillan and Chavis definition of a sense of community, measuring across 12 questions, four subscales, including (1) membership, (2) influence, (3) integration and fulfillment of needs, and (4) shared emotional connection.	https://www.senseofcommunity.com/soc-index/
24-Item Sense of Community Index - 2 (Revised)	SCI-2, Chavis, Lee & Acosta, 2008	Improves reliability of the SCI especially as a cross-cultural measure.	http://dl.icdst.org/pdfs/files/f458f0f15016819295377e5a979b1893.pdf
Social Capital and Social Cohesion Measurement Toolkit for Community-Driven Development Operations	Mercy Corps and World Bank, 2020	A 15-item survey for measuring social capital and social cohesion combined with a qualitative contextualization guide that helps to adapt the tool for a particular context, based on a review of 2600 survey questions from existing tools utilized globally.	https://collaboration.worldbank.org/content/usergenerated/asi/cloud/attachments/sites/collaboration-for-development/en/groups/community-driven-development-global-solutions-group/documents/jcr:content/content/primary/blog/social_capital_and-OhaN/Social%20Capital%20and%20Social%20Cohesion%20Measurement%20Toolkit%20(Final).pdf

Tool	Author	Description and Note	Link to Find Tool
8-item Brief Sense of Community Scale	BSCS, Peterson, Speer & McMillan, 2008	Attempted to refine the earlier SCI.	https://www.researchgate.net/publication/229567281_Validation_of_a_Brief_Sense_of_Community_Scale_Confirmation_of_the_Principal_Theory_of_Sense_of_Community
Social Health Index	Shaw-Taylor, 1999	Assesses how well a community functions in caring for its most disadvantaged populations	https://www.amazon.com/Measurement-Community-Health-Social-Index/dp/0761821260
Community Assessment of Resilience Tool	CART, Pfefferbaum, Pfefferbaum, Van Horn, Klomp, Norris & Reissman, 2006	Assesses community resilience	https://www.researchgate.net/publication/236076108_The_Communities_Advancing_Resilience_Toolkit_CART_An_Intervention_to_Build_Community_Resilience_to_Disasters
Social Vulnerability Index	SOVI, Cutter, Boruff & Shirley, 2003	Measures demographic and socioeconomic data to assess vulnerability that is negatively correlated with economic development, social capital and community resilience measures	https://www.d.umn.edu/~pfarrell/Natural%20Hazards/Readings/Cutter.%20Socail%20Vulnerability.pdf

Tool	Author	Description and Note	Link to Find Tool
Sense of Belonging Scale	Hoffman 2002	(Ludvik & Eberhart, 2018)	https://www.researchgate.net/publication/326463786_Revised_Sense_of_Belonging_Scale_Hoffman_MB_Richmond_JR_Morrow_JA_Salomone_K_2002-2003_Investigating_sense_of_belonging_in_First-Year_college_students_Journal_of_College_Student_Retention_43_227-256

COMMUNITY & BELONGING ESSENTIAL STUDIES

Following are a selection of key studies that help define this domain of personal transformation, provide an assessment of tools for its measure, or provide insights on its relevance to social change.

Study	Citation	Summary	Link
The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation	Baumeister, R. and Leary, M. (1995). The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation. <i>Psychological Bulletin</i> . 117(3): 497-529.	Baumeister and Leary explore the belonging hypothesis.	https://www.academia.edu/35868543/The_Need_to_Belong_Desire_for_Interpersonal_Attachments_as_a_Fundamental_Human_Motivation
Who Is This “We”? Levels of Collective Identity and Self Representations	Brewer, M. and Gardner, W. (1996). Who Is This “We”? Levels of Collective Identity and Self Representations. <i>Journal of Personality and Social Psychology</i> . 71(1), P. 83-93.	This article provides a conceptual review of research and theory of the social self, arguing that the personal, relational, and collective levels of self-definition represent distinct forms of self-representation with different origins, sources of self-worth, and social motivations.	https://www.researchgate.net/publication/232469632_Who_Is_This_We_Levels_of_Collective_Identity_and_Self_Representations
Sense of Community: Advances in Measurement and Application	Chavis, D. and Pretty, G. (1999). Sense of Community: Advances in Measurement and Application. <i>Journal of Community Psychology</i> . 27(6): 635-642.	This article summarizes theoretical and methodological advances in the study and application of a sense of community.	https://www.academia.edu/18671961/Sense_of_community_Advances_in_measurement_and_application
Psychological Sense of Community: Measurement and Application	Glynn, T. (1981). Psychological Sense of Community: Measurement and Application. <i>Human Relations</i> 34(7): 789-818.	The development and testing of an instrument designed to measure “psychological sense of community” (PSC) is described. A discussion of the historical background of the PSC concept is presented and results of the use of the instrument is described.	https://journals.sagepub.com/
Sense of Community: A Definition and Theory.	McMillan, D. and Chavis, D. (1986). Sense of Community: A Definition and Theory. <i>Journal of Community Psychology</i> . 14: p. 6-23.	This article attempts to describe the dynamics of the sense-of-community force — to identify the various elements in the force and to describe the process by which these elements work together to produce the experience of sense of community.	https://www.researchgate.net/publication/235356904_Sense_of_Community_A_Definition_and_Theory

Study	Citation	Summary	Link
Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness	Norris, F., Stevens, S., Pfefferbaum, B., Wyche, K. And Pfefferbaum, R. (online: 2007, Dec 22). Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness. Am J Community Psychol (2008) 41:127-150.	Drawing upon literatures in several disciplines, we present a theory of resilience that encompasses contemporary understandings of stress, adaptation, wellness, and resource dynamics. The authors propose that to build collective resilience, communities must reduce risk and resource inequities, engage local people in mitigation, create organizational linkages, boost and protect social supports, and plan for not having a plan, which requires flexibility, decision-making skills, and trusted sources of information that function in the face of unknowns.	https://www.researchgate.net/publication/5691020_Community_Resilience_as_a_Metaphor_Theory_Set_of_Capacities_and_Strategy_for_Disaster_Readiness