Original Article

Collective Human Agency in the Context of Organizational Participation

Contributions From Social Cognitive Theory and Activity Theory

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Abstract: Connecting the social cognitive approach of human agency by Bandura (1997) and activity theory by Leontiev (1978), this paper proposes a new theoretical framework for analyzing and understanding employee participation in organizational decision-making. Focusing on the social cognitive concepts of self-reactiveness, self-reflectiveness, intentionality, and forethought, commonalities, complementarities, and differences between both theories are explained. Efficacy in agency is conceived as a cognitive foundation of work motivation, whereas the mediation of societal requirements and resources through practical activity is conceptualized as an ecological approach to motivation. Additionally, we discuss to which degree collective objectifications can be understood as material indicators of employees' collective efficacy. By way of example, we explore whether an integrated application of concepts from both theories promotes a clearer understanding of mechanisms connected to the practice of employee participation.

Keywords: person-environment transaction, work motivation, collective efficacy, employee involvement, organizational participation

Kollektives menschliches Handeln im Kontext der organisationalen Partizipation – Beiträge aus der sozial-kognitiven Theorie und der Tätigkeitstheorie

Zusammenfassung: Auf Basis des sozial-kognitiven Ansatzes der Human Agency von Bandura (1997) und der Tätigkeitstheorie von Leontiev (1978) schlägt dieser Artikel einen neuen theoretischen Rahmen zur Analyse der Partizipation von Arbeitenden an Entscheidungen in Unternehmen vor. Mit Blick auf die sozial-kognitiven Konzepte der Selbstreaktivität, Selbstreflexivität, Intentionalität und Vorausschau werden Gemeinsamkeiten, Komplementaritäten und Unterschiede zwischen beiden Theorien untersucht. Das Erleben von Wirksamkeit im Handeln wird als kognitive Grundlage der Arbeitsmotivation betrachtet, während die Vermittlung von gesellschaftlichen Anforderungen und Ressourcen durch praktische Tätigkeit als ein ökologischer Ansatz der Motivation konzeptualisiert wird. Dabei wird auch diskutiert, inwiefern gemeinsame Vergegenständlichungen als materielle Indikatoren der kollektiven Wirksamkeit von Arbeitenden verstanden werden können. Exemplarisch wird dargelegt, inwieweit eine integrierte Anwendung von Konzepten aus beiden Theorien dabei hilft, Mechanismen, die mit der Praxis der Partizipation von Mitarbeitern im Unternehmen verbunden sind, besser zu verstehen.

Schlüsselwörter: Person-Umwelt-Transaktion, Arbeitsmotivation, kollektive Wirksamkeit, Handlungsregulation, organisationale Partizipation

In organizational behavior research, empirical studies on employees' direct or representative participation in decision-making concerning tactical or strategic issues have demonstrated that specific practices of organizational participation have different effects on outcomes. Characteristic outcomes are performance, health and safety, quality in decisions, organizational commitment, citizenship behavior, employee motivation, and job satisfaction (for reviews, see Heller, Pusic, Strauss, & Wilpert, 1998; Kruse, 2002; Summers & Hyman, 2005; Weber, 2015; Wegge et al., 2010).

However, researchers still do not agree on the theoretical models or conceptualizations that may sufficiently explain the respective association between participation in organizations and its outcomes. In particular, this applies for contemplable psychological constructs that

This article was handled by the previous editor-in-chief, Prof. Dr. Friedemann Nerdinger.

DOI: 10.1026/0932-4089/a000234

may help to explain individual and interindividual attributes and processes that mediate or moderate potential effects of participatory organizational structures or participative behaviors on those psychological outcomes. The existing aforementioned reviews indicate that, from case to case, researchers refer to very different theories for explaining specific transfer effects from structures and processes of employee participation to psychological outcomes. These theories include models of motivation, self-actualization, skill utilization, the job characteristics model (all stemming from humanistic psychology), expectancy value (rational choice) approach, Rotter's locus-of-control concept and similar concepts of cognitive control, Marx's alienation theory, concepts of psychological empowerment, or the psychological ownership framework (Pierce, Kostova, & Dierks, 2001). However, in a number of cases, researchers use heuristic frameworks influenced by organizational sociology or business economics but no psychological models or concepts are used at all. Overall, among researchers there is little congruence about how transactions from the organizational environment over concrete acts of employees' participation in respective psychological outcomes are mediated and should be conceptualized theoretically.

It remains more or less open which *collective* experiences, cognitive–motivational processes, and products of collaboration employees are associated with in various forms of substantive participation in organizational decision-making. Further, because different forms of participation are related to corresponding decision areas, the single organization characteristically applies diverse forms of employee participation. This implies an ongoing interplay between individual, collective, direct, and representative forms of participation. Several organizational–sociological studies revealed problems of compatibility between these different forms. Further studies indicated that implementing employee participation often suffers from a lack of concepts to foster participatory skills and knowledge or cohesiveness of participatory boards as *problems* of organizational participation. Other studies revealed problems such as employees' insufficient motivation to participate, resistance against organizational change, reluctance toward taking responsibility, low trust in participatory boards, or, finally, uncertain spillover effects from participation at the workplace to democratic engagement in society (for overviews, see Greenberg, Grunberg, & Daniel, 1996; Heller et al., 1998; Sauser, 2009). However, organizational–psychological studies with a more micro-analytical perspective (e. g., Nerdinger, Martins, & Pundt, 2011) and utilizing genuine psychological concepts in explaining cognitive and motivational processes that occur within and between actors, target groups, and specific institutions of participation are still rare.

In the present paper we aim to substantiate that a tentative integrated psychological framework of collective agency by connecting the social cognitive theory of human agency by Albert Bandura (1997, 2001, 2006) and activity theory by Aleksei Nikolaevich Leontiev[1] (1978, 1981) will contribute to a better understanding of problems like those listed earlier. Both theories address person–environment transactions comprehensively and approach the link between the person and his/her ideal, social, and material environments from a different perspective. We aim to demonstrate how these two theoretical approaches may supplement each other in shaping a holistic spiral structure of human action embedded in the environment. Further, we will argue that their combination offers opportunities for a more profound understanding of several research objects. Here we refer to the dynamics of the individual in a collective team context, the psychological and material ties between employees taking part in organizational decision-making, the motivational bases of participation and nonparticipation, and both psychological and societal benefits resulting from organizational participation. Since our brief literature review discovered no cross-references between Bandura's social cognitive theory and Leontiev's activity theory in the PsycINFO database, this proposed theory connection seems to be novel.

The first part of our paper reveals how the two theories correspond to each other and how they may contribute to establishing a framework of collective agency. The section "Self-Reactiveness and Self-Reflectiveness" presents efficacy in agency as a cognitive foundation of motivation and activity theory as an ecological approach to motivation. The importance of the domain concept is emphasized, and we discuss how collective objectifications can be understood as the material indicators of collective efficacy. The third section, "Intentionality and Forethought," explains how activity theory may aid in a perspective enlargement of social cognitive theory concerning temporal and spatial reference points that consider collective agency. It is argued that intentionality and forethought offer the conceptual links.[2]

[1] We follow Dmitry A. Leontiev (personal communication) concerning the correct transfer of his family's name into English.

[2] This article is dedicated to Bernhard Wilpert, former professor at the Technische Universitaet Berlin and former IDE (Industrial Democracy in Europe) research director. Through his pioneering work on organizational participation, and through personal contact (or communication), he has inspired us to take up the challenge to contribute theoretical issues from psychology that concern the interplay between forms of representative and direct participation and their effects on psychological outcomes.

Social Cognitive Theory and Activity Theory: Transactional Person-Environment Concepts

Social cognitive theory constitutes a theoretical framework (Bandura, 1997, 2001, 2006) in which people are rooted in social systems and act within a broad network of sociostructural influences. This implies that people are both producers and products of social systems. Furthermore, Bandura (1997) states that humans operate within a *triadic reciprocal causation* between internal factors (cognitive, affective, and biological events), behavior, and environmental events. The three sets of interacting factors are not of equal strength, and their relative influence will vary for diverse activities and under different circumstances. Within the triadic model, sociostructural and personal determinants are treated as interacting cofactors within a unified causal structure (Bandura, 1997). Through "reflexive and regulative thought, the skills at one's command, and other tools of self-influence that affect choice and support selected courses of action" (Bandura, 1989, p. 1182; cf. Bandura, 2006) persons gain a latitude of action. "Self-generated influences operate deterministically on behaviour the same way as external sources of influence do" (Bandura, 1989, p. 1182).

While Bandura (2001) emphasizes the dialectics between individuals and their social systems on the individual and group level, activity theory (Leontiev, 1978, 1981) offers a broader conceptual framework for collective human agency and motivation embedded in culture, history, and society. In the following, it is argued that activity theory contributes to the understanding of how collective human agency, organizational goals, and societal objectives and values are interrelated and how they influence each other (see row 1 and 2 in Table 1). Table 1 summarizes the whole conceptual comparison (including the main concepts).

While defining the basic category of activity theory, the Russian psychologist Alexei Nicholaevich Leontiev (1978, p. 40) referred to the early humanist work of Karl Marx and Friedrich Engels (1973; written in 1845/1846): *Activity* is defined as an active, sensory-practical behavior through which humans establish practical contact with objects of "the surrounding world," experience the "resistance" (i.e., character and attributes) of those objects, act upon the latter (e.g., change some of its attributes), while "acknowledging their objective properties." As stated by Leontiev (1978):

> "Even the bodily organization of individuals incorporates the need that they participate in an active relationship with the external world; in order to exist they must act, produce the necessary means of life. Acting on the external world, they change it; at the same time they also change themselves." (pp. 40–41)

A most significant specialty of activity theory, with a high relevance for our understanding of collective agency, is how it conceptualizes the interrelationship between the individual, his/her activities, and the embedding society (including culture). Leontiev (1981) argues that not only social (e.g., rules) or ideal objects (e.g., symbols), but also most material objects resulted from the former activities of other humans. Hence, the interrelationship between societal rules, requirements, norms, values, and resources (e.g., knowledge, tools) etc. and the individual is *mediated* through the individual's activities (cf. essays of philosophers close to activity theory, e.g., Ilyenkov, 1977 and Lektorsky, 1980). A person's activities are shaped by the latitude allowed by societal/social meanings belonging to the activity-related objects, conventions, and resources on the one hand. The actor influences, enriches, or at least reproduces those social principles and resources of behavior through his/her sensory-practical activity on the other hand.

Essential for activity theory is the conceptualization of human activity as an ongoing circle:[3] Persons continuously acquire material (e.g., a tool) and ideal (e.g., knowledge about the correct use of this tool) objects from both their environment and the more remote world. In doing so, components of the collective cultural–historical knowledge are transferred to the acting individual shaping his/her skills, knowledge, and intentions. Simultaneously, persons materialize their intentions and change elements of their environment through their consciously or emotionally regulated actions.

Leontiev (1978) acknowledges that mental representations play a specific role within the circular transactions between a person and his/her environment, especially when:

> "... the product toward which activity is directed does not yet exist. For this reason it can direct activity only if it is presented to the subject in a form that allows it to be compared with the original material (the object of work) and its intermediate transformations. Moreover, the psychic image of the product as a goal must exist for the subject in order that he might work with

[3] Although Leontiev (1978, p. 87) calls this circle between appropriation and objectification a "circular structure," we prefer to call it a spiral structure because Leontiev's construct is deeply rooted in Hegelian dialectical philosophy.

Table 1. Comparison of concepts

	Social cognitive theory (SCT; A. Bandura)	Activity theory (AT; A. N. Leontiev)
(1) Person–environment (P-E) interplay and the agency vs. activity concept	*Triadic reciprocal causation:* Bidirectional influences between cognitive (and other) personal factors, behavioral patterns, and environment; P-E interplay is *mediated* by persons' *self-regulatory processes* and analyzed on the individual or group level. SCT does not conceptualize objects within their cultural–historical context as mediators of P-E transaction. Persons play a role in creating self-development and self-renewal by establishing their own lives and life conditions under specific, supporting or limiting, social and material environmental conditions. Theoretical focus upon cognitive structures and processes; limited conceptualization of activity as *agency* representing the interplay of specific cognitive, emotional, and motivational processes referring to goal-directed behavior and embodying the endowments, belief systems, self-regulatory capabilities through which a person exercises influence upon his/her social or material environment.	*Circular* (dialectical spiral) *structure* of activity: P-E interplay is *mediated* by the actor's sensory–practical activity and cultural–historically created objects that he/she uses (tools, symbols incl. language, social standards etc.) in a societal context; P-E interplay is analyzed on the level of the society, too. Theoretical focus on processes of *activity:* Active, sensory–practical behavior through which persons establish practical contact with material, ideal, or social objects, developmental images of the latter while experiencing their character; persons simultaneously change elements of their environment through their – more or less – consciously or emotionally regulated actions. Here, environment is considered as being changeable through the materialization (objectification) of mental images or operations, on the one hand, and as influencing those mental phenomena while the individual acquires elements of his/her environment through practical activity, on the other hand. Extensive conceptualization of activity as object-mediated exchange between collective sociocultural knowledge, individual knowledge, skills, and experiences.
(2) Influence of society, culture, sociostructural system	Societal influence on the individual is based on material resources, roles, practices, sanctions etc.; self-regulatory mechanisms, i. e., core features of agency (especially efficacy beliefs) *mediate* the effect of societal (incl. sociostructural) factors upon individual psychic attributes, processes, and behaviors. Persons are conceptualized as agents who change features of their social and societal environment actively and deliberatively whereas SCT overestimates the role of intention and other cognitive mechanisms. Theory regards society from the perspective of the individual person.	Societal influence is based on the position of the individual within the societal structure that determines the individual's chances or barriers to gain access to different domains of activity that encompass potential motives serving his/her personality development. Leontiev considers but undervalues individual and collective activities that are aimed at the changing of societal and social conditions. In contrast to Holzkamp-Osterkamp and Bandura, he overvalues objective necessities inducing the individual to accommodate to societal rules. Theory views the individual person from the perspective of the society and its cultural system.
(3) Social learning vs. appropriation (= acquisition) and objectification	SCT focuses more on individual processes of learning, e. g., self-reflectiveness, social modeling, and vicarious learning. Social standards and norms have to be learned by the individual guided by his/her self-regulatory capabilities. However, beside shared efficacy beliefs and knowledge, joint material resources are considered as bases of collective agency. Material results of collective activity do not have the same theoretical weight in SCT as they have in AT. Thus, SCT neglects the role of objectifications including their mediating tool character for human development.	AT focuses upon the transfer of accumulated *sociocultural knowledge* and competences to the individual: Knowledge, know-how, and experiences that other persons have objectified in external forms through materialization, symbolization, or communication represent the base of both individual and collective (social and societal) learning. These objectified forms of knowledge are actively discovered by the individual in their specific quality and then converted into internal, mental forms. *Objectifications* as material or symbolic embodiments and carriers of humans' cultural–historical mental capabilities are mediated through the individual's resulting experiences when dealing with raw materials and tools etc. In creating *collective objectifications*, members of a collective mutually transfer their individual knowledge, competences, and experience into a material form, that is, into own products that the collective develops, produces, modifies, or improves. By doing this, members make their materialized knowledge available to other persons who can appropriate it.

Table 1. Comparison of concepts (Continued)

	Social cognitive theory (SCT; A. Bandura)	Activity theory (AT; A. N. Leontiev)
(4) Motivation and motive	SCT acknowledges the sociocultural embeddedness of human agency but offers no elaborated conceptualization of cultural–historical genesis of human motives and motivation.SCT focuses on *self-regulatory* cognitive *processes* as motivators of purposive behavior. Personal goals rooted in a person's value system, in his/her experiences of mastering environmental tasks, and in his/her sense of personal identity provide activities with meaning. Personal goals motivate by monitoring one's own activities and comparing their performance with personal standards. Persons motivate themselves and guide their actions anticipatorily through *forethought* concerning preferred objectives based on their domain-specific efficacy beliefs in their capabilities to realize those objectives. Thus, forethought is translated into incentives and adequate courses of action. Attention to motivation focuses the function cognitive processes have for the regulation of behavior, and, only to a lesser degree, toward social or material determinants in the environment influencing that behavioral control.	AT accentuates an elaborated sociological and historical conceptualization of motives and motivation. Motives link the individual with his/her society and culture. Ontogenetically, a specific *motive* originates from the individual's social or material environment (incl. objectifications) that offers plenty of possible *domains* containing motives/objects (related to the individual's emotions and psychological needs) out of which the person makes a selection. This individual *interiorization* of motives depends on present situative opportunities, requirements, or hindrances that he/she will find within the respective domain and on previous behavioral capabilities, interests, former experiences, and, based on the latter, on his/her present behavioral strategy and the resulting experiences of mastery. Thus, mediated through the individual's object-related activity, the respective object gains *personal meaning* (sense) for the subject who develops and coordinates a hierarchy of motives and complementary activities.
(5) Mental representations and action regulation: Intentionality, forethought, self-reactiveness and self-reflectiveness vs. interiorization and image	Four core features of human agency are regarded as central *self-regulatory* cognitive *capabilities* specific for human beings exercising influence on their environment. 1. *Intentionality* includes the deliberative planning of strategies and future actions for realizing a desired goal. 2. *Forethought* refers to far-reaching goals and anticipations of outcomes of future actions that, by being represented cognitively in the present, are converted into current motivators and regulators of behavior. 3. *Self-reactiveness* means the ability to give shape to appropriate courses of action and to motivate and regulate their execution and accompanying affects. This is governed by self-guidance through performance compared with personal goals and standards, and corrective self-reactions. 4. *Self-reflectiveness* denotes people's ability to reflect on their personal efficiency, motivations and values, their thoughts, and actions and the importance of their goals that enables corrective adjustments. *Self-efficacy* means a person's beliefs in his/her capabilities to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over environmental events in a specific *domain* (e. g., workplace, family, hobby). SCT sets the *primacy of mental representations and self-regulatory mechanisms* against practical activity.	Leontiev acknowledges that mental *images* can represent intentions, personal goals, action programs, and self-reflection within the transactions between the person and their environment. However, he stresses the *primacy of sensory–practical behavior (activity)* and of the resulting *experiences* against mental representations that originate from practical activity and, therefore, are subordinated to the latter. *Interiorization* means the transformation of an external action dealing with a material object into mental processes including a psychic image of that external action and its object (Vygotsky, 1978). Tools and other instruments function as objectified expressions of socioculturally created cognitive norms, standards, and object-related hypotheses, which exist outside the individual psyche, too (cf. Lektorsky). These norms function as structure-forming components of the individual's cognitions and represent a counterpart to cognitive standards as conceptualized in SCT. Because of a different theoretical position, classic AT (Leontiev) has not elaborated a conceptualization of self-reactiveness, self-reflectiveness, or self-efficacy.
(6) Concepts of collective agency, collective efficacy vs. collective activity	SCT is both present- and future-oriented: In *collective agency*, persons operate together to secure the outcomes from as many of the desired goals as possible that are only achievable through interdependent efforts; people utilize joint resources (knowledge, tools, skills) in collaborative action while drawing on past experiences and planning concrete steps into preferable futures. In *proxy agency*, a person tries to influence others who have the necessary resources and means and expects that the latter obtain outcomes that will also be beneficial for him-/herself.	Being past- and present-oriented, classic AT (Leontiev) accentuates collective resources (knowledge, tools, symbols etc.) as cultural–historical antecedents of the individual's present activities, motives, and development potentials in the future. A more future-oriented further development of activity theory (Holzkamp-Osterkamp) posits that humans have the capability of insight to realize that their integration into organized cooperation requires restraints of immediate articulations of needs, but offers care for subsistence and multifarious possibilities to

	Collective efficacy is considered as shared beliefs of a social unit's actors about conjoint capabilities and resources to execute successful cooperative actions to solve tasks in a specific domain. Collective efficacy is considered as both a product and a precondition of cooperation.	develop one's personality or to appropriate cultural assets and goods. Specific for human beings, *generalized agency* is represented through collaborative, prospective planning of situations in the future as well as through a *collectively planned environmental control* based on the development of means for the handling of future situations. Collective agency (collective forethought and intentionality) can be viewed as social–cognitive theoretical fractal of generalized agency. Objectifications are regarded as both product and precondition of cooperation.

> this image, i.e., modify it in relation to present conditions. Such images are in essence conscious images, conscious representations – in a word, the essence of the phenomena of consciousness." (p. 115)

This view can be related to intentionality as a core feature of agency in terms of social cognitive theory. However, in contrast to Bandura, Leontiev (1978) stresses the primacy of sensory–practical behavior (activity) against those resulting mental representations:

> "Activity is not by any means simply an expresser and transmitter of the psychic image objectivised in its product. It is not an image that is impressed on the product, but specifically activity, the objective content that it carries objectively in itself. Transitions subject → activity → object form a kind of circular movement, and for that reason it may seem to make no difference which of its links or moments is taken as the initial one." (p. 117)

Environment is considered as being changeable through a person's activity that materializes (i.e., transfers) mental images into tangible objects or visual symbols (*objectification* sensu Leontiev, 1981; cf. Lektorsky, 1980), on the one hand. On the other hand, depending on its quality, the environment influences his/her mental images while the individual acquires elements of the environment, for example, knowledge and know-how, through practical activity (*appropriation* sensu Leontiev, 1981, *acquisition* sensu Leontiev, 1978). Thus, concrete activity, that is, the handling of, adapting to, and changing of (material, ideal, or social) objects mediates the person–environment–(society) relationship.

In social cognitive theory, self-regulatory processes of human agency play an important mediating role in terms of the aforementioned relationship:

> "In social cognitive theory, sociostructural factors operate through psychological mechanisms of the self system to produce behavioural effects. Thus, for example, economic conditions, socioeconomic status, and educational and family structures affect behaviour largely through their impact on people's aspirations, sense of efficacy, personal standards, affective states, and other self-regulatory influences, rather than directly." (Bandura, 2001, p. 15)

Similar to Bandura, Leontiev (1978) states that societal processes condense in mental phenomena. He considers consciousness:

> "... personality as a new quality engendered by the movement of the systems of objective social relations into which his activity is drawn. Personality thus no longer seems to be the result of a direct layering of external influences; it appears as something that man makes of himself, confirming his human life." (p. 185).

Notwithstanding, Leontiev's characterizations of consciousness and images remain rather global. Therefore, we will argue that, because he is focusing on cognitive processes to a higher extent compared with activity theory, Bandura offers the psychological missing link between both theories.

The agentic perspective implies that an active person intentionally influences both his/her own functioning and external circumstances, and in this causal structure, people are self-organizing, proactive, self-regulating, and self-reflecting (Bandura, 2006). Thus, people play a role in creating their self-development and self-renewal, in addition to establishing their own lives and life conditions under various, supporting or limiting, social and material environmental conditions. Social cognitive theory distinguishes between *four core features of agency* that enable people to operate in this way (Bandura, 2001, 2006):

- *Intentionality* that includes the planning of actions and strategies for realizing them, based on an intention as a representation of a future action to be performed.
- *Forethought* involves the time dimension of agency and includes far-reaching goals people have set up and anticipations of outcomes of future actions.

- *Self-reactiveness* as multifaceted self-directedness operates through self-regulatory processes that link thought to action. These regulations of motivation, affect, and action are governed by a set of self-referent subfunctions. Thus, actions give rise to self-reactive influence through comparing one's performance with one's personal standards and goals.
- *Self-reflectiveness* denotes a person's ability to investigate and reflect on his/her own functioning (self-awareness). People reflect on their personal efficiency, their thoughts, and actions, and the importance of their goals – which enables them to correct and adjust their behavior. Here, efficacy beliefs exert a strong influence on processes and results of self-reflectiveness.

The exercise of agency is dependent on, and displayed via, people's beliefs in their capabilities to produce desired effects by their actions. Social cognitive theory distinguishes between three different modes of agency, postulating that "everyday functioning requires an agentic blend of these three forms of agency" (Bandura, 2006, p. 165). Personal or *individual agency* as individually exercised behaviors must therefore rely on people's own functioning in combination with environmental factors (e.g., resources that are utilized). *Proxy agency* is designated as a socially mediated agency. It is exercised in contexts in which a person does not have direct control or the necessary resources to alter the social or institutional conditions that affect his/her live (Bandura, 2000). Instead, the person searches for an agent who may act on behalf of him/her.

In *collective agency,* persons collaborate with others to secure the desired outcomes from as many goals as possible that are only achievable through interdependent efforts. In the exercise of collective agency, people apply their joint resources, knowledge, and skills and act in common. Here, peoples' conjoint beliefs in their collective capacities to achieve attainments constitute a key ingredient of collective agency (Bandura, 2006).

In contrast to social cognitive theory, activity theory does not focus on the regulatory power of peoples' individual or shared beliefs in motivating and mastering their everyday life. Rather, activity theory posits the primacy of sensory-practical activity and the mediating function of ideal or materialized objectifications of sociocultural knowledge and competences in a cultural–historical perspective. Notwithstanding, Bandura (1997, 2001, 2006) also accentuates the role of joint resources (both knowledge and tools), which are utilized when persons are collaborating, drawing on past experiences, and planning concrete steps into preferable futures. Thus, social cognitive theory offers several points of contact.

Self-Reactiveness and Self-Reflectiveness

In the following, we compare both approaches concerning their compatibility by considering self-reactiveness and self-reflectiveness as two core features of human agency.

Efficacy in Agency: A Cognitive Foundation of Motivation

Bandura (2001) accounts for self-reactiveness and self-reflectiveness as representing the main motivating intrapersonal processes responsible for the realization of an individual's intentions and plans. He characterizes *self-reactiveness* as follows:

> "This multifaceted self-directedness operates through self-regulatory processes that link thought to action. … Monitoring one's pattern of behaviour and the cognitive and environmental conditions under which it occurs is the first step toward doing something to affect it. Actions give rise to self-reactive influence through performance comparison with personal goals and standards. Goals, rooted in a value system and a sense of personal identity, invest activities with meaning and purpose. Goals motivate by enlisting self-evaluative engagement in activities rather than directly." (p. 8)

Closely interconnected with self-reactiveness, *self-reflectiveness* refers to a person's ability to reflect on their own functioning. People reflect on their personal efficiency, their thoughts, and actions, and the importance of their goals. Reflecting enables them to make corrective adjustments, or, in other words, self-reactive behavior. Here, efficacy beliefs exert a strong influence on processes and results of self-reflectiveness: In human agency the belief of *personal efficacy* constitutes the foundation of agency according to Bandura (2006). He further emphasizes that unless people believe they can produce the desired effect, they have little incentive to act. No matter how other factors may serve as motivators or guides, they are rooted in the belief of people whether they have the power to create changes through their actions or not. Efficacy beliefs are shaped when people estimate the interplay of their agency capabilities with environmental conditions in light of the possibilities for making changes. Based on those estimations, the forms of agency are established and chosen.

From an efficacy perspective, effective acting will require both the necessary skills and efficacy beliefs to

apply them well in a given context. Effective acting further requires the ability to coordinate the skills in new ways to counter variations in situational demands.

When people have adapted a certain goal they then act to realize it, and forethought is translated into incentives and courses of action through self-regulatory mechanisms. Bandura's view of cognitive motivation means that people motivate themselves and guide their actions anticipatorily. Meta-analyses show that efficacy beliefs contribute significantly to the level of motivation, emotional well-being, and performance accomplishments (Bandura, 2006). However, Bandura's attention on motivation is primarily directed at cognitive processes and their functioning, and to a lesser degree toward a breakdown of determinants in the environment. Considering the social determinants of human agency, including motivational processes in general, activity theory offers compatible complements.

Activity Theory: An Ecological Approach to Motivation

According to Leontiev (1978), intraindividual motivational processes are inseparably linked with material, ideal, or social objects in the individual's environment (see row 4 in Table 1). The environment offers motives and links the individual with his/her society and culture. In Leontiev's view, motives represent a dynamic interrelationship between the individual and objects (or human beings) in his/her environment. Leontiev (1978, see p. 161) emphasizes that behaviors, which are specific to human beings, result from interiorized motives. The latter represent original (material, ideal, or social) environmental objects that attract the attention of the respective individual who discovers that specific features of an object are personally meaningful for him/her. Consequently, this individual dedicates himself/herself to the object in activity and thought. For example, a worker who has mastered performing games that require high dexterity is predisposed to develop interest in a new work task that requires a similar light-fingeredness.

Requiring self-consciousness, many human social and mental motives (e.g., esthetics, politics) have no counterpart in animals. During their life, and entangled in their activities, humans develop motives that flow into a hierarchy of dominant and subordinated motives. They strongly pursue their dominant motives with a long-term perspective. Why an individual develops specific activity–motive associations is a complex question. To a certain extent it will depend on the domains of the environment to which this particular individual has actual access to. It will also depend on the opportunities or hindrances he/she will find within these domains. And, it will depend on how the individual will deal with these societal resources and restrictions he/she encounters while acting in the respective domain. In this respect, Leontiev's view is similar to Bandura's domain concept (see section "The Structure of Collective Agency and Efficacy Connected to the Domain Concept").

According to Leontiev (1978), interiorized motives based on individual experiences that result from the person's sensory–practical activity in the environment determine his/her future goal-setting and action regulation. Activity-theoretical studies of work tasks in research and development resulted in several models of exploratory epistemic action regulation. These models represent reconnoitring actions to gather information about still unknown conditions, possibilities, and means of acting when a person is confronted with novel problems and tasks (Hacker & Sachse, 2014). Such exploratory behavior often occurs spontaneously, intuitively or improvising, and is not guided by contoured goals or complex planning (Fjeld et al., 2002; Volpert, 2003). Nevertheless, it can provide a basis for later conscious goal-setting and planning. The view of activity theory differs from the view of social cognitive theory concerning this issue in principle. Bandura (2001) considers conscious goals, plans, expectations, beliefs, and self-regulatory mechanisms as decisive means of anticipatory action regulation.

However, representatives of activity theory state that an individual who forms an intention, sets a goal, creates a plan, or makes a decision will always fall back on (material, ideal, or social) objects that were created in his/her present, or in a past, society. These culturally created objects are interiorized by the individual, set standards for the person that influence his/her cognitions, and mediate between his/her cognitive images and processes and his/her exchange with the environment. Or, in the words of Lektorsky (1980):

> "The instrumental man-made objects function as objective forms of expression of cognitive norms, standards, and object-hypotheses existing outside the given individual. The mastering by the individual of these norms, social in their genesis, permits their functioning as structure-forming components of cognition." (p. 20)

For example, let us consider a designer who creates a novel product, which is denominated as an objectification (Lektorsky, 1980; Leontiev, 1981) or a reification (Ilyenkov, 1977) of his creative ideas. His/her previous interiorization of those structure-forming components of cognition (e.g., technological know-how, target specifications, contemporary esthetic values) *preceded* the materializa-

tion of his/her current idea, Depending on the specific nature of those structure-forming components they will foster or restrain his/her creativity. Hence, on the one hand, activity theory provides an important hint of which external (cultural) forces create those personal standards guiding a person's or a collective's self-reactiveness.

On the other hand, the experience of personal efficacy represents a supportive condition that human agents will develop individual motives within their culturally/historically framed environmental context. For example, if a person does not dare to use unknown tools that are complicated to handle, it is not very likely that he/she will develop a motive to exert a skill-promoting work activity requiring the use of this kind of tool. This self-reflexive *energizing* of interiorized motives and their corresponding objects (to which the experience of efficacy refers) represents a highly significant contribution from social cognitive theory to the conceptualization of human activity. Complimentarily, activity theory offers a sophisticated conceptualization of those objects that possess a personal meaning (sense) within the history and network of the social and material relationships of the respective individual (cf. D. A. Leontiev, 2005).

Finally, according to Leontiev, carrying out activities and gaining corresponding experiences builds a necessary condition for personality development. He supposes that for each personality a specific hierarchy of realized domains of activities and a hierarchy of corresponding motives are characteristic (Leontiev, 1978, section 5.4). We assume that the complexity of the intra-organizational environment will be associated with the employees' structures of motives that emerge from employees' participatory activities dealing with challenging tasks. For example, employees who enjoy meaningful and challenging work tasks (Fairlie, 2011) and participate in decision-making concerning their work system (e.g., self-managed work teams; see Weber, 1999) will differ from employees working without any decision authority (e.g. repetitive work on the assembly line) referring to Leontiev's (1978, p. 185) sketch of three basic parameters of personality concerning:

- The diversity and multiplicity of their realized motives and domains of activity within and outside the work life.
- The hierarchical degree of their motives: For example, because they experience higher responsibility, the structure of work-related motives of employees participating in complex decisions and enjoying meaningful work tasks may be considerably stronger differentiated (concerning superior-intrinsic motives and inferior-instrumental goals).
- The regulation of the interdependencies between their motives and domains of activity: Several motives of employees enjoying a high extent of participation and meaningful work tasks will connect specific activity domains closer to each other than is the case for other workers subjected to restrictive tasks. For example, a person likes to read specialist literature during his/her occupational activity and also reads similar literature during the leisure activity based on his/her comprehensive interest in a specific topic that links both activities.

A corresponding study would require high methodological standards concerning the method of data collection. Fortunately, several diagnostic inventories with activity-theoretical orientation exist (e.g., D. A. Leontiev, 2005; Ostendorp, 2006; Schnell & Becker, 2007).

The Structure of Collective Agency and Efficacy Connected to the Domain Concept

According to Bandura (1997, 2001) persons integratively evaluate the interplay of their self-regulatory capacities with behavioral determinants in their social environment (e.g., if their work tasks demand problem-solving competences). This balanced evaluation creates the efficacy belief system that controls the choice of agency mode (personal, proxy, or collective) through influencing the individual's appraisal of which actions may be realizable by him/her in a concrete situation (see row 2 and 5 in Table 1). People who develop competencies, self-regulatory skills, and enabling efficacy beliefs can generate a wider array of options for their actions. They can be more successful in realizing future goals than those with less developed agentic resources.

In many domains of life and organizational functioning, and for a variety of reasons, people may try to accomplish desired goals and realize values indirectly through the exercising of *proxy agency* instead of direct personal agency. According to Bandura (2000, 2001), proxy agency is a socially mediated form of agency. People attempt to bring other actors to do actions on their behalf in such a way that they still may have the possibility to achieve the outcome they desire. Persons may turn to proxy agency in situations when:

- They have no direct control over a domain,
- They have the possibility to exert direct control but they do not think that they have the capabilities to apply direct control themselves and feel others may perform better, or
- People do not want to assume responsibilities or undertake tasks because exerting personal agency may cause too much strain.

Many of the outcomes people desire are only achievable through their interdependent efforts with others, in which people will have to work together in order to attain the desired goals. Bandura (2000, 2006) states that a collective's attainments are the product not only of the group's shared knowledge and varying skills, but also of the interactive, coordinated, and synergistic dynamics of their transactions. He emphasizes that these dynamics help to explain why persons may work skillfully when alone, though poorly when performing together. Beside shared knowledge and skills, *collective efficacy* builds a further constituent of collective agency. It is defined as a social entity's (e.g., a work group's) shared belief in its conjoint capabilities and power to organize and execute courses of action required to produce given levels of performance. Collective efficacy is operating on the same principles as self-efficacy, although the processes are more complicated because group success requires an effective interdependent linkage of task skills and roles. The group members must not only coordinate what they are doing individually with the results of the work done by other members. Additionally, they are also affected by the beliefs, motivation, and quality performance of their coworkers (Bandura, 1997, p. 468).

The findings from meta-analyses and empirical investigations indicate that "... the higher the perceived collective efficacy, the higher the group's motivational investment in their undertakings, the stronger their staying in power in the face of impediments and setbacks, and the greater their performance accomplishments" (Bandura, 2000, p. 78).

Several studies have identified different antecedents for the amplification of efficacy belief systems at both the personal and the collective level. Overall, the studies have found that leadership climate (Chen & Bliese, 2002) as well as team factors such as size, last performance, confident leadership (Watson, Chemers, & Preiser, 2001), age, socioeconomic status, and social position (Fernandez-Ballesteros, Diez-Nicolás, Caprara, Barbaranelli, & Bandura, 2002) all influence self-efficacy and collective efficacy. Further, we suppose that a work group's level of collective agency will be positively dependent on the amount of collaborative interdependence between the members' goals and tasks (cf. Tjosvold, 1998).

Summing up, collectivity is constituted through common activities by members of a social entity. Here, collective efficacy, task interdependence (Gully, Incalcaterra, Joshi, & Beaubien, 2002), autonomy, and the members' various competencies (Heller, 2003) form important conditions for the level of collective agency and for a work unit's performance.

Triadic reciprocal causation (see section "Social Cognitive Theory and Activity Theory") implies that human beings are part of a continuous developmental spiral that changes people and the environment through mutual influence. Thus, efficacy cannot be perceived as being of a general global nature, but will always be constituted in a given specific context. Further, efficacy beliefs are not to be understood as a component of personal traits or fixed abilities. On the contrary, efficacy systems are generative capabilities that are changeable and continuously influenced through the interplay with the environment. Moreover, Bandura (1997) points out that explanatory and predictive power in measuring personal efficacy must be related to domains of functioning that represent a variety of task demands.

In the following, we will exemplify that organizational participation research may benefit from the collective agency concept and the activity-theoretical framework in several aspects. We refer to this research area because organizational participation includes employees' collective efforts to plan or improve and change their work conditions or their organization. In other words, participation research refers to the person–environment transaction.

From the point of view of social cognitive theory, we will argue for dividing the field of work life into two specific domains, namely, the job domain and the organizational domain. Performing one's work tasks constitutes a delimited area of working life and could therefore be considered to compose a specific domain, namely, the *job domain* to which work-related self-efficacy or work-related collective efficacy is directed at. Employees' influence in performing their own job (including its work tasks) is often conceptualized as the level of autonomy, for example, group autonomy (see Ulich & Weber, 1996). By contrast, employee participation in organizational decision-making processes comprises issues at higher levels, such as employment policies, health and safety, human resources, financial affairs, and development of the organization. Hence, these decision areas constitute another domain: the *organizational domain* that relates to the running of the whole organization.

Applying the concept of two efficacy belief systems, including their relationships with the modes of agency to both domains of working life, will allow for a better understanding of the interplay between the employee(s), between different forms/systems of participation, and between the effects of applied participatory practices. To date, such research has been very rare in organizational psychology. Work performance is characterized by a continuous increase in the application of team work (Salas, Goodwin, & Burke, 2009). This will also increase the importance of *collective efficacy* in order to facilitate

institutions of employee participation (e.g., self-managed work groups, work councils, joint participatory committees).

In the following, we give several examples of how the agency construct may be applied to organizational participation research. We consider the interplay of direct or representative forms of employee participation with regard to their concrete institutions, modes of agency, and the two forms of efficacy between, as well as within, the work and the organizational domain (cf. an empirical study on employee desire for control of the different institutions of participation in Jeppesen, Jønsson, & Shevlin, 2011).

First in very hierarchically structured large organizations, the single employee has no direct influence on strategic decisions in the organizational domain. Instead of this, his/her influence is primarily *proxy*, that is, via elected employee representatives. The latter enjoy personal influence at the organizational level taking part in joint committees, work councils, or company boards. Thus, systems of representative participation in the organizational domain involve proxy agency beliefs. The employees seek influence and want their desires fulfilled through their employee representatives taking care of their desires for the future.

Second, dependent on the specific participatory system of their organization that allows them more or less participation in tactical or strategic decision-making, these employee representatives will develop individual self-efficacy. The latter is the case if their individual contributions gain some acceptance within their collective. Furthermore, they may also experience collective efficacy if the group of representatives to which they belong successfully influences organizational decisions benefitting their interest group.

Moreover, whether employees who experience high job-related self-efficacy also develop high collective efficacy within the same domain may depend on whether their jobs are integrated into a participatory work system or not. The domain-specific association between both forms of efficacy may be positive for members of semi-autonomous work groups following interdependent goals. However, self-efficacy and collective efficacy may be uncorrelated or even negatively associated for employees in work units that are autocratically managed. In the latter case, the single workers are relatively separated from each other and do not find many opportunities to develop collective efficacy when they execute their individual work tasks.

To give a further example, employees who experience high collective efficacy within the job domain may develop a strong belief in organization-related proxy agency concerning work councils, joint participatory committees, or other participatory boards because they have experienced benefits of collective action within their own domain. Thus, they will develop trust in representatives of their interests. Finally, different modes of agency may interact negatively. Employees experiencing strong proxy agency but only low collective agency within the job domain may resist against participating directly in organizational decision-making in case of organizational changes that offer them more direct influence. Their resistance may result from their long-term experience that others took care of them, sparing them the effort to spring into action themselves.

In the following, we will argue that both considered theoretical approaches complement each other. Social cognitive theory accentuates a shared ideal entity (namely, collective efficacy) as a product (also as a precondition) of cooperation, whereas activity theory emphasizes a material entity that is resulting from activity processes (namely, collective objectifications).

Collective Objectifications: Material Indicators of Collective Efficacy?

Leontiev (1981, p. 117) considers the continuous process of socially embedded human activities as the source of the development of mental proprieties and functions. By means of his category of *appropriation,* he stresses that through activity the developing individual acquires the knowledge and experiences of his/her collective. That knowledge is embodied in objects, ranging from the group, to society, to the human species as a whole.

Tools and communication are the main instruments of this process of appropriation, or in Leontiev's (1978; there he calls it *acquisition*) words: "Equipment mediates activity connecting man not only with the world of things but also with other people. Owing to this, his activity draws into itself the experience of humanity" (p. 94). This process is reciprocal. Humans perceive the knowledge and information impinging on them in their own characteristic ways, and by contributing new knowledge and insights, they in turn contribute to the collective knowledge and experience in small, and sometimes major, ways (Morf & Weber, 2000; Weber, 1999). This leads to Leontiev's (1981) category of *objectification* (see row 3 in Table 1) that:

> "... appears to us as a process of the embodiment, objectification of man's spiritual forces in the products of their activity, while the history of mankind's material and spiritual culture appears as a process that expresses, in its outward objective form, the advances in the development of the human species'

> abilities. From this standpoint each step toward perfecting and improving, for example, tools and implements can be regarded as expressing and consolidating a certain degree of development of the psychomotor functions of the human hand." (p. 263)

In terms of collaboration, processes of collective activity are manifested not only in the form of mutually shared cognitive images (Leontiev, 1981) or representations, such as collective efficacy (Bandura, 1997, 2000). Collective activity solidifies also in materializations as a form of objectifications or as a form of the *embodied ideality* (Ilyenkov, 1977). The process of collective objectification is understood as a process by which all (or several) members of a collective mutually transfer their individual knowledge, expertise, and experience into a material form. By doing this, they make their materialized knowledge and expertise available to other group members (for empirical studies see Fjeld et al., 2002, and Hacker & Sachse, 2014). Referring to the result of this process of objectification, Weber (1999) defined *collective objectifications* as a group's or another collective's own products, which are internally developed, produced, modified, or improved, for example:

- Material means of work (tools, devices, models, components of machinery, etc.);
- Virtual means of work (e.g., software tools, programs, or macros for manufacturing functions such as those mentioned under planning/work and evaluation methods); and
- Planning and work methods (heuristics for production planning and control, operator's guidelines for manufacturing systems, checklists for diagnosing machine troubles, etc.).

Leontiev (1978) states:

> "Work activity imprints itself on its product. ... This transition represents a process of material embodiment of the objective content of activity that now presents itself to the subject, that is, stands before him in the form of an image of the perceived object." (p. 116)

Referring to Leontiev, Ilyenkov (1977) clarifies that the ideas that regulate humans' work activities are deeply rooted not within the single individual, primarily. Instead of that, intrapsychic regulatory structures are anchored within the social collective "... as a real aggregate of real people collectively realising their specifically human life activity, as the 'aggregate of all social relations' arising between people around one common task" (p. 27). Individual intrapsychic images that emerge during the regulation of work tasks relate closely to objectified collective ideal regulatory structures "... that 'mediate' the individuals that are socially producing their life: *words, books, statues, churches, community centres, television towers,* and (above all!) *the instruments of labour ...*" (p. 27). Ilyenkov states that culture, collective knowledge, and materialized objectifications are intertwined and culminate all in the collaboratively integrated, individual human activity, shaping its concrete form and motives: "It is in these 'things' that the ideal exists as the 'subjective', purposeful form-creating life activity of social man, embodied in the material of nature" (p. 27).

Reconsidering Bandura's model of triadic reciprocal causation (see sections "Social Cognitive Theory and Activity Theory" and "The Structure of Collective Agency and Efficacy Connected to the Domain Concept") and Leontiev's spiral structure of activity (see the first section of this article and Table 1) reveals that both theories come to an agreement insofar that affordances, options, or restrictions in the environment influence acting persons in creating ideas, beliefs, or material objects. However, material results of collective activity do not have the same theoretical weight in social cognitive theory as they have in activity theory. Activity theory stresses that sensory–practical behavior mediates between environmental possibilities, people's characteristics, and the development of material or ideal objectifications. By contrast, social cognitive theory emphasizes cognitive and cognitive–motivational processes (forms of efficacy and modes of agency, especially) mediating between behavioral options within the environment and products that result from human acting. Hence, from a perspective of "evolutionary logic," according to Leontiev, collaborative practical behavior precedes the creation of collective objectifications. However, Bandura views collective agency, including evolving beliefs in collective efficacy, as a significant precursor of such objectifications. Of course, both processes interdigitate in everyday behaviors and are difficult to separate empirically.

Notwithstanding, gaining knowledge about the possible interrelation between the environment, collective efficacy, and collective objectifications requires one to analyze and compare cooperating collectives whose decision autonomy, behavioral norms, options, and restrictions differ. To give an example, this is the case for self-managed versus autocratically managed work groups in several sectors of the economy. The possibilities of such groups to design their work systems and decide on the execution of their working tasks are very different. To evaluate Bandura's and Leontiev's models of person–environment transaction, it may be relevant to investigate how group members' direct participation in decision-making influences the possible association between col-

lective objectifications and collective efficacy. Or, formulated in a conceptual language: Do collective objectifications represent objective, materialized indicators of collective agency in work groups? Do collective objectifications and collective agency depend on the decision autonomy (as a component of the intraorganizational environment) of work groups? As a first hint, a study by Weber (1999) of 17 work groups representing various group types indicated that the number of collective objectifications created by the group members was strongly dependent on the complexity of a groups' collective decision-making requirements. Furthermore, the number of collective objectifications was related to several indicators of group cohesiveness, including group-related self-efficacy.

Intentionality and Forethought: Agency Under the Societal Perspective of Collective Environmental Control

The considerations presented in the previous section of the present paper indicated that activity theory creates options for a perspective enlargement of social cognitive theory with regard to temporal and spatial reference points of collective efficacy. From the viewpoint of social cognitive theory, intentionality and forethought, as two core features of human agency, offer the conceptual link (see row 5 in Table 1). *Intentionality* refers to the specific quality of human planning. Bandura emphasizes that coping with challenges for future living and working often requires complex collaborations between agents. He shows that, "such joint activities require commitment to a shared intention and coordination of interdependent plans of action. The challenge in collaborative activities is to meld diverse self-interests in the service of common goals and intentions collectively pursued in concert" (Bandura, 2001, p. 7). To be effective, collective intentionality goes along with *forethought:* "The ability to bring anticipated outcomes to bear on current activities promotes foresightful behaviour. It enables people to transcend the dictates of their immediate environment and to shape and regulate the present to fit a desired future" (p. 7). Bandura argues that in planning socially responsible collective behavior, collaborating actors link possible future events to their present situation. "By being represented cognitively in the present, foreseeable future events are converted into current motivators and regulators of behaviour" (p. 7).

Compared with activity theory, at least two differences attract attention. First, Bandura weighs the importance of conscious, collective intentions and planning for a person's transactions with his/her environment as much stronger. By contrast, activity theory focuses on the environment offering objects that are interiorized and transformed into motives during the course of practical activity. *After* this transformation, object-related motives regulate human behavior, often nonconsciously. Second, the social cognitive view of collective agency is strongly oriented toward objectives represented in the future and peoples' present behavioral possibilities to realize them. By contrast, activity theory centers on regulation requirements in the present, whereas Leontiev weighs how those behavioral demands emerged from societal processes (including the division of labor) in the past. He states that, "... in society a man finds not simply external conditions to which he must accommodate his activity, but that these same social conditions carry in themselves motives and goals of his activity, his means and methods" (Leontiev, 1978, p. 85).

Despite his roots in dialectical materialism, surprisingly, Leontiev (1978, 1981) treats the basic human capability of changing the societal environment through collective planning and action with reserve. To date, it is difficult to assess whether his biased conceptualization of collective action was caused by the restrictions from which science suffered in a climate of political repression that was characteristic of the former authoritarian communist system. A further elaboration of activity theory that occurred within the German approach of critical psychology intends to solve this conceptual weakness. When considering the developmental interrelationship between personality and society, Ute Holzkamp-Osterkamp (1975, 1976; Osterkamp, 2009) emphasizes the significance of the integration of working people in long-range organizational and societal cooperation (see row 6 in Table 1). According to Holzkamp-Osterkamp (1975), societal care for subsistence, which is realized through public, communal, or private institutions and associations, is considered a specific human form of environmental control:

> "Deliberate life activity of human beings is not only characterized by coping with a current situation by means of goal anticipation and action control, but is represented through prospective planning of situations, which will happen in the future as well as through a generalized control of the reality providing means for their handling." (p. 250; translated from the German original)

According to Holzkamp-Osterkamp (1976) and to cultural anthropologists such as Harris and Johnson (2006),

humans have the capability of insight to realize that their integration into organized cooperation requires restraints of immediate articulations of needs. They are able to relinquish short-term needs because this enables collective care for subsistence and multifarious possibilities to develop one's personality or to appropriate cultural assets and commercial goods to a much higher extent in the future. In this context, actors are able to put momentary personal needs and short-term aims last in case their immediate satisfaction would endanger a shared and important long-term goal. This matches well with Bandura's (2001) core feature of forethought. However, Holzkamp-Osterkamp relates her construct of *collectively planned environmental control* (or cooperative integration) primarily to the societal level, whereas Bandura focuses on the level of the individual and of the group (without ignoring the importance of societal planning, see Bandura, 2001, p. 17).

Activity theoretical conceptualizations state that human motives to explore and improve one's environment according to one's interests, on one hand, and providing and receiving mutual support while dealing with one's environment, on the other hand, are deeply rooted in the human living conditions. Thus, productive needs of those who perform coordinated, cooperative activities and their societal environment are developing in a process of permanent *co-evolution* (cf. Volpert, 2003). Albeit society – as culminated in institutions, organizations, and their norms, rules, tasks, etc. – has dominant power compared with the single individual, the latter is able to change societal arrangements in the long run, particularly if such change activities are carried out by collaborating actors. "'Generalized agency' acknowledges that the specifically human possibility of consciously/jointly creating the conditions of one's own life can only be realized on a supra-individual or meta-subjective level, that is, by considering each other's interest in a self-determined life too" (Osterkamp, 2009, p. 175). Social cognitive theory shares this co-evolutionary view: "In the bidirectional view of evolutionary processes, environmental pressures fostered changes in biological structures and upright posture conducive to the development and use of tools. These endowments enabled an organism to manipulate, alter, and construct new environmental conditions" (Bandura, 2001, p. 20).

Close to Bandura's view, Osterkamp (2009) stresses the specific human capability that cooperating humans are able to widen their perspective to a great extent. They are able to recognize how their individual work activities are embedded in a societal or, even, in a world-wide composite of cooperation that serves the global care for subsistence (or, in fatal cases, the converse, namely, destruction).

Challenging Bandura's and Osterkamp's complex theoretical frameworks of collective agency and generalized agency by means of empirical investigations will cause considerable investments in theoretical and methodological elaboration. Applying both concepts of agency to organizational participation research would, for example, suggest to investigate whether employees who substantially participate in collective decisions on medium- or long-term goals of their company will defer their individual interests in favor of the collective interest in contrast to employees enjoying only weak or no participation. Bringing both approaches together lets us assume that employees carrying the responsibility for themselves, for their colleagues, and for external clients and experiencing the consequences of their participation in collective decisions for others' well-being will not only reflect on the fortune of their own enterprise. Rather, they may transfer their sense of responsibility and may also advocate services for the public or engage voluntarily in activities serving the common welfare (see Greenberg et al., 1996; Weber, 2015; Wegge et al., 2010).

Discussion

In showing partial theoretical incompatibilities, affinities, and complements between social cognitive theory and activity theory (see Table 1 for a summary), we will discuss to what extent the conceptual integration succeeded. As stated in the introduction of this article, referring to concepts of both theories, the proposed integrated framework of collective agency and activity shall help to reduce conceptual gaps between participatory organizational structures or participative behaviors as predictors and several psychological outcomes. Both theories offer several concepts – still neglected in participation research – that we consider as individual or interindividual psychological factors, which may influence associations between employee participation and its outcomes. Moreover, applying elements of the proposed conceptual integration may help to explain several problems that threaten the successful functioning of employee participation in practice, also mentioned in the introduction section. Notwithstanding, our contribution is explorative and by no means exclusive. Concepts from other theories following a dialectical view of person–environment transaction may be included in future contributions.

First, some extent of incompatibility between particular assumptions of both theories should be addressed. On the one hand, social cognitive theory sets the *primacy of mental representations*, conscious goal setting, planning of behavior, and self-regulatory mechanisms against practi-

cal activity. By contrast, activity theory stresses the *primacy of sensory–practical activity* and the resulting – sometimes unconscious – experiences guiding further behaviors against the regulatory power of conscious mental representations. Moreover, activity theory considers human motives as originating from the individual's social or material environment that offers plenty of culturally reshaped objects that may stimulate an individual's emotions and needs. On the contrary, social cognitive theory focuses on self-regulatory cognitive processes as motivators of purposive behavior. Thus, both theories differ in their (cognitivist vs. non-cognitivist) accentuation.

Nevertheless, several concepts included in social cognitive theory or activity theory conform to each other or complement gaps and shortcomings inherent to the other theory. This seems to lend satisfactory compatibility to the proposed integrated framework of collective agency and activity. This framework encompasses several interrelated elements of both theories as summarized in the following paragraphs (see the previous sections and Table 1 for an elaborated delineation). Additionally, we will provide several hints as to how the framework may be used for empirical research in reference to problems of organizational participation.

(1) Regarding the *triadic reciprocal causation* or *spiral structure of activity*, both theories share an ecological model of person–environment transaction. Claiming a co-evolutionary view, both theories emphasize that human beings are able to create their own self-development and life conditions, although they do this under supporting or limiting environmental or psychic conditions.

(2) Each theory offers several concepts that may compensate the respective shortcomings of the other theory. This is the case for how the *influence of the sociostructural system* and its *culture* upon the acting persons is conceptualized. Activity theory provides an elaborated model of how accumulated sociocultural knowledge and competencies are transferred to the individual, enriched by the individual, and eventually transferred back to society. This transfer succeeds via his/her handling of objectifications as embodiments and carriers of the mental capabilities of the human species. Thus, activity theory offers a conceptualization of the superior sociocultural system in which the development of human agency, as well as the standards guiding individuals' self-regulatory processes, are embedded. Complimentarily, social cognitive theory provides an elaborate conceptualization of agency demonstrating that self-regulatory processes are not unidirectionally influenced by the sociocultural system. Rather, people use their self-regulatory capabilities to change elements of the latter system.

Since institutions of organizational participation represent an interface between individual, organizational, and sociocultural demands and interests, such institutions build an appropriate field to apply and empirically test constructs from the combined framework of both theories. For example, different groups of actors in an organization could be compared concerning their emergence of proxy agency beliefs, collective efficacy, and collective objectifications when those groups try to carry (or to stop) the transfer of new proposals (across several participatory institutions) that workers have developed together to improve the quality of their work life. Correspondingly, it could be investigated to what extent successes or failures influence the development of employees' agency and efficacy beliefs when they try to implement their improvement suggestions within, or beyond, the frontiers of their work domain. Researchers could trace the course and changes that employees' suggestions take from the work council over a participatory representative board of the company to the chamber of labor or other political institutions in society, taking into account prescriptions, rules, enactments, and their underlying cultural beliefs.

(3) For social cognitive theory self-regulatory mechanisms (especially self-reflexiveness), social modeling, and vicarious learning play a crucial role for persons acquiring social standards, rules, norms, and competencies; whereas activity theory views socioculturally accumulated objectifications as important carriers of knowledge transfer and social learning. Thus, with regard to social learning and knowledge acquisition, both theories show a compensatory relationship with each other. Direct observation of social models and a reflection of their significance for oneself, as well as using material or ideal objects and experiencing their "structure-forming components" (see the designer example in the section "Activity Theory: An Ecological Approach to Motivation") within the respective social context, are closely intertwined in the real world of labor. Computer-supported cooperative work (CSCW) systems represent a contemporary example of this interdependence in participative contexts. In a detailed case study, Fjeld et al. (2002) demonstrated how activity theory guided the development of a groupware tool that supports early phases of architectural design projects. Correspondingly, they derived a set of design guidelines from activity theory. For instance, following the spiral structure model of a close interdependence between sensory–practical activity, its mental reflection, and communication, they developed a graspable interface. With this interface, a self-managed team of users can interact face-to-face in a coincident action–perception space utilizing materials as well as virtual components of the tool. Fjeld et al. (2002) emphasized that joint use of such tools

leads to a novel form of collective objectifications, namely, virtual models of an object that can be manipulated within a virtual space.

(4) Concerning motive formation and motivation, both theories also compensate each other's shortcomings. Bandura (1997, 2001) strongly weighs the mediator effect that self-regulatory (agency) mechanisms exert on the association between sociostructural factors and the development of personal values and goals. Activity theory considers that personal motives develop through individual handling and interiorization of socioculturally accumulated objectifications depending on the opportunities, requirements, or restrictions that the respective work domain contains for the workers' actions (see examples concerning motive hierarchies associated with participatory work activities and meaningful work tasks in "Activity Theory: An Ecological Approach to Motivation"). Cultural and societal norms, values, and procedures are materialized in the form of objectifications in work domains and codetermine corresponding behaviors to a considerable extent (Leontiev, 1978). Individual experience that actors gain from those objectifications will also influence the development of self-regulatory capabilities and vice versa. Applying this conceptual framework, we propose to compare challenging work environments requiring substantive employee participation with highly restrictive work settings (e.g., short-cycled assembly-line work). Accordingly, employees working in highly participative work systems and enjoying complex, meaningful work tasks will experience a greater degree of mastery, develop individual and collective efficacy, and demonstrate lower resistance against organizational change than would their peers in more restrictive work systems. Further research questions concerning associations between decision autonomy in work groups, collective efficacy, and collective objectifications are documented in the section "Collective Objectifications: Material Indicators of Collective Efficacy?"

(5) In contrast to his focus on sensory–practical behavior, experience, and interiorization, in explaining cultural–historical knowledge transfer as well as individual learning, Leontiev's (1978) activity theory misses a tantamount elaboration of the complimentary intrapsychic processes and mental representations. Despite a cognitivist narrowness of some of the social cognitive theoretical constructs, we consider self-regulatory processes based on intentionality, forethought, self-reactiveness, and self-reflectiveness as missing links to complement Leontiev's rather vague characterization of the role *images* play in the spiral structure of human activity. In our view, during processes of organizational decision-making, cooperating employees communicate their individual experiences, evaluate them, and transfer them to their collective. This indirect, communicated mutual transfer of experiences may prompt the individual to change and improve his/her mental representations (or images) and efficacy beliefs stemming from his/her direct work experience. However, social cognitive theory underestimates the mediating function of practical activity. Such activity facilitates multisensory learning experiences, which fund the acting person's development of mental representations during the exploration of new tangible objects. Here, activity theory suggests that collective problem-solving and decision-making also might require employees' *direct* contact to material objects (cf. the example referring to R&D tasks in the section "Activity Theory: An Ecological Approach to Motivation").

(6) Finally, both theories offer related concepts of collective and proxy agency, which are supported by different forms of efficacy beliefs, on the one hand, and generalized agency on the other hand. The latter describes how collaborative efforts of a multiplicity of actors are integrated into collectively planned projects of environmental control at the higher (societal) level. Thus, both theories state that cooperating persons are able to agree on far-reaching desirable goals, plan the realization of those goals, develop, and share resources when they integrate themselves in an adequate division of labor. Considering collective agency as a fractal of generalized agency helps to formulate research questions about possible spillovers from employees' enduring, substantive participation in organizational decision-making to their civic engagement and political participation in society (see section "Intentionality and Forethought"). Notwithstanding, examining the interplay of direct and representative forms of employee participation with regard to their modes of agency and forms of efficacy beliefs as outlined in section "The Structure of Collective Agency and Efficacy Connected to the Domain Concept" also reveals problems of organizational participation. For example, research has posed the problem of alienation between employees and their representatives, namely, work council members or company board representatives (Heller et al., 1998). The framework of agency and activity posits that integrating forms of direct participation into complex systems of representative participation within large organizations can help to reduce the risk of employee's political alienation from their representatives. Involving employees *directly* in joint problem-solving, planning, and decision-making allows them to experience mastery and to develop a substantive level of collective intentionality, forethought, and efficacy. These components of collective agency seem to represent a prerequisite of trust in an overarching system of participation (cf. Bandura, 2001, 2006).

To conclude, and notwithstanding the fact that parts of the proposed conceptual framework are speculative and require empirical examination, we consider this framework capable of contributing to the theoretical explanation and empirical study of the presented problems of organizational participation research.

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Submitted: July 29, 2015
Revision submitted: September 22, 2016

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