Further exploring the dynamicity, situatedness, and emergence of the self: The key role of context

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Abstract

Drawing on theoretical insights from a complex dynamic systems framework, this work explores the ways that learner selves, as they relate to learning and using languages, manifest across different contexts and timescales and emerge in interaction with various factors. First, a broad overview of dynamically-oriented L2 motivation research is provided before critically considering the need for research that aligns with conceptual advances made under the dynamic turn in SLA. In particular, this critical overview highlights a crucial need for more research employing dynamic methods capable of revealing how learner perceptions of self emerge in relation to their interlocutors and in interaction with external factors, including language ideologies that may uniquely characterize sociocultural contexts where target languages other than English are learned. The chapter concludes by discussing ways to implement dynamically oriented methodology that can provide much needed insights into the inherent dynamic, emergent, and contextually and socially embedded nature of learner selves.

Keywords: complex dynamic systems; L2 motivation; L2 self; learning context

1. Introduction

The idea that the motivation to learn and maintain the ability to communicate in another language is influenced by context and changes over time is not new.

Parallel to the social turn in the field of second language acquisition (SLA) (Block, 2003; Firth & Wagner, 1997), Ushioda (1996, 2009) first argued that motivation is best conceived as a process that is dynamic, contextually grounded, and socially mediated in nature and that language learners should be viewed as people, or "persons," who are located in particular social, cultural and historical contexts. The latter idea developed into the "person-in-context," relational view of second language (L2) motivation as an organic, nonlinear phenomenon that emerges from relationships between people, which Ushioda (2009) summarizes as the following:

> I mean a focus on real persons, rather than on learners as theoretical abstractions; a focus on the agency of the individual person as a thinking, feeling human being, with an identity, a personality, a unique history and background, a person with goals, motives, and intentions; a focus on the interaction between this self-reflective intentional agent, and the fluid and complex system of social relations, activities, experiences and multiple micro- and macro-contexts in which the person is embedded, moves, and is inherently part of. (p. 220)

This thinking influentially challenged the traditional separation of learner and context and the view of motivation as a static, internal phenomenon residing primarily within the learner with context acting as an isolated background variable that exerts a one-way influence on the learner and language development. In essence, a person-in-context view emphasizes the co-adaptive and mutually influential nature of the relationship between learners and the learning context, in which „learners shape and are shaped by context" (Ushioda, 2015, p. 48).

Within the broad field of learner individual differences (IDs), the study of language motivation, in particular its dominant operationalization as the L2 self (Dörnyei, 2005, 2009a), has significantly evolved in line with the person-in-context view and dynamically oriented approaches to L2 learning, most notably complex dynamic systems theory (CDST, Larsen-Freeman, 1997, 2017; Larsen-Freeman & Cameron, 2008a). The current article aims to draw on key conceptual insights and methodological tools afforded by this ecological perspective in order to elucidate the complex ways that language learner selves emerge over time through dynamic, reciprocal interactions with context, conceived on both micro- and macro-levels (King, 2016; Larsen-Freeman & Cameron, 2008a; Mercer, 2016; Ushioda, 2011, 2015). First the article lays the conceptual groundwork of CDST, with a focus on how these principles have transformed our understanding of context and the construct of learner possible selves (Dörnyei, 2009a, 2009b, 2010). Next, I provide a critical review of previous research investigating the multi-dimensionality and contextual and temporal dynamics of learner selves. The paper concludes by identifying outstanding questions in dynamically oriented research on the self and consider eclectic and innovative methodological approaches capable of providing insights into these questions.

2. Language, learning, and learners as complex dynamic systems

Simply put, a complex dynamic system (CDS) is a system that changes with time (Larsen-Freeman, 1997). It is emergent, in that its interrelated components not only mutually and continually affect one another (van Geert, 1994), but such interactions yield complex, ordered behavior, which is not totally random nor wholly predictable either (Larsen-Freeman & Cameron, 2008a). Rather, the centrality of variation and nonlinearity in understanding the system is key (Larsen-Freeman, 2015b). CDSs are also sensitive to or dependent on initial conditions such that their trajectories and outcomes will vary depending on where they started. Likewise, a complex system is sensitive to feedback and adapts, or ". . . changes in response to feedback from its changing environment" (Larsen-Freeman, 2015a, p. 16). All complex systems embody these core characteristics, whether they occur in the natural world (e.g., bird migration patterns or a wetland ecosystem), in the business world (e.g., the stock market), or what most concerns applied linguists, during the course of language development.

Larsen-Freeman (1997) first related the principles of complex dynamic systems theory (CDST) to the study of second language acquisition and argued for the need to view L2 development as a dynamic, holistic, relational system, rather than a static set of independent, isolated variables. She argued that this "larger lens" would potentially overcome the traditional divide between the social and the individual cognitive dimensions of SLA (Larsen-Freeman, 2002), an idea that has significantly evolved through transdisciplinary efforts (e.g., Beckner et al., 2009; de Bot, Lowie, & Verspoor, 2007; Douglas Fir Group, 2016; Larsen-Freeman, 2012, 2015b, 2017; Larsen-Freeman & Cameron, 2008a; Verspoor, de Bot, & Lowie, 2011). Since then, the dynamic turn in SLA (de Bot, 2015) has not only afforded new ways of "seeing" but also "doing" research (Benson, 2019; Larsen-Freeman, 2018).

Two interrelated areas of research significantly impacted by this holistic, ecological way of seeing and doing are the study of learner IDs and language learning context. The impetus of the ID strand of research has traditionally aimed to answer the 'differential success' question (Larsen-Freeman, 2015a), or understanding why individual learners vary in the rate and outcomes of SLA. Mainstream notions of learner differences portray them as deviations from a norm (Dörnyei, 2005, 2010) that are stable and independent from context and other IDs. Further, the relationship between learners and the contexts in which language learning takes place is seen as one-directional, rather than reciprocal, where the external (i.e., contexts) influences the internal (i.e., learner characteristics) (Mercer, 2016; Ushioda, 2009, 2015).

Under the dynamic shift, not only has the theoretical conceptualization of learner IDs changed, but so has the differential success question itself. That is,

learner ID constructs are predominantly viewed as constellations of cognitive, motivational, and emotional components that are multidimensional, contextually-embedded, and temporally dynamic (Dörnyei, 2009b, 2010) and variability in learning ". . . stems from the ongoing self-organization of systems of activity" (Larsen-Freeman, 2012, p. 211). That is, developing individuals and their language system ". . . develop owing to the interaction with their environment and principles of self-organization" (Verspoor, Lowie, & Van Dijk, 2008, p. 214) and will never be completely stable during a specific period of time. Therefore, the relationship among individual learners and their environments is proposed to be continuously changing and mutually influential, rather than static and one-directional. This not only alters the construct of context itself but also motivates different questions about how the external and internal dimensions of language learning interact over time.

One way to illustrate this mutual influencing is in terms of the 'back and forth' that occurs in language classrooms between teachers and learners or amongst learners themselves. For example, the ways that learners orient and respond to the input they receive (whether from teachers or other learners) „will affect the content, quantity and quality of further input in the developing context of the interaction" (Ushioda, 2015, p. 47). From a CDST perspective, this interaction between interlocutors is understood as "co-adaptation," or a kind of „mutual influencing" in which change in one system perpetuates change in another connected system (Larsen-Freeman & Cameron, 2008b, p. 203). Importantly, co-adaptation is thought to not only shape the nature of the linguistic interaction but to also impact each interlocutor's cognitive and affective resources as well (Larsen-Freeman, 2020; Larsen-Freeman & Cameron, 2008a). However, dynamically-oriented research is only beginning to understand the mechanisms through which co-adaptation takes place, such as mediation through learner perceptions of their interlocutors (Serafini, 2020).

The following section elaborates on the nature of the learner-context ecosystem under a CDST view with a focus on exemplifying different macro- and micro-levels of context. Then, I consider how the study of L2 motivation and notions of self have been transformed under CDST.

3. The learner-context ecosystem

The term *context* is not monolithic but refers to „multiple levels of contexts stretching from micro-level interactional contexts to macro-level cultures" (Mercer, 2016, p. 13). That is, the context of any communicative event is not a singular entity but rather exists at multiple levels including spatial, temporal, cultural, etc. (King, 2016). According to Larsen-Freeman and Cameron (2008b), contextual

factors characterizing a language learning or language using activity might include elements of the *physical* environment such as the seating arrangement of learners in the room, whereas the teaching approach and tasks or materials that are used form part of the *pedagogical* context. The *cultural* context can encompass the cultural norms or expectations of teachers and students in a formal learning environment, while *social* aspects of a communicative context refer to relationships among interlocutors, both inside and outside the classroom. The *sociopolitical* dimension of context might reflect the societal ideologies about language and bi/multilingualism in general, and the language under study in particular, as well as its perceived social status or prestige. Context also refers to *cognitive* factors that reflect the intrinsic dynamics of the learner, like working memory capacity.

King (2016) considers a similar contextual continuum, locating intrapersonal narratives and interpersonal interactions as well as the physical, social and pedagogical dynamics of individual classrooms at the micro-level, to broader macro-level sociocultural and national contexts. Importantly, this work also addresses the key concept of *temporal* context, highlighting the need to study "language learner characteristics and behavior across various timescales of activity" (p. 2). Given the hallmark "ebb and flow" of language motivation, the time-frame one adopts is particularly important to consider as motivation can appear to be more or less stable or fluctuating depending on the time-frame analyzed (e.g., over a semester vs. over a week of instruction vs. over the course of a lesson) (Larsen-Freeman, 2015a). Therefore, to avoid spurious results, de Bot (2015) recommends collecting developmental data over different levels of granularity to "get the full picture" (p. 36).

These multiple, interconnected levels of context are "not separable from the system" (Larsen-Freeman & Cameron, 2008b, p. 204) and can be conceptualized in terms of the learner being 'coupled' with their environment. In addition to actively participating in shaping the nature of the linguistic exchange, as illustrated in the previous example of input during classroom interaction, ". . . the learner also constitutes part of the dynamic physical, historical, social, and cultural context within which the interaction is taking place" (Ushioda, 2015, p. 48). As Ushioda argues, this inseparability raises conceptual and empirical questions in terms of conceptualizing and researching the learner-context ecosystem because one must be able to somehow 'delimit' context in relation to the learner and decide which external, internal and temporal boundaries of 'context' may be relevant to the phenomena under study. To overcome these issues, Ushioda recommends ". . . we endeavor to think big and small at the same time" (2015, p. 53) and to think in terms of nested, interconnected external and internal levels of context, while remaining necessarily pragmatic in the selection of focal contextual elements within a single ecosystem.

In sum, language learners, the learning process and language itself are fundamentally changed under a CDST view. Fundamental to this conceptual transformation

is the role of context. Rather than an isolated, separate entity that exerts effects 'on' learner characteristics and language development, context is thought to form an integral part of the whole system. The learner and his/her environment are in an ongoing, mutually influential dynamic in which "contextual factors play a prominent role in pushing or pulling a system toward or away from a certain state" (Waninge, Dörnyei, & de Bot, 2014, p. 706), which in turn leads to systemic variability (Verspoor et al., 2008). This implies certain challenges that researchers must be aware of in order to make sound conceptual and methodological decisions about the scope of their research and to meaningfully, yet practically, set contextual and temporal boundaries (see Hiver & Al-Hoorie, 2016, for step-by-step guidelines).

The following section offers a broad overview of dynamically-oriented work on L2 motivation with a focus on studies exploring the multi-dimensional, contextual and temporal dynamics of learner possible selves as they have been theorized and explored within the sociodynamic framework of L2 motivation, referred to here as the L2 motivational self-system (L2MSS) (Dörnyei, 2005, 2009a; Dörnyei & Ushioda, 2009).

4. Dynamic conceptualizations of L2 motivation and the L2 self

Conceptions of language motivation have evolved from a dominant focus on *integrativeness* (Gardner, 1985, 2001), or the extent to which an L2 learner identifies (psychologically) with and wants to be associated with the target-language community. More recent notions reflect how a learner envisions herself or himself in relation to learning/using language and the attributes she or he would ideally like to possess in the future, encapsulated in the construct of learner *possible selves*, or "future self-guides" (Markus & Nurius, 1986) which originates in self-discrepancy theory (Higgins, 1987). Learner possible selves represent the ways individuals conceptualize and imagine their current and future self-identities and Dörnyei was the first to formally adapt these concepts to the domain of second/foreign language learning. He proposed in his L2MSS that L2 motivation is driven by the degree to which achieving target language proficiency is integral to one's imagined identity as a speaker/user of the target language. Thus, one's level of motivation to reduce the perceived gap between current and future self states will lead to action (or not) and thus, positively or negatively impact L2 development.

Since this influential reconceptualization of L2 motivation, our understanding of the L2 self has further evolved in terms of the ways it functions as a *system* that is inherently complex, multidimensional in nature, and dynamic across contexts and time. To theoretically account for these dimensions, several researchers have suggested that the self be viewed in terms of a holistic, nested system that not only operates "within ecologies of other motivational systems, but also within other psychological, psycholinguistic, and social systems" (Henry, 2017, p. 561).

4.1. Multidimensionality of the self

In terms of the multidimensional nature of the self, research tends to focus either on the interconnectedness of cognitive, affective, and emotional subcomponents of IDs more generally (e.g., Dörnyei, 2009b, 2010, 2017; Dörnyei & Ryan, 2015; Segalowitz & Trofimovich, 2012), or the ways language-specific selves are represented, interact, and manifest in multilingual speakers (e.g., Henry, 2011, 2017; Henry & Cliffordson, 2013; Lasagabaster, 2016; Thompson & Erdil-Moody, 2014; see Thompson, this issue; Ushioda, 2017).

As previously mentioned, the former area of inquiry has had a broad theoretical impact in challenging problematic conceptual divides, such as the longstanding cognitive/affective ID dichotomy in SLA (Larsen-Freeman, 2018), and in questioning the traditional view of IDs as stable, modular, and isolated traits. Current dominant views portray IDs as dynamic systems variables (e.g., Henry, Davydenko, & Dörnyei, 2015; Waninge et al., 2014) that act as multicomponential resources, or higher-order integrated wholes, that may potentially function as "powerful attractors" or "stabilizing forces" (Dörnyei, 2010, p. 261) in the language learning process. Under this view, the *ideal L2 self* in particular is thought to function as a relatively stable, higher-level constellation of cognition, motivation, and affect (p. 262).

Within complexity theory, IDs are referred to as *growers* (van Geert, 1995), which are limited by nature and posited to interact with one another. That is, learner resources such as memory capacity, input, time, and motivation likely amplify and/or compete with one another's effects (de Bot, 2008), and these interactions are hypothesized to manifest as supportive, competitive, conditional or compensatory relationships (de Bot, 2008; Verspoor et al., 2011). However, while patterns of interaction among growers are "likely to be different for individual learners" (de Bot, 2008, p. 174), little dynamically-oriented research to date has actually explored the interrelationships between the self and other learner IDs or resources in L2 development.

One key exception is Serafini (2017), who explored the variable interactions among cognitive capacity and L2 motivation, conceived under both Gardner's and Dörnyei's models, in instructed L2 learners of Spanish at three levels of proficiency over a semester of instruction. Cognitive and motivational constructs were found to be differentially involved according to learner proficiency, and relationships among cognitive and motivational growers exhibited both stability and fluctuation over time and by stage of development. Specifically, relationships among growers at higher levels of proficiency were more stable, potentially indicating the existence of emergent attractor states, or stable states in system behavior (Larsen-Freeman, 2012), while the nature of relationships between IDs found for beginning learners

was more variable, likely indicating system reorganization that is typical during transitional phases (de Bot et al., 2007; Verspoor et al., 2008).

In a different strand of research, researchers have drawn on dynamic notions of multilingualism, such as the dynamic model of multilingualism (DMM; Herdina & Jessner, 2002; Jessner, 2008), to theorize about the degree of uniqueness, overlap, and interaction among self-concepts in multilingual speakers (i.e., L1 self, L2 self, L3 self, etc.). For example, recent conceptual work by Henry (2017) examines the emergence of multilingual self-guides and the potential effects they may have on L2 motivation. This study was motivated by critiques of the inherent monolingual bias in the core constructs of *integrativeness* and *ideal L2 self* in both the socio-educational and socio-dynamic theoretical models of L2 motivation whose assumed reference point is the monolingual native speaker of the target language. Henry argues that this ignores the reality of the globalized, multilingual world as well as the other languages the individual may desire to learn, already speak or be in the process of learning (Ushioda, 2017). To address this theoretical gap, Henry draws on complexity theory and insights afforded within the multilingual (May, 2014) and dynamic (de Bot, 2015) turns in SLA to contemplate whether students learning two or more foreign languages – and who are in the process of being/becoming multilinguals – might also develop a "multilingual identity" (Henry, 2017 p. 558), as well as how that identity might be mentally construed.

Similar to other nested models of the self, described in the literature (e.g., Mercer, 2014, 2015b), Henry (2017) proposes that "the motivational systems of the learner's different languages need to be conceptualized as interrelated systems that are simultaneously constituents within a higher-level multilingual motivational system" (p. 549). Specifically, the multilingual motivational self system is proposed to be a subsystem nested within the multilingual identity system. Under this model, Henry argues that the *ideal multilingual self* emerges from harmonious, or "mutually complementary" interactions between ideal Lx and ideal Ly selves, while a *contentedly bilingual self* may result from competitive or conflicting interactions among a speaker's selves. Importantly, Henry argues that multilingual self-guides can generate positive effects on motivation in that "for people who develop an ideal multilingual self, motivation to learn the Ly can be greatly enhanced in that developing TL competence becomes part of a larger identity project" (2017, p. 557).

Other work in multilingual contexts has investigated the nature and outcomes of interactions between learners' selves in relation to the different languages they know or are learning. For example, Henry (2011) conducted focus groups with secondary students in Sweden learning two or more languages other than English (LOTEs) in addition to English. The study revealed how, in L3 learning situations, learners' L2 English self-concept was frequently active in cognition,

and how interactions between L2 and L3 self-concepts took place, which, in conjunction with attitudes and beliefs about multilingualism, generated multilingual self-guides. He also reported that students tended to emphasize the sensory and perceptual aspects of being/becoming multilingual and used figurative, metaphorical language to depict openness, empathy, and discovery.

In two large-scale quantitative studies using self-report measures, Henry and Cliffordson (2013) and Lasagabaster (2016) investigated the role of learner characteristics (i.e., gender and language-related differences) in the perception and construal of learner possible selves within a multilingual setting, Sweden and Spain, respectively. Specifically, Henry and Cliffordson investigated gender-related differences in the ideal L2 self (English) and third language (L3) selves (Spanish, German, or French) of 269 secondary adolescent learners studying L2 English and their L3s as compulsory subjects in Sweden. Participants completed three 5-point Likert-scale, self-report questionnaires administered in the L1. Significant gender differences were found for the ideal L3 self, but not the ideal L2 self and confirmatory factor analyses revealed that such gender-related differences in the ideal L3 self were mediated by learners' interdependent self-construal (ISC), or how females and males relate to target language speakers and the elaborateness with which they imagine these interactions.

Similarly, Lasagabaster (2016) asked whether the relationship between English-medium instruction (EMI), motivation, and possible selves in L3 English is mediated by gender and students' first language (L1) (Basque, Spanish, or both) in university students who were voluntarily enrolled in EMI in Spain. 189 intermediate L3 English learners completed a 6-point Likert-scale, self-report questionnaire (67 items). A lack of, or weak, effect sizes led Lasagabaster to conclude that gender differences in motivation are neutralized in EMI contexts and that one's native language does not influence the imagined ideal L3 self of EMI students.

In an English as a Foreign Language (EFL) Turkish context, Thompson and Erdil-Moody (2014) investigated the relationship between motivation (conceived as ideal and ought-to L2 selves) and multilingualism, operationalized either as any experience with an L3 or perceived positive language interaction (PPLI; Thompson & Aslan, 2015; see also Thompson, this issue). PPLI refers to whether multilingual learners perceive positive or negative interactions among the languages they know or are learning as well as how the ideal multilingual self connects to language-specific ideal selves. 159 EFL learners completed self-report measures and significant group effects were found for multilingual status for both L3 experience and PPLI in relation to the ideal L2 self but no significant group differences emerged for the ought-to L2 self.

In a similar large-scale study conducted in the United States, Thompson (2017) measured relationships among motivation, language choice, and multilingualism in

195 university students learning LOTEs. Learners completed a background questionnaire and motivation questionnaires (31 items) that assessed learners' ideal, ought-to, and anti-ought-to selves in relation to the foreign languages they knew or were learning (34 different languages reported). Thompson found that higher-level multilingual students (those with at least a basic beginning level of proficiency in an L3) had significantly stronger ideal selves than their bilingual peers who only had experience with one FL and also the lower-level multilingual students who had below a basic level in an L3. Moreover, within the higher-level multilingual group, the PPLI learners who perceived positive language interaction between previously studied FLs had a stronger ideal self compared to those who did not, providing empirical support for Henry's model (2017). That is, in contrast to a *contentedly bilingual self* that is hypothesized to result from competitive or conflicting interactions among a speaker's selves, the enhanced ideal L3 self perceived by multilingual learners in Thompson's study underscores the role of PPLI in generating stronger ideal multilingual self-guides, which Henry claims emerge from positive reciprocal interactions between ideal Lx and ideal Ly selves.

The studies reviewed above have revealed key insights into the multidimensional nature of motivational and self-related phenomena in learners who speak and learn multiple languages. However, the majority of studies employed quantitative self-report measures administered at one point in time with large samples of learners, which can be valuable for replicating and generalizing results to different contexts, but arguably limits our understanding of the inherent emergent and situated nature of the self as well as its dynamicity and susceptibility to change (Henry, 2015; Serafini, 2019). Second, although the above studies were carried out in contexts where multiple languages are spoken/learned, most research on learner selves to date has been exclusively carried out in instructed ESL/EFL contexts (for reviews, see Al-Hoorie, 2017; Boo, Dörnyei, & Ryan, 2015; Sugita McEown, Noels, & Chaffee, 2014; Ushioda, 2017). This gap underscores the need for qualitative research to explore how learner selves evolve in relation to learning LOTEs and in diverse sociocultural contexts where bi/multilingualism may not be the societal norm and where the symbolic value of and support for linguistic and cultural diversity varies.

4.2. Contextual dynamics of the self

Theoretical discussion and qualitative work by Mercer (e.g., 2011a, 2011b, 2014, 2015b, 2016) has been particularly valuable in conceptualizing the situated nature of the self. Integrating insights from Ushioda's "person-in-context" view of L2 motivation and theoretical principles in CDST, Mercer proposes a network, or relational view, of the self and underscores its emergence in interaction with

context, which, similar to the broader notion of self-concept, "both influences and is affected by a person's social contexts and interactions" (Mercer, 2011a, pp. 13-14). Mercer also argues that the self is best construed as "a network of relationships which inherently integrates contexts-both temporal and spatial" (2016, p. 12). Thus, the self is constructed in relation to these multiple contextual levels, which encompass the past, present and future and stretch "from micro-level interactional contexts to macro-level cultures" (Mercer, 2016, p. 13), for example, from the immediate family context to larger societal attitudes and beliefs.

Conceived in this way, Mercer (2014) has noted the need for multiple theoretical perspectives to motivate research investigating the self, but recommends qualitative methods in order to tap into the subjective meaning that past, present and future contextual factors hold for the individual. In particular, she emphasizes that a learner's sense of self cannot be understood without employing methods that explore "the learners' own subjective interpretation of the relevance and meaning of respective contextual factors" (Mercer, 2016, p. 17).

For example, in previous exploratory work, Mercer (2014) used multimedia narratives with four adult EFL learners at the university level. Learners were asked to portray their sense of self (related to the domain of foreign language learning via a collage, which provided the basis for an in-depth interview or series of interviews). Based on a content analysis of the data, Mercer used sociogram software to visualize learners' sense of self as a network of relationships "to things, places, people, events and concepts – past, present, and future" (Mercer, 2016, p. 22). She argues that such an approach portrays a broad, holistic view of the self in which contexts inherently form part of the system of relationships. Network data can also be generated through questionnaires, interviews and/or observations, but a key consideration and challenge is defining the focus and level of analysis (Mercer, 2015a). For example, within an educational setting, "different levels of networks could include, for example, a school class of learners as a network, an individual learner's language use network, a teacher's network of professional contacts" (Mercer, 2015a, p. 77), among others.

Thompson and Vásquez (2015) also take a narrative approach to explore the motivational profiles (based on the L2MSS) and language learning experiences of 3 L1 English non-native speaking teachers of Chinese, Italian and German. In addition to further fleshing out Dörnyei's model to account for the possibility of psychological reactance, or "the urge to perform an action specifically because someone gave advice to the contrary" (Brehm, 1966; Brehm & Brehm, 1981, as cited in Thompson & Vásquez, 2015, p. 161), the authors inductively analyzed audio-recorded narrative interviews in which participants narrated their personal foreign language learning journeys. Findings illustrate the variation in motivational profiles and how each "was shaped by components of his/her

immediate social context" (p. 163), leading them to emphasize the need to consider interactions between the self and contextual variables in a variety of settings, particularly non-EFL environments.

In sum, a contextually grounded, dynamic view of the self aims to maintain the integrity and complexity of the system without reducing the whole to the sum of its parts. Methods that are qualitative in nature such as learner biography, narrative, and social network analysis provide particularly effective means for gaining access to learners' subjective interpretations of the meaning and relevance of context and to portray a relational view of the self as a network. However, while there has been rich conceptual discussion and empirical advances regarding the contextual dynamics of the self, less is known about its temporal dimension. In Mercer's exploratory work, the learner's sense of self was represented "on a broad level as experienced at the particular moment in time" given that "the dynamics of the self across time were not the focus" (2016, p. 21). While Thompson and Vásquez (2015) rightfully argue that narratives have a temporal dimension and "provide the opportunity for language learners to reflect back upon their lifelong language learning processes" (p. 161), the focal timescale in a narrative is inherently broad with less potential for revealing temporal dynamism and change at different levels, as well as interaction among them. One key exception is Mercer (2015b), detailed in the following section, who examines different facets of the self across broad and narrow timescales.

4.3. Temporal dynamics of the self

Several studies conducted in instructed settings have investigated micro-level change (e.g., over seconds or minutes) and variability in learner IDs like willingness to communicate (WTC) and anxiety. For example, a productive line of research led by MacIntyre and colleagues has aimed to capture the moment-to-moment fluctuations of WTC through innovative methods using idiodynamic software (e.g., MacIntyre & Legatto, 2011). This method requires learners to frequently self-record responses while completing L2 communicative tasks and has also been used in case studies of anxiety (e.g., Gregersen, MacIntyre, & Meza, 2014). Other classroom studies have investigated factors affecting changes in WTC using both in-class self-ratings over the course of a conversation class as well as immediate post-questionnaire reports (Pawlak, Mystkowska-Wiertelak, & Bielak, 2016).

A growing number of studies have also studied fluctuation in short-term motivation in the classroom (e.g., Pawlak, 2012; Waninge et al., 2014). For example, Waninge et al. analyzed micro-level classroom motivational dynamics in four language learners during six language classes over a period of two weeks. They used an adapted version of the Motometer, which learners completed at

five-minute intervals, as well as classroom observations and a motivation and attitudes questionnaire completed at the end of the study. Together these instruments illustrated both fluctuation and stability in individual learners' motivational development and also demonstrated that motivational phenomena are inseparable from the learner's individual learning context. Importantly, the authors recommend that motivational development be studied over different interacting timescales as "what happens on the minutes scale has an impact on what happens on higher time scales and the other way around" (Waninge et al., 2014, p. 707).

In contrast to classroom-based studies of WTC and L2 motivation, there has been noticeably less empirical work aimed at revealing change in learner selves in either instructed or naturalistic learning environments. One key exception is a small-scale exploratory study by Mercer (2015b), who takes a nested systems approach to the self, which "can be thought of as comprising multiple layers of the self that differ in scope, evolve over different timescales and are interconnected with different types or levels of contexts" (p. 141). This study elicited data over four different macro and micro-level timescales via four different methods from two advanced instructed adult EFL learners in a university context. Specifically, EFL learners' sense of self/academic self was assessed via open-ended interviews and multimodal narratives on a monthly basis (three total) and weekly journal entries (15-17 total) over a 15-week semester. Learners' working EFL self was tapped in the form of Likert-scale questionnaires completed every five minutes during three class sessions. At the most micro-level, Mercer used idiodynamic software to analyze change in learners' EFL self-confidence on a second-by-second basis while engaging in two speaking tasks together.

Despite several learner similarities such as age, gender, educational background, and level of proficiency, findings highlighted the inherent individuality in each learner's self system, particularly in terms of its underlying structure and conceptualization, the identified drivers of change, and patterns of dynamism. For instance, at the macro-level, learners differed in their focus and approach to describing their sense of self (more holistic versus more domain-specific) as well as the way they portrayed their self-beliefs (positivity vs. certainty). Factors affecting change were also unique although both learners' sense of self was strongly affected by interpersonal factors, particularly their interlocutors. For example, degree of familiarity with the interlocutor and a focus on their reactions during the communicative task were what most affected both learners at the idiodynamic level. The interpersonal focus was also prevalent on a more macro-level for one learner, who emphasized affective responses to her experiences with others in the journals and interviews.

Mercer's rich qualitative and quantitative methodological approach exploring change on multiple time scales illustrates the connection between social

and interactional relationships and inherent fluctuation in a learner's sense of self, which underscores that individuals construct "their identity in relation to a specific [sociocultural, educational, or personal] context, real or imagined" (Mercer, 2011a, p. 19). Interlocutors are obviously a key part of such contexts, but are often taken for granted and omitted in both the research phases of conceiving of the role an interlocutor's characteristics may play (beyond being a 'native speaker') as well as incorporating them into the phase of methodological design and analysis (Gurzynski-Weiss, 2017). However, two key studies provide initial insights in this realm within a broader (Pellegrino, 2005) and narrower timeframe (Serafini, 2020).

5. Interlocutors and learner selves: A potential role for co-adaptation and alignment

In a longitudinal study conducted in an immersion setting, Pellegrino (2005) explored the impact of the interaction between learner-internal factors (e.g., attitudes toward the L2) and external factors (e.g., interlocutors' personal characteristics) on the self-construction of six native English-speaking L2 learners of Russian studying abroad in Russia for varying periods (4-10 months). Study abroad interlocutors included language instructors, resident directors, host-family members, roommates, or friends and their characteristics encompassed their behaviors, perceived attitudes, and personal characteristics such as gender, age, and physical appearance.

A grounded theoretical analysis of learner narrative journal entries and interviews revealed several insights into the evolution of learners' sense of self in relation to their interlocutors abroad. For example, complimentary comments and behavior exerted a positive influence and served as validation of the self, while attitudes and behaviors perceived as critical negatively impacted learners' self-esteem and confidence and caused conflict between learners' real and ideal selves. An interlocutor's age also played a key role, with many participants reportedly feeling more confident in interactions with older adults and children, whereas interlocutors who were closer in age (i.e., peers or teens) were perceived to be more threatening to one's status or self-presentation. Pellegrino also reported that learners' sense of self and self-construction gradually relied less on their perceptions of interlocutors over time, elucidating the temporally dynamic relationship between interlocutor characteristics and learner affective outcomes abroad.

In a similar study conducted over a two-week experience abroad in Ecuador, Serafini (2020) took a mixed methods approach to explore the extent to which interlocutor IDs mediate learners' perception and construction of their possible selves, conceived within the L2MSS framework (Dörnyei, 2009a). To assess daily, weekly, and monthly changes in self-constructs, four learners (three L2; one heritage learner, HL) completed a series of Likert-scale, self-report questionnaires on a daily basis, and before, during, and at the conclusion of the program as well as one month

later. Learners also completed a social interaction log to reveal the range, frequency and content of their daily interactions with study abroad interlocutors.

To elucidate factors influencing changes in learners' perceptions of self (as measured quantitatively), learners also completed guided daily journal reflections, which instructed them to reflect on their perceptions of experiences and social interactions with host interlocutors in the target language within the local community, the at-home setting, and the classroom. Interlocutors included host family members, Spanish teachers, Ecuadorian university students, program coordinators, a group excursion tour guide, a faculty program director (i.e., the researcher), and several "miscellaneous" interlocutors (e.g., bus driver, waiter). Interlocutors completed a closed- and open-ended questionnaire tapping six IDs (e.g., language-related training and background, experience working with L2/HL learners, attitudes toward L2/HL learners).

Inspection of the quantitative data via line graphs and moving max-min graph plots revealed varying degrees of fluctuation and change in learner perceptions of self over time. These different patterns of intra-individual variability were linked to internal factors (e.g., previous experiences learning or using Spanish) and interactions and relationships developed with their interlocutors as well as learner perceptions of interlocutor differences. However, the independent measure of interlocutor IDs did not always align with learner perceptions of these characteristics as described in the journal reflections. For example, while learners frequently mentioned being inspired by their interlocutors' high level of bilingualism in Spanish and English, which positively reinforced their ideal L2 self, interlocutors themselves did not assess their bilingual skills as highly as learners did. Also positive (and negative) interactions with host mothers, teachers, and the excursion tour guide played a key role in how learners perceived and constructed different facets of self, which underscores that the interlocutor not only provides language input and feedback for learners, but is a crucial source of information about themselves, causing conceptions of self to continually be in flux (Henry, 2015; Pellegrino, 2005).

The studies detailed above contribute valuable insights to our understanding of the dynamic, situated nature of learner selves and move us toward a holistic view of learners and their interlocutors as contextually-embedded, dynamic elements of a larger "coupled system" (Larsen-Freeman & Cameron, 2008a). However, both studies stop short of revealing the emergent nature of the self through the mutually influential and reciprocal processes of co-adaptation and alignment (Larsen-Freeman, 2020). That is, while emphasizing the key mechanism of learner perceptions of their interlocutors, neither study demonstrates how learner selves emerge through mutually reciprocal processes nor do they illustrate how *both* parties emerge changed from their interactions. This

gap not only limits our understanding of the notion of dynamicity and emergence but also situatedness given that the self is proposed to be sensitive to feedback and to continuously modify through social interaction and the implicated processes of "self-perception, social comparison and self-appraisal" (Henry 2015, p. 89).

6. Moving toward a dynamic, situated, and emergent understanding of the self

To render insights into the true complexity and dynamicity of self-related phenomena, this work concludes by summarizing gaps and considering ways to move forward.

6.1. Contextual breadth

First, we need a broader representation of sociocultural contexts in order to better understand how learner selves develop in interaction with unique cultural, historical, pedagogical, political, and social factors that are relevant to learning target languages other than English. Though an increasing number of studies have investigated the L2 and/or L3 self in a broad range of social and educational settings including, but not limited to, Russia (Pellegrino, 2005), Canada (Kim, 2009), Sweden (e.g., Henry, 2011; Henry & Cliffordson, 2013), Japan (e.g., Sampson, 2012), Indonesia (e.g., Lamb, 2012), Turkey (Thompson & Erdil-Moody, 2014), Spain (e.g., Lasagabaster, 2016, 2017), Korea (Kim, 2019), and Ecuador (Serafini, 2020), the overwhelming majority of these studies remain limited to instructed ESL/EFL contexts, with few exceptions (Thompson, 2017). This gap prevents us from understanding how factors operating within cultural, social or sociopolitical dimensions of context (e.g., circulating language ideologies or perceived value and social status associated with different languages and varieties) intersect with learners' relationship to the target language and culture(s), and thus their perceptions of self.

For example, further research is needed within the US context with a focus on the growing number of students who identify as heritage speakers of a minority language like Spanish. Such speakers often speak socially stigmatized, or "nonstandard," varieties of Spanish and have likely been exposed to harmful ideologies about standard language, whether at home, in the community, in the classroom, or elsewhere (Leeman, 2015, 2018). Research should explore the degree to which their conceptions of self reflect internalization of or active resistance to such ideologies, or both, and analyze the ways in which these mutually influence one another.

In addition to investigating LOTEs in different sociocultural settings, more selves research is also needed in varying formal and informal learning environments such as instructed heritage language contexts, mixed classes with both L2 learners and heritage speakers, language for specific purposes, service learning or community-based learning, and study abroad or work/volunteer experiences

abroad (e.g., Peace Corps). Expanding our focus to these contexts would clarify how learner selves are contextually and socially embedded and "coupled" with their environment, leading to a more complex, rather than reductive, understanding of the learner-context ecosystem (Ushioda, 2009, 2011, 2015).

6.2. Interaction across timescales

Complex systems such as the self not only operate at different levels of context, they also fluctuate over a range of timescales and these timescales interact. This means that an ideal CDST design requires the study of dynamic systems at different levels of granularity as they evolve over minutes, days, weeks, months, years, etc. (de Bot, 2015; Larsen-Freeman & Cameron, 2008b). However, as the current review has shown, very few previous studies explore the evolution of the self over *both* micro- and macro-levels of granularity with few exceptions (Mercer, 2015b). On one hand, large-scale studies tend to be cross-sectional in nature, presenting a static snapshot or "photographic stills rather than moving pictures" (Henry, 2015, p. 93). On the other hand, longitudinal small-scale case studies either exclusively focus on motivational phenomena at the micro-level (e.g., seconds or minutes) using idiodynamic methods or a broader timeframe (e.g., the lifespan) via language learning biographies or narratives. Moving forward, studies need to measure phenomena over a minimum of one narrow and one broader timescale to compare fluctuations over moments, days, weeks, months and years, and analyze how these different rates of change influence one another and lead to divergent trajectories in the phenomenon under focus.

Related to the key components of context and time, it is important to note that researchers must differentiate between what is ideal and what is practical in a CDST design. That is, what is conceptually or theoretically desirable is not always feasible. Deciding the scope of one's research and meaningfully, yet practically, setting contextual and temporal boundaries is a recurring challenge in the study of dynamicity, and one that has received considerable attention (e.g., Hiver & Al-Hoorie, 2016; Larsen-Freeman, 2012; Mercer, 2015a).

6.3. Longitudinal mixed methods designs

Related to levels of granularity, one key methodological decision in exploring complex, dynamic systems is the number of time points of data collection. Given that variability "is an intrinsic property of a self-organizing system" (Verspoor et al., 2008, p. 219), it is necessary to take a longitudinal approach that includes repeated measurements and a high density of observations relative to the rate of change in order to reveal the degree and patterns of variability. This variability

not only enables us to compare intra-individual complexity to group-level patterns (Hiver & Al-Hoorie, 2016), but also reveals more about the developmental process in that high variability may indicate phases of transition and system reorganization whereas low variability may reveal more stability (Verspoor et al., 2008).

Further, particularly appropriate to the longitudinal study of complex systems is the use of "combinations or blends of methodologies" (Larsen-Freeman, 2015b, p. 233), which should elicit and examine data through both quantitative and qualitative means (Verspoor et al., 2011). For example, self-report questionnaires or surveys should be completed at multiple points over longer timescales and idiodynamic measures or other innovative instruments like the Motometer (Waninge et al., 2014) should be administered over shorter timescales. To elucidate and explain data obtained via quantitative measures, it is essential to also employ qualitative methods such as longitudinal autobiographies, language learning narratives, journal reflections, interviews, and focus groups, among others. These methods allow essential access to first-person insights into the personal significance of contextual factors (Mercer, 2016). Sociograms are a useful tool to analyze "the social network structures that underlie linguistic interaction" (Beckner et al., 2009, p. 17) and ethnographic methods that include participant and/or nonparticipant observations of learner interactions in the classroom, community, and beyond[1] can provide rich insight into the myriad contexts in which the learner functions.

Analyzing repeated observations of learner interactions with others is particularly important for revealing the emergent nature of learner selves, which is a key gap in previous research, as argued throughout this article. In particular, researchers should focus on the degree of alignment between interlocutors and the reciprocal, reflexive nature of co-adaptation "in which change in one system leads to change in another system connected to it, and this mutual influencing continues over time" (Larsen-Freeman & Cameron, 2008b, p. 203). Focusing on this type of mutual causality and what unfolds between interlocutors within a particular context can overcome the traditional one-sided focus on the learner and reveal how all parties emerge changed or affected by the enactment (Larsen-Freeman, 2020).

6.4. Large-scale replication and small-scale case studies

Finally, both large-scale replication and small-scale exploratory studies are necessary in order to address the broader question of the extent to which the self is situated versus being a more global construct (e.g., Mercer 2011a, 2011b, 2014,

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[1] Regardless of the area of inquiry, researchers should critically reflect on ethical considerations in longitudinal researcher-participant relationships and how participants benefit or are affected by the outcomes (see Consoli & Aoyama, 2019).

2015a, 2016). While CDST warrants change from a traditional focus on hypothesis testing and generalizability of results, a means analysis of large-scale data to confirm or reject hypotheses and make generalizations regarding populations of learners can still inform dynamically oriented research (Verspoor et al., 2008). For instance, Serafini (2019) argues that conceptual replication may serve as a first step to address the degree to which learner possible selves are generalizable across diverse social and educational contexts and in relation to learning LOTEs, but must be complemented by longitudinal, mixed methods case studies that are more in line with the dynamic conceptualization of the self as a multidimensional construct that is contextually situated across time and space.

7. Conclusions

Overall, the dynamic turn in SLA has led to a more holistic conceptualization of IDs in language learning more generally, and the self in particular, which has fundamentally transformed the questions we ask and the ways we try to answer them (Benson, 2019). However, there is a need to reconcile theory and research practice as the ways we investigate these constructs have not kept up with the pace of conceptual advances in the field. As Benson (2019) argues, the field is entering an era of 'person-centeredness' in which individual learners are conceived as socially and contextually embedded beings. To keep moving forward, it is hoped that the critical review and methodological recommendations discussed here will spur dynamically oriented research toward further rendering valuable insights into productive ways to study the learner-context ecosystem and the variable ways the self interacts with the internal and the external as it continuously emerges and fluctuates across time and space.

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