Introduction

> What determines our judgment, our concepts, and reactions, is not
> what one man is doing now, an individual action, but the whole hurly-
> burly of human actions, the background against which we see an action.
>
> Wittgenstein (1981)

Our worlds – including our learning contexts – are created, maintained,
and transformed through our engagement with others. This is a social,
relational, agentive, creative, and sustained process of "context using and
context creating." We create these contexts (these lived worlds) by con-
trolling and directing our thoughts, feelings, desires, actions, and interac-
tions with social others to make meaning, to figure out problems, to
construct knowledge, and to inhabit diverse social identities. Through
this process, we gain voluntary control over our social, psychological,
and practical behaviors, which is generally referred to as self-regulated
behavior or self-regulated learning. The emphasis on "self" is no accident,
as it reflects dominant worldviews of human development as an individual
and mental process (Shweder, 1991). This is a one-sided, mentalist view of
human development and it is changing. At present, across social sciences,
a relational view of human development is taking hold because of
Vygotsky's (1981, 1934/1986) radical cultural-historical theory of psycholo-
gical development and related social and cultural theories (Barad, 2007;
Dewey, 1929/1958; Gibson, 1969, 1986; Mead, 1934/1962; Shotter, 2016).
The relational view conceptualizes the human mind as emerging from
meaning-making processes situated in social contexts, mediated by cultural
artifacts and sign systems, and distributed across individuals, tools, tasks,
space, and time. The shift toward this relational view of mind requires an
alternative approach to regulatory processes – an approach that sees human
development as a social, relational, and cultural process in which indivi-
duals and their communities co-develop, effectively transforming the paths
toward competent social and psychological selves.

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This book builds on Vygotsky's work and the work of other closely related social and cultural theorists (e.g., Bourdieu, 1980, 1985; Cole, 1996; Engeström, 1999; Miller & Goodnow, 1995; Kockelman, 2006; Shotter, 1993; Valsiner, 2001; Wertsch, 1985, 1991) to broaden contemporary views of behavioral regulation. Specifically, we offer a novel approach to behavioral regulation that helps explain how ways of controlling, directing, and constructing complex cognitive behaviors emerge from relational and agential processes of engagement that are continuously interwoven with a community's cultural and semiotic resources, including tools and signs, norms, values, expectations, and moral ethos. To do this, we draw on sociocultural theories to develop four alternate, sociocultural frames intended to illuminate how social contexts and learning processes (and/ or developmental processes) are interrelated. These new frames are designed to bring into focus how engagement in *all* forms of behavioral regulation (self-, co-, and other-) and socially shared regulatory processes function together as relational parts of a whole system for gaining, maintaining, and displaying competencies in the lived world. This entanglement of regulatory processes is an integral part of social, individual, contextual, and instrumental (mediational) aspects of controlling and directing ways of thinking, feeling, and doing. Of course, from this perspective, self-regulated behavior plays an important part in the process that Vygotsky (1978) calls "the internalization of higher psychological processes" by individuals (p. 52). Processes of internalization accomplished by individuals suggest that self-regulation is implicated in all forms of behavioral regulation; simultaneously, these processes are always situated in the sociocultural world. This points to why the central concern of our argument is not simply the self-regulatory processes of individuals. Rather, we focus on behavioral regulation as a whole system of regulatory processes that constitute the relational and socioculturally situated ways active agents continuously co-construct and change psychological phenomena in activities with others.

The social and cultural processes that give rise to competencies with regulatory processes reflect Vygotsky's (1934/1987) claim that learners "with collaboration, direction, or some kind of help . . . [are] always able to do more and solve more difficult tasks" than they can do "independently" (p. 209). Here, Vygotsky's use of the term "independently" is referring to individual development as the primary goal of interacting with others or, in his words, "man mastering processes of his own behavior" through self-regulation of reasoning, thinking, and feeling (Vygotsky, 1987, pp. 242–243). Yet the very essence of this process involves the social genesis

of voluntary control over culturally organized mental functions, such as deliberately remembering or deliberately controlling attention. Fundamental to this process is a recursive and bidirectional relationship between individuals and their cultural milieus, a relationship in which they develop together. This co-evolving and bidirectional relationship also suggests why competencies with all forms of behavioral regulation are necessary for social and psychological development.

Of course, human development necessarily requires individuals to learn how to self-regulate or master their own thinking, feelings, and actions in the midst of ongoing activities (Vygotsky, 1978). But, facility with self-regulation also requires individuals to master ways of interacting with others to gain, maintain, and develop this competency, which is part of an ever-changing "formative or developmental process" involving a system of regulatory behaviors (Shotter, 1993). For example, during literacy learning, the entanglement of regulatory processes can be very complex. Consider a lesson on poetry where the teacher's goal is to help children learn how to recognize poetic elements and how to use these elements to create their own poems through collaborative large- and small-group activities. In such an activity, children can be seen self-regulating their attention toward the teacher's explanations. This would also involve learning how to focus (regulate) attention on particular aspects of a poem. Engagement in this form of self-regulation might also be utilized to understand different forms of texts – for example, expository or persuasive writing. In the same poetry activity, self-regulation may simultaneously become entangled with co-regulation where learners focus their actions and interactions on collaboratively accomplishing the same goal. Further, these co-regulatory processes may occur along with other-regulation where the teacher controls the learners' actions through explicit directives that lead learners to work independently or collaboratively. Later, children may revoice the teacher's directives as a strategy to self-regulate their own behaviors. Similarly, in small-group learning, children can revoice strategies as a way of assisting one another to achieve a shared or individual goal. In these and other complex ways of learning, regulatory processes become an integral part of transforming thought, feelings, and actions. Accordingly, aptitudes for controlling and directing psychological and pragmatic behaviors necessarily involve all forms of regulatory behaviors (self-, co-, other-) to coordinate and collaborate on actions and interactions in the "whole hurly-burly of human actions."

In everyday activities, interactions with others always necessitate facility with *a repertoire of ways to regulate behaviors*. This repertoire is an essential

part of in situ arrangements that foster developmental processes. Shotter (2016) refers to these developmental processes as "relational becomings" in that our competencies with regulatory processes are always connected to our social and material world and always part of an "unbounded" or "incomplete" process open to further development (p. 27). The development of behavioral repertoires for controlling and directing thinking, feeling, and volitional inclinations consistently emerges and becomes elaborated from engaging in meaning-making with social others. It is in this relational process of becoming psychologically and socially competent that we learn to regulate our behaviors with others to exploit, create, discover, and potentially change a myriad of semiotic/contextual resources, including communicative strategies, social rules/values, symbolic and material tools, and our local community's moral ethos or guide for "the right way" to interact with others. In this way, individual learning and development are constitutively interwoven with social and cultural development.

With the goal of contributing to understanding these relational processes of learning and development, this book presents a view of behavioral regulation that is grounded in cultural psychology (Cole, 1996; Ellis & Stam, 2015; Leont'ev, 1981; Vygotsky, 1978; Engeström, 1999). Our approach offers analytical frames that make it possible to understand more deeply how we regulate our behaviors in relation to our lived worlds. It also offers a means to reveal how actions and interactions are coordinated through flowing, emerging, and evolving configurations of self-, other-, co-, and socially shared regulatory processes in habitual and creative ways. Our view of behavioral regulation as part of a relational process of human development changes the focus from the solitary individual to the relational ways in which agentive individuals collaborate and coordinate their actions and interactions, utilizing all forms of regulatory processes to become competent members of their communities.

Self-Regulation in Learning Communities: A Concept in Transition

Self-controlled and self-directed actions and interactions across learning settings, both in and out of school, have traditionally been studied as originating from individuals' perceptions, thoughts, attitudes, and feelings about their past experiences (Panadero, 2017). These psychological responses to prior experience are assumed to influence individuals' capacities to self-regulate their cognitive, emotional, and volitional behaviors.

In other words, this view emphasizes the role of the individual in initiating, adapting, and maintaining their thoughts, feelings, and pragmatic behaviors in relation to ongoing engagement in the world (Forgas, Baumeister, & Tice, 2009; Schunk & Zimmerman, 2006). With this explicit focus on the developmental outcomes of autonomous and isolated individuals, it is no wonder that self-regulation, animated by the emphasis on "self," became the cynosure for understanding how individuals construct knowledge to develop academic, psychological, and real-world competencies. This historical focus in psychological research on individuals and how they self-regulate has resulted in a systematic neglect of the relational, social, material, and contextual dimensions of learning. Yet these neglected aspects of the lived world are the very resources we use and the very resources we create to control and direct our thoughts, feelings, actions, and desires. Further, the emphasis on self-regulation elides how agentive individuals co-inhabit and co-create learning contexts through a shifting repertoire of regulatory processes that, over time, form the basis for collaboratively built social contexts, which orient learners to social others, the unfolding meanings of their tasks, and a host of artifacts (tools/ideas) that can be used in problem-solving or cognitive activities. In other words, psychological approaches to behavioral regulation lack the theoretical and conceptual means to account for the social, relational, and contextual dimensions that are an essential part of social selves and learning activities.

Self-Regulation in Social Contexts

Over the last twenty years or so, social scientists have begun to move beyond the individual to consider the role of the social context in shaping regulatory processes, particularly in educational research. These studies tend to conceptualize self-regulation as embedded in and influenced by learning contexts (Allal, 2011; Panadero & Järvelä, 2015). Here, context is often framed as a cuing mechanism for the development of self-regulation. In other words, learners use contextual cues to regulate their engagement in learning as a fundamentally self-organized process of control, volition, and adaptation. Yet, time and again, researchers assume that it is the autonomous individual who is responsible for directing, controlling, and maintaining motivational inclinations to self-regulate thinking and feeling strategies used to monitor, plan, and control engagement in learning tasks (Boekaerts, 2001; Martinek, Hofmann, & Kipman, 2016; Rief, 2007). The contextual influences used by learners are viewed as emerging from instructional or mentoring approaches found in formal or informal

learning activities (Fuhs, Farrran, & Nesbitt, 2013; de Bruin & van Gog, 2012). That is, learning contexts preexist to some degree in that they are created for learners by teachers or mentors. Although this view recognizes the influences of the context, it obscures whatever contributions learners make to the construction of local contexts as they negotiate the uncertainties, ambiguities, and conflicts that are characteristic of learning activities.

Even with the acknowledgment of the social world, the body of work that focuses on individuals offers only limited theoretical accounts of the interrelationship of regulatory processes with the social, relational, and contextual aspects of the lived world (for exceptions, see Iiskala et al., 2011; Hadwin & Oshige, 2011). Why is this the case? The newer views of regulatory processes as embedded in social contexts and the more mainstream psychological approaches share a worldview in which individuals and their thinking are "bounded entities" separate from the lived world (Shotter, 2014). Put simply, the thoughts and ideas that influence engagement in regulatory processes are "hidden within the heads of individuals" even if cued or supported by social contexts (Shotter, 2014, p. 1). We posit that the separation of the cultural world from individual development is no longer tenable given our growing understandings of human development as emerging from complex, dynamic, and constantly evolving transactions between agential individuals and their sociocultural contexts.

From Self-Regulation to a Dynamic Interplay of Regulatory Processes

The ascendance of sociocultural theories of human learning and development has led to a profound conceptual shift in how we view individuals and their cultural contexts (Kirschner & Martin, 2010). No longer separated from the social milieu, individuals are enmeshed in a relational entanglement with their social and material worlds, the nature of which can be traced to Vygotsky's widely acknowledged claim that mental functioning, including cognitive and emotional-volitional aspects, originates in a system of social processes and relationships. Vygotsky summarized this relational view in his general genetic law of cultural development:

> Any function in the child's cultural development appears twice, or on two planes. First it appears on the social plane, and then on the psychological plane. First it appears between people as an interpsychological category, and then within the child as an intrapsychological category. This is equally true with regard to voluntary [qua regulated] attention, logical memory, the formation of concepts, and the development of volition [qua motivation] ... it goes

without saying that internalization transforms the process itself and changes its structure and functions. Social relations or relations among people genetically underlie all higher functions and their relationships. (Vygotsky, 1981, p. 163)

Vygotsky's unique perspective on regulatory processes is that the emergence, control, and direction of cognitive and emotional processes such as deliberate memory, selective attention, meaning-making perception, and volition (motivation) first appear between people and are later internalized (appropriated) by individuals. This means that the regulation of psychological behaviors is first socially constructed with others and later appropriated (creatively adapted) by individuals for their own purposes. As a consequence, the development of competencies with behavioral regulation emerges from socially organized learning activities where children (and adults) learn how, when, and where to control and direct their feelings, thoughts, ideas, actions, and desires or inclinations for active engagement with social others. This points to why behavioral regulation is an intellectual and social-emotional competency that emerges as individuals collaboratively engage in the continuously unfolding ambiguities and uncertainties of learning practices to make meaning with others. In effect, there is a fundamental relationship between regulatory processes and the complexity of meaning-making processes during learning.

Cultural Practices and Regulatory Processes

Interestingly, the same actions and social interactions used in behavioral regulation both exploit and create the learning *practices* of local communities. All practices emerge from and are created through the routine and valued activities of a local culture and thus provide repeated opportunities for individuals to learn how to take control and regulate their psychological and practical behaviors. Because of this, cultural practices – whether academic, work, or play – exert a significant role in helping learners decide when, how, and under what circumstances to regulate behavior. For example, cooking practices with children might include activities such as learning how to read and follow recipes; shop for ingredients; and use tools such as digital scales, mixers, blenders, or even rules of thumb. During cooking practices, learners may come to understand how to regulate their psychological and practical behaviors to achieve their culinary goals. These cooking practices will likely involve interactions with others (collaborators, mentors, parents, etc.) as well as the use of particular systems of knowledge and technologies.

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This is why engagement in regulatory processes does not simply occur within the "heads of individuals" but rather in relationships with social others in the material and symbolic world. Likewise, these processes will also relate to the problems or tasks at hand as well as what tools are available. Through engagement in local learning practices, intellectual, social-emotional, and motivational changes will occur. Over time, these changes transform how learners regulate their thoughts, feelings, actions, and ways of being with others during routine learning practices. Understanding how these changes occur requires a more nuanced conceptualization of context and its role in social and relational processes of behavioral regulation.

The purpose of this book is to offer unique sociocultural frames to assist scholars, research practitioners, students, and educators in understanding the transactions that lead to regulatory actions by agential learners in social contexts. Our approach views behavioral regulation as shaped by an emergent relatedness arising from learners' orientation to others in their surroundings, to their tools, to their tasks, and to their active roles in the ongoing creation of the "the whole hurly-burly" of learning activities. An important part of this orientation to others is the enactment of agency in routine activity. In other words, the ways that participants in a practice actively control and direct (regulate) their behaviors to affect the world. Thus, fundamental to our approach is the idea that individuals are engaged in agential processes that unfold through alternate configurations of self-, other-, co-, and socially shared regulation situated in social-historical contexts. Following Karen Barad (2007), we see agency not as an individual "attribute but the ongoing reconfiguring of the world" (p. 141). From this perspective, agency is spontaneously emerging and relational and comes into existence through actions and interactions used to exert control over, and create, the social world. As learners and their peers, mentors, or teachers continually configure, reconfigure, and reinterpret their relationships to those around them, their tools, and their tasks, they creatively transform practice and build a cultural context. All of this hinges on learners' historical (over time) engagement in regulatory processes of doing, thinking, and being; thus, all participants in locally situated practices are involved in creating an ecological system of influences on regulatory processes.

To capture how regulatory processes emerge, each of the following chapters in this book offers a different analytical frame with which to view those complex transactions that give rise to regulatory actions. A brief description of each chapter follows.

In Chapter 1, we present an overview of Vygotsky's (1978) *cultural-historical activity theory* (CHAT), including an explanation of how regulatory processes arise from the routine practices of social life. As part of this overview, we provide an explicit definition of cultural practices. To elaborate how a practice perspective is beneficial for understanding behavioral regulation, we describe the basic elements of an activity theory framework as aspects of a social practice. This framework offers a useful model for conceptualizing and observing how social practices come into existence and create the contextual resources (e.g., cultural tools and sign systems or symbols) that influence behavioral regulation. We conclude this chapter with definitions of self-, other-, and co-regulation, which are used in all analyses of learning contexts.

In Chapter 2, we offer a conceptual frame referred to as the *relational habitus* (RH), which can be used to observe how meaning-making processes (intersubjectivity) are co-constructed over synchronic (interactional) and diachronic (historical) time. The relational habitus is an ecological ensemble of relations including self, tools, tasks, and others that is intersubjectively constructed and sustained over time in formal and informal learning communities (Stone, Underwood, & Hotchkiss, 2012). It explains how variances in the social organization of regulatory processes are related to learning arenas, the interactional contexts of these arenas, and movement in the social and psychological spaces of these arenas. As a tool used for observing behavioral regulation during meaning-making, the RH encompasses three interrelated aspects of intersubjectivity: (1) an orientation to others in cultural contexts, (2) mutual perspective-taking accomplished through communication, and (3) perspective-making emerging from the ongoing negotiation of ambiguities and uncertainties of learning. These three aspects of intersubjectivity explain how regulatory processes emerging from and changing through meaning-making involve both the agential actions of individuals and the situational structuring of these actions.

Engagement in regulatory processes involves enacting behaviors within an RH and this engagement reflects a moral responsiveness to others, to how tools are used, and to how tasks are to be accomplished. To better understand this moral responsiveness, in Chapter 3 we present a theoretical frame that describes the contextual construction of *practical-moral knowledge* (PMK). PMK can be used to understand the dynamic transactions between the historical construction of a social context and behavioral regulation. PMK, found in all formal and informal learning communities, is constructed and reconstructed from a continually emergent and shared

semiotic (sign) system of rights, responsibilities, and duties that establishes legitimate actions and interactions for competent participation. It creates a *community ethos*, which is a sign system comprising two components: (1) *social order* or practical/implicit understandings of who does what, when, and where and (2) *moral order* or implicit understandings of what is desirable, preferred, good, and right for regulating engagement in learning activity (Stone, Kerrick, & Stoeckl, 2013). As a socially embedded contextual influence, PMK shapes how learners create meaning with others in relation to tools and tasks. In effect, PMK creates a community ethos involving a code of conduct for regulating behaviors, a code always under revision as learners and the community co-develop. One way of observing the emergence of regulatory processes in the dynamic relationship between learners and their local community is to consider how learners (and their mentors/teachers) use locally constructed PMK to guide engagement in processes of self-, other-, and co-regulation.

In Chapter 4, we suggest that competency be reimagined as a social identity. Social identities are inhabited or embodied representations (signs) of the values and statuses of a community. These identities can be explicit to the extent that they are defined by socially and historically shared agreements – for example, learner, mentor, researcher, or teacher. Social identities can also be implicit to the extent that they are recognized in a community of practice but not publicly articulated. An *identity of competency* is an example of an implicit form of social identity that is linked to a local community's values and expectations of how to be, act, or feel as a competent member. In learning settings, an identity of competency is implicitly valued and highly desired because it not only indicates a willingness to persist in complex learning but also brings recognition and status (rights/power) for regulating the behaviors of self and others. This form of identity comes into existence when learners regulate their behaviors to align with a (continually emerging) socially shared category for competency. Through this alignment, learners vie to inhabit an identity of competency by employing those psychological and pragmatic acts of behavioral regulation marked as competent.

Chapter 5 offers the concept of *contextual mood* to capture how emotional (affective) experiences are interwoven with cognitive engagement in learning practices, where feelings permeate actions and thoughts and emerge through The , a linguistic resource used during social interactions (Stone & Thompson, 2014). The creation of a contextual mood attunes learners to particular forms of behavioral regulation as learning activities unfold. We explain how a contextual mood prompts young learners to

consider, utilize, and potentially contribute to a repertoire of strategies for regulating meaning-making behaviors during literacy learning.

The Conclusion provides an overview of our theoretical approach and details how each of the sociocultural lenses presented in this book offers reflective and analytical tools for better understanding behavioral regulation as a system of self-, other-, co-, and socially shared regulatory processes. Reconceptualizing competence as involving all forms of behavioral regulation moves us away from the dualisms characteristic of traditional psychological approaches that divide the self from culture and the individual from society. Our analytical lenses do not reject the importance of an individual's development of psychological and practical actions over time but rather reframe them as part of a relational process of agency in which the regulated actions and interactions used to enact and develop intellectual and social emotional competences are always part of the sociocultural world.