Holistic approaches to the study of emotions and identity in language learning and use: Complex dynamic systems theory, language ecology, and post-structuralism

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Abstract

In the field of English applied linguistics, learners and their learning processes including their psychological and emotional responses to second language acquisition (SLA) were traditionally researched in isolation following the psychometric tradition. By contrast, learners' idiosyncratic, and often life-changing experiences that shape their identities are usually examined holistically drawing on interviews and case studies. In this paper, I discuss how I brought under the same roof these two seemingly incompatible research traditions to shed light on language learners' multilingual and multicultural identity construction. The paper draws on the basic tenets that language and culture are inherently intertwined in SLA (Kramsch 1998) and that language learning is embodied (Damasio 1994) generating powerful emotional responses to language learning and use. In the paper, I delineate three holistic approaches to the study of emotions and identity in SLA including complex dynamic systems theory (CDST), language ecology, and post-structuralism. These approaches have three important principles in common. (1) They look at learners holistically in their complexity and entirety. (2) They perceive learner-intrinsic and contextual factors as interconnected, dynamic, and changing over time. (3) They examine learners and their learning processes in response to environmental stimuli in the form of interactions with others, learning materials, the learning environment, languages spoken by the individual, as well as the educational and sociocultural context. Following the introduction of the three theories, I present my latest research results drawing on these theoretical underpinnings. I explain how I conceptualized learners' identity construction as a complex dynamic system of individual differences and how I detected novel patterns of psychological behavior using CDST in online education. Then, I discuss the impact of language socialization on language learning and use drawing on case studies. Finally, I present examples of powerful emotional and identity responses to language learning and use, the transformative potential of SLA, and the language learner's imagined L2 habitus (Fekete 2018) pinpointing how learners speak, think, feel, and behave differently when they switch to different languages.

Keywords: *emotions, identity, language learning, the psychology of learners, complex dynamic systems theory, language ecology, post-structuralism, holistic approaches, online education, language socialization, the learner's imagined L2 habitus, online education*

Introduction

I have given many thoughts over the years as to how and why I feel, think, speak, and behave differently when speaking my various languages, which are Hungarian, English, Spanish, and German. Although my mother tongue is Hungarian, I have used English extensively in my professional and private life for over two decades. Early on as an English learner, I often caught myself embracing the

transformation I experienced via English. Learning English felt like a tabula rasa – a clean slate – to reconstruct myself and my life centering around the new language. I felt like I was gradually becoming a different person and there was a point when I could not imagine my life only speaking a single language – my mother tongue. I could not quite explain why I was having these troubling yet liberating feelings and thoughts, but I could not help getting them. Therefore, my life choices were shaped by this train of thought – I chose English-medium instruction in my university studies and professions requiring English knowledge, I have traveled to and lived in English-speaking contexts, made English-speaking friends all over the world, consumed hundreds of books and movies in the English language, and have experienced a range of – mostly positive – emotions and states of mind via English. Then, came Spanish as another transformative life experience – only to perturb my complex, dynamic yet stable linguistic, cultural, emotional, social, and psychological systems of English and Hungarian before finding its place in my multilingual and multicultural Self. Soon, I came to realize how learning and speaking English had shaped my trajectory in life as well as my identities. Intrigued by my own experiences, I started to pay heed to other people's experiences and narratives to shed light on how languages had shaped their lives and thus their identities. While conducting my PhD research, I found the theoretical and methodological tools to make sense of these interesting life experiences that many multilingual speakers reported.

   In this paper, first, I present three major challenges that the researcher is likely to encounter in researching identity and emotions in second language acquisition (SLA) including 1) research methodology, 2) terminology, and 3) the reconciliation of the holistic and the psychometric approach in this endeavor. Then, I delineate three holistic approaches applicable to the study of emotions and identity in SLA research including 1) complex dynamic systems theory (CDST), 2) language ecology, and 3) post-structuralism. The concise theoretical overview of the three approaches is followed by a brief discussion of the author's own research in the three fields to point out how the three challenges may be overcome in empirical research and how the three holistic approaches may be used to examine individuals with various identities, emotions, and individual differences (IDs). Although it is an academic paper, the author shares her personal and academic journey to demonstrate the transformative potential of SLA and suggest methods addressing these experiences in research. The theoretical and methodological tools along with the findings of the author's research presented in the paper can help researchers, educators, and, in general, multilingual individuals to understand their experiences better and find resources to conduct their own research in the field. Due to the wide scope of the paper tackling three problem areas and three research approaches, the discussion of empirical research is confined to the author's own studies in the three fields.

Background to the problem: Challenges in researching emotions and identity in SLA
Research methodology

   The first challenge that the researcher is likely to face when researching emotions and identity in SLA is **researchmethodology**. When the constructs of psychology research were adopted in English applied linguistics before the second millennium, the psychometric research tradition was also integrated into SLA research (Dörnyei & Ryan 2015). A prominent example of this effort is the integration of Deci and Ryan's (1985) concepts of intrinsic and extrinsic motivation in the field. Similarly, Dörnyei's (2005) motivational self-system draws on Markus and Nurius's possible selves theory (1986) and Higgins' self-discrepancy theory (1987). This was a big shift from understanding motivation as a socio-cultural construct to perceiving it as a psychological-cognitive and situated factor describing what the learner can and wants to do with language at a given point in time. At that point, I realized that studies in applied linguistics examining individual differences such as motivation, language anxiety, or willingness to communicate (WTC) usually drew on the psychometric research tradition. They worked with large sample sizes, generated numerical results, and performed statistical analyses to arrive at generalizable results. Thus, the use of a more rigorous and systematic design that draws on numbers and variables

rather than cases made such research valid and reliable and thus linked applied linguistics research to already established sciences such as statistics, mathematics, and psychology. These generalizable results prove or disprove hypotheses and point out what is going on in general, and what the state of things is (Dörnyei 2007). Due to the scientific approach, quantitative research has always enjoyed great prestige in English applied linguistics.

However, the individuals are lost in these generalized results, as idiosyncrasies and subtle details remain undisclosed in this research tradition. While quantitative research answers the question of what is going on, it does not uncover why and how the results have emerged and what characterizes the individuals participating in the research. By contrast, a major benefit of qualitative research lies in its capacity to shed light on rich details including emerging patterns as well as idiosyncratic phenomena characterizing special cases rather than averages or variables (Dörnyei 2007). The use of multiple data sources and research instruments conducive to inductive data analysis allows for a more holistic look at phenomena under scrutiny (Creswell 2003: 38-39). This research method is highly interpretive, as researchers make sense of the data relying on the traditions of their discipline, and their cultural background, views, and beliefs. Until the new millennium qualitative research did not enjoy high prestige in applied linguistics, since it was criticized for its interpretive and labor-intensive nature, the use of small sample sizes, the lack of a rigorous scientific design, and for producing non-generalizable results. However, in the past two decades, the individual has come to the forefront of research, and case study research has gained momentum, giving more recognition to qualitative research.

Being interested in individuals and their idiosyncratic experiences and narratives, I was going to conduct qualitative case study research, but I thought I was expected to perform quantitative research if my results were to be taken seriously. As a researcher, I do not deem these two research traditions incompatible or exclusive – placed at the very ends of a continuum; instead, I regard them as reconcilable and complementary research approaches, yielding a more profound and reliable understanding of the constructs under study. Therefore, I decided to include some quantitative research in my research project to complement the qualitative research design. Applying mixed methods is profitable, as such a research design fuses the advantages of quantitative and qualitative research while offsetting their downsides by generating insights in areas where the other research method cannot.

Terminology

The second problem that the researcher encounters when examining identity is related to terminology concerning the terms **'self' vs 'Self', 'identity' vs 'identities'**, and the various meanings of the word **'subjective'**. The term 'self' is understood as one factor among other variables; therefore, it is not capitalized. It is associated with the five types of self-knowledge identified by Neisser (1988: 37-53) including the ecological self, the interpersonal self, the extended self, the private self, and the conceptual self. In applied linguistics, the word 'self' is also associated with self-perception, self-concept, self-esteem, and self-efficacy. In contrast, post-structuralist researchers and cultural theoreticians capitalize the word 'Self' to refer to the individual in their entirety and their idiosyncratic experiences. So, when Kramsch (2009) reinterpreted Neisser's five self-concepts in the field of SLA, she capitalized the terms.

The term identity can be used as a singular or as a plural noun. In the past, it was thought of as a singular concept referring to a coherent, homogeneous, constant, and unchanging entity. However, post-structuralist scholars pointed out that the individual and their identities are constantly changing over time due to internal and external stimuli. Therefore, identity is a heterogeneous, often fragmented, or incomplete entity that has different types and can be understood on different levels. Consequently, the plural form better captures the multi-layered and diverse nature of identity. Individuals have different identities including individual and collective identities such as linguistic, cultural, ethnic, racial, professional, gender, or national identities. Furthermore, identities are constructed, co-constructed, and

reconstructed in social interactions pointing out "a process never completed – always-in process" (Hall 1996: 2) or as Kramsch (2009: 18) put it a "subjectivity-in-process".

The third problem area in terminology addressed words such as 'subjective' or 'subjectivity'. The meanings associated with these words denote the lack of objectivity and the presence of bias – often associated with qualitative research as a major weakness. By contrast, the post-structuralist interpretation of the word is value-neutral referring to the multilingual individual's idiosyncratic meaning-making practices associated with the second language (L2) that involve the learner's brain, mind, and body (Kramsch 2009), generating emotional responses to SLA that are conducive to transforming the individual's life. This interpretation of the word – I realized – resonated very much with my experiences as a multilingual speaker and as a language learner. Kramsch defined 'subjectivity' as the multilingual individual's "conscious or unconscious sense of Self mediated through language/s guiding their perceptions, reactions, and thoughts that orient their relationship to others" (p. 18). Therefore, the learner's subjectivity is "constituted and shaped in interaction with the environment through the discourse of others" and it involves "both the conscious mind and the unconscious body's (i.e., emotional) memories and fantasies, identifications, and projections" (Kramsch 2009: 18).

Tackling the above challenges led to four observations:

1. Identity construction is inseparable from imagination. Imagination shapes thoughts, emotions, utterances, and actions associated with language use. This is how imagination becomes reality.
2. Consequently, identity is inseparable from emotions. The individual's emotions feed into their identities and their identities generate emotional responses.
3. Therefore, L2 learning and use construct and shape the multilingual speaker's identities (e.g., their linguistic, cultural, social, and professional identities).
4. Consequently, SLA generates emotional responses in learners, pinpointing that language learning and use is embodied engaging learners' brain, mind, and body (Kramsch 2009).

Reconciling two research traditions

As a result of the two main problems delineated above, the researcher is faced with a third challenge as to **how to reconcile these two seemingly irreconcilable approaches**:

1. how traditional individual differences (IDs) research looks at the self and other IDs, examining learners and their learning experiences in isolation focusing on only one or two constructs and a couple of variables, and
2. how other fields perceive the Self with various identities looking at learners and their learning processes holistically in their complexity and entirety on a smaller scale.

In what follows I discuss three holistic approaches to the study of identity and emotions in language learning and use that can reconcile the seemingly incompatible views and methods of traditional individual differences research and identity research. These approaches include 1) complex dynamic systems theory (CDST), 2) language ecology, and 3) post-structuralism.

Complex dynamic systems theory in the study of individual differences and identity in SLA
Complex dynamic systems theory and SLA

Complex dynamic systems theory originates in natural sciences: on the one hand, in biology endeavoring to explicate how unexpected and novel processes emerge from a set of pre-determined variables, and on the other hand, in mathematics studying non-linear dynamics utilizing computer modeling (Larsen-Freeman & Cameron 2008: 2-4). By now, complexity science has come to be applied in additional domains such as business management, economics, epidemiology, and social sciences, as well as in developmental and social psychology (Nowak, Winkovska-Nowak & Brée 2013) and SLA (Larsen-Freeman 1997, 2017). The terms complexity theory (CT) and complex dynamic systems theory (CDST) may be used interchangeably; however, in this paper, I will be using the latter to avert bafflement.

A complex dynamic system (CDS) is envisaged as "a system of interacting lower-level elements" leading to a higher level or system-level behavior. The task of the researcher is, therefore, "to identify the rules of interaction among elements and to investigate how these rules promote the emergence of macro-level phenomena" (Nowak, Winkovska-Nowak & Brée 2013: 2). Consequently, the theory can be applied to investigate both social and individual processes including interpersonal and intrapersonal phenomena in the field of education and applied linguistics alike. CDST was introduced in applied linguistics by Larsen-Freeman (1997) in her seminal paper discussing how complexity theory may be employed in SLA. Later, Ellis and Larsen-Freeman pointed out the emergent nature of language and language learning (2006) and explained how language is a complex, dynamic, and adaptive system (2009).

There are three seemingly irreconcilable contradictions in individual differences research in the field of SLA. The first one concerns the **universal vs uniquenature of individuals and their functioning including SLA**. All humans are based on a universal genetic design but there are infinite variations on this design. People display variation and diversity in every attribute they possess and in every way of their functioning from brain mechanisms to skin tone. They also differ in their response to the environment, stimuli, experience, and learning. Humans can master any mother tongue as a child unless some extreme circumstances frustrate first language mastery. However, the statement is far from being true for SLA. Not all language learners attain high proficiency in the L2 despite their prolonged effort and learners attaining the same proficiency level in the L2 often report completely different emotional and psychological responses to SLA, resulting in a diversity of learning backgrounds and trajectories. CDST, however, resolves this contradiction by pointing out that humans like everything else in the universe are fractals, as they permit infinite variation in the system that is self-similar based on a universal design (Larsen-Freeman 1997). Galaxies, suns, trees, plants, animals, humans, languages, and language learning are fractals as they display endless variations while retaining characteristics that make them recognizable as belonging to a distinct category or group.

The second contradiction concerns the **stable yet dynamic** (i.e., changing) **nature of individual differences, emotions, and identities** in SLA. All humans are prone to changes over time, yet they also show stability; otherwise, they would not exist. Similarly, L2 learning is prone to changes but must also be stable to be maintained over time. This contraction can be reconciled by CDST, which regards natural phenomena as a complex dynamic system composed of interacting subsets that function as the levels of the system. Such a system is characterized by the following key properties (Larsen-Freeman & Cameron 2008):
- complete interconnectedness of levels within the system;
- the system changes in response to environmental stimuli;
- the system sustains its stability over time by continuous adaptation to change;
- the system alternates between attractor and repeller states;
- emergent behavior of macro-level phenomena;
- reciprocal behavior between the subsets of the system and the system; and
- two or more systems co-adapt and co-evolve.

A complex dynamic system is also a chaotic system characterized by **non-linear dynamics** constituting the third contradiction **in SLAand IDs research**. SLA is oftentimes characterized by a disparate relationship between stimuli and outcomes. For instance, prolonged learning efforts may result in little progress while little effort, at other times, may lead to much progress. From a teaching perspective, teachers often invest much time and energy in teaching a certain topic to their learners; yet learners seem to struggle to make progress, while at other times, little effort may lead to great progress. This contradiction is explained by the butterfly effect, which relies on non-linear dynamics and points out how small and often seemingly unrelated phenomena can cause great changes in a complex dynamic system.

Identity construction as a complex dynamic system of individual differences

In my Ph.D. dissertation research, I sought to combine traditional IDs research and post-structuralist research into identity by examining multilingual speakers' identities along with their various IDs. As I was studying the different categorizations of individual differences and the different numbers of individual differences conceived by researchers, I was surprised to see that identity was not included in any of the lists.

My interdisciplinary research approach, however, allowed me to **reconcile traditional individual differences research and holistic identity research**. The participants of the study were 38 multilingual university students speaking at least two languages or more. I examined their identity construction in their various languages as well as their individual differences including their motivation, language anxiety, willingness to communicate, competitiveness, perfectionism, and self-perception. The results pointed out that individual differences constantly interact with one another in dynamic and complex ways in response to stimuli coming from the subsets of the system and from the environment. My findings confirmed Bailey's (1983) results that self-perception, perfectionism, and competitiveness continuously interact with and feed into one another, forming a cyclic relationship at one level of the system.

Figure 1: A dynamic interaction among self-perception, perfectionism, and competitiveness
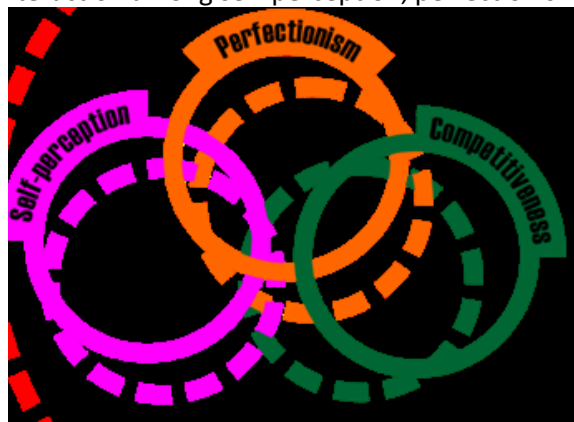
Changes at this level then feed into the learner's language anxiety at the next level up, which affects their motivation to learn the language at the next level.

Figure 2: Changes in the level of self-perception, perfectionism, and competitiveness feed into the learner's language anxiety and motivation at the next level.
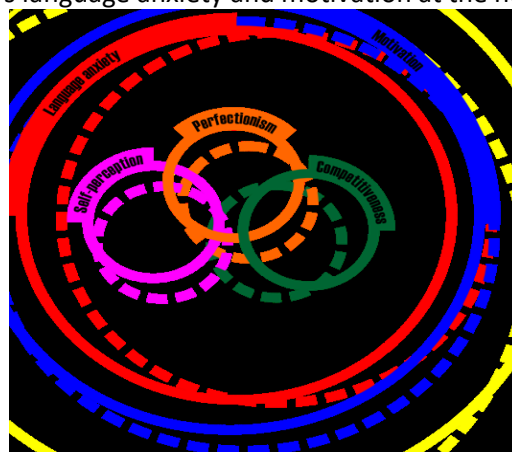
Figure 3: Changes in the level of motivation and language anxiety resulting from interactions at lower levels feed into the learner's WTC in the L2.
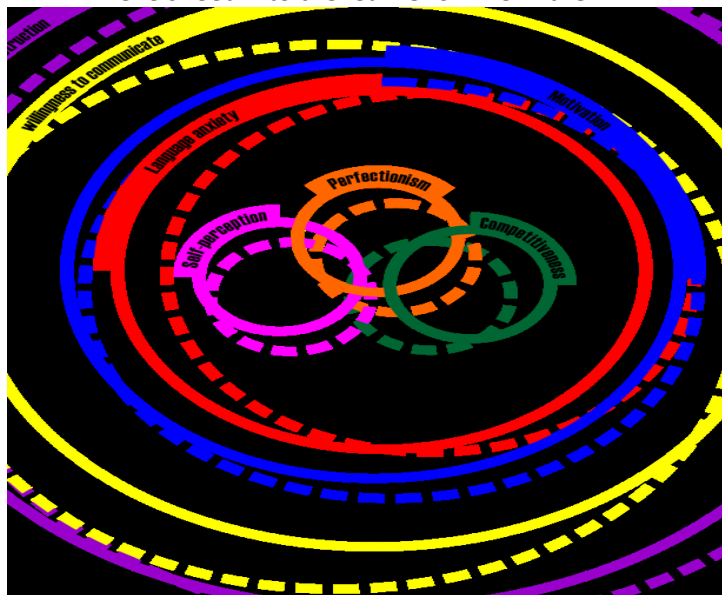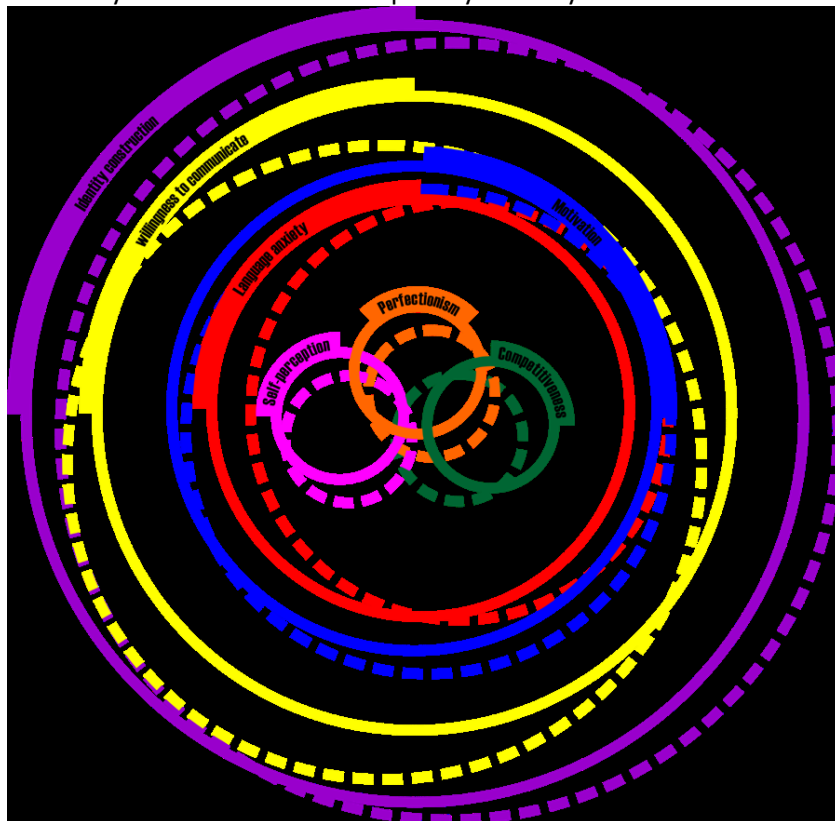

Figure 4: Identity construction as a complex dynamic system of individual differences

Based on the results I proposed that **individual differences should be envisaged as vertically and horizontally interacting subsets (i.e., levels) of a system that construct and shape the learner's identity as system-level behavior.** The interactions between the system and its subsets are bidirectional since the system reacts to changes in the lower subsets of the system as well as to stimuli originating from the environment in the form of interactions with other L2 speakers (e.g., peers, teachers, native and non-native L2 speakers) and due to contextual factors. Tasks, teaching and learning methods, requirements, curricula, and the school environment constitute the micro-environment of L2 learning, while the educational, social, and cultural context becomes the macro-environment of SLA. Therefore, I view identity construction as a complex dynamic system in which individual learner characteristics make up the subsets of the system that horizontally and vertically act upon the behavior of the system. This system-level behavior is construed as learners' identity construction in and through the second language. The intermittent lines index potential trajectories of the subsets producing diverse behavioral patterns. The many potential trajectories of IDs are idiosyncratic and prone to changes over time. Despite the potentially infinitive number of system-level behaviors over time, patterns of learner behavior may be detected, ensuring the stability of the system that can be observed by researchers and teachers alike. Therefore, the task of the researcher(-teacher) is to find patterns conducive to successful SLA as macro-level phenomena in an effort to enhance learners' learning experience and their language attainment while averting patterns hampering the success of SLA.

The impact of the learning environment on the psychology of teachers and learners in online and offline education

The micro- and the macro-environment have a great impact on the individual differences and identities of learners and teachers as complex dynamic systems. Therefore, **I expected the sudden switch to online education from offline teaching and learning in 2020 to result in major changes in teachers' and learners' psychological, emotional, and identity responses to L2 use**. To prove this ratiocination, I conducted a study (Fekete 2021) in which I examined teachers' emotional and psychological responses to online education along with their identity as English speakers and as English teachers in offline and online education. The participants were 26 teachers of English teaching either in secondary school or at university from eight countries who voluntarily performed a sentence completion task online describing situations, emotional and cognitive states, and behaviors in offline and online education. The qualitative research design was complemented by descriptive statistics pointing out trends and frequencies characterizing the emerging patterns. While the numerical data showed what was going on with the teachers, qualitative content analysis shed light on the subtle details of the emerging phenomena.

The teachers' linguistic identities associated with English use were characterized by mostly positive emotions, self-fulfillment, and a desire for subjective meaning-making processes in and via English. However, their professional identity construction showed a more heterogeneous picture. While traditional, offline teaching generated positive self-images, self-enhancement, and self-confidence in them, online education triggered negative emotions, negative self-perceptions, anxiety, low self-confidence, and a loss of self-awareness in teachers. The results pinpointed how the change in the educational context as a novel macro-context and the many challenges that teachers faced daily in their online classes as a novel micro-context had an immense impact on their emotional, psychological, and identity responses to their teaching activities in English.

After learning about the psychology of teachers in online education, I embarked on a new project to find out more about **learner behaviors in online classesdrawing on CDST** (Fekete in press). Since the previous study (Fekete 2021) pointed out how drastically environmental changes can affect the individual differences and identities of teachers, I endeavored to examine the changes in learner behavior in the two contexts. This research project involved 27 English teacher trainees who completed

a qualitative questionnaire on their motivation, language anxiety, and willingness to communicate in English in offline and online education. Although the questions were open-ended collecting textual data from students, trends and frequencies were calculated using descriptive statistics.

The results showed significant changes in the students' psychology in the two environments. In offline education, they reported lower levels of anxiety and higher levels of motivation and WTC indicating a psychological state more conducive to successful learning. This state may be perceived as an attractor state of successful learning. By contrast, in online learning, they indicated increased anxiety levels coupled with decreased motivation, and WTC, pointing out a repeller state that is usually inconducive to successful learning. Students' motivation, anxiety, and WTC were fully interconnected and showed stability over time by continuously adapting to change. The results pinpointed a distinction between **display and real communication and WTC** and pointed out **new types of anxiety** that did not emerge in offline education such as **technology anxiety, camera and microphone anxiety, fatigue anxiety, personal interaction deprivation, invasion of privacy, lack of feedback from peers, and lack of communicative success**. The three studies above drawing on CDST revealed how detecting key properties of complex dynamic systems can help educators and researchers understand the psychology of learners and teachers in more profound ways.

Language ecology
Language ecology and SLA

The second holistic approach suitable to examine learners and teachers in their entirety is language ecology. The ecological approach in SLA is inherently linked to socialization denoting a process that enables young individuals and novices to become accepted members of a community by conforming to social and cultural conventions and behaviors agreed upon and expected by a specific community (Ochs & Schieffelin 2017). The ecological perspective has come to be utilized in additional academic fields such as psychology and anthropology, as well as in L1 socialization and SLA research.

Language ecology in SLA utilizes a holistic look at learners and their learning environments pointing out that the language, the learner/speaker of the language, and the environment cannot be separated from one another. Consequently, they should be considered and studied as a dynamic and interacting relationship (Steffensen & Kramsch 2017). Language and language use, therefore, are construed as naturally emerging from interactions between individuals and the individual and their environments. (Steffensen & Kramsch 2017: 1). Ecological linguists scrutinize how natural and social processes impact linguistic patterns and how these patterns, in turn, influence natural and social phenomena.

SLA researchers drawing on language ecology examine how adolescent and adult L2 learners socialized in their L1 culture perceive second language socialization. The ecological view of SLA is dynamic, making it prone to changes over time. Its multiscalar view considers not only the individuals learning/speaking the language but also the educational, social, and historical context in which they learn and use their languages. In addition, the learner's biographical timescales are also taken into account drawing attention to how past experiences shape present and future events, activities, and goals, as well as how future goals affect the learner in the present (Steffensen & Kramsch 2017). Therefore, it does not come as a surprise that the versatile processes embedded in language socialization construct and shape the person's individual and collective identities (Ochs & Schieffelin 2017: 6). In summary, from an ecological perspective, a holistic view is applied to learners, their languages, and their contexts alike.

The impact of language socialization on the linguacultural and motivational profiles of multilingual speakers

To point out the processes outlined above, I outline two of my studies addressing the interacting relationship between language socialization and SLA. The results of this research project are published in

two papers. The first study (Fekete 2023b) addresses how different language socialization processes impact the linguistic and cultural profiles and language learning motivation of 14 multilingual speakers in an English instruction university course. The participants came from five countries and spoke different mother tongues, but they all drew on English as a lingua franca (ELF) (Jenkins 2007) and as an intercultural language (Byram 2008, Fekete 2022) in the classroom. While eight students were Hungarian, six were international students from Indonesia, Spain, Ukraine, and Bosnia-Hercegovina. To collect data for the research, students were invited to write their linguistic autobiography, which is an unstructured essay about their life journey shaped by languages. This also served as a course requirement integrated into the course with pedagogical goals.

The textual datasets revealed two distinct trends characterizing the participants' linguistic and cultural profiles. Students who had been socialized in multilingual environments spoke 4-5 languages while students who had been socialized in a monolingual environment spoke only 3 languages resulting from a secondary school regulation requiring Hungarian learners to learn two foreign languages in secondary school in addition to their mother tongue. Students having been socialized in a multicultural or multiethnic environment reported having been exposed to 2 or 3 cultures and 1 or 2 sojourns. By contrast, students having been socialized in a single linguacultural environment reported having been exposed to only their home culture and only one student in this cohort had experienced sojourn.

The results pointed out that **exposure to more languages and cultures results in the attainment of more languages**. In addition to heritage, ethnic, and foreign languages, these learners wanted to learn additional languages in their free time, as SLA seemed to have become a natural part of their lives, and they experienced intrinsic, integrative, and instrumental motivation when learning languages. By contrast, students who had only been exposed to their mother tongue and culture only learned as many foreign languages as was compulsory in their formal education. They perceived formal SLA as a struggle and reported many negative experiences associated with L2 learning and only succeeded in attaining high proficiency in English but not in their other foreign language. Their SLA was mostly characterized by extrinsic and instrumental factors, and they rarely experienced joy and intrinsic motivation in their language classes. Therefore, they were not motivated to learn additional languages in their free time; rather, they reported being satisfied with their English knowledge. The results of the study highlighted **the profound impact of language socialization on learners' linguacultural profiles and language learning motivation**.

The impact of language socialization on psychological, emotional, and identity responses to SLA

The second study (Fekete 2023a) featuring special cases from the same research project calls attention to **how different socialization processes result in different psychological, emotional, and identity responses to SLA**. Two special cases emerged in the data collected via the linguistic autobiographies.

Tamara was raised in a Hungarian family by a Hungarian-speaking mother and a father who had achieved a pseudo-native proficiency level in German. Therefore, to raise a bilingual child, the father decided to talk with Tamara using only German while other family members and the outside world interacted with her in Hungarian. This unique socialization process immensely impacted the psychology of the child triggering short-term and long-term emotional and psychological responses in her. Later, Tamara's language socialization, turned out to be incompatible with the socialization practices of the elementary school she attended, generating further negative emotions and experiences in her associated with German learning and use. The many negative socialization experiences and emotions led to Tamara's giving up on learning and using German despite her achieving a high proficiency level in the language.

*From the moment I was born my mom talked to me in Hungarian and my dad in German. I have to be honest, I did not always enjoy the situation. Though I never had any real problems with being bilingual, **I did refuse to answer in German to my dad** (most of the time) because I was naive and stubborn as a child. It did not bother him that much, the point was that I was able to speak German whenever I felt like it and I understood everything I had to. … It was **very difficult for me to enjoy German classes since I already knew everything**… So, she [the teacher] gave us a simple task, which was to write a sentence in German, containing the vocabulary we were learning at the time. When everyone was ready, it was time to read out loud a couple of them and I was asked to read mine as well. I did, and after I finished, my teacher sighed. Then she proceeded to scold me in front of the whole group for "using a sentence structure we will be learning next year". I was really surprised and honestly, **it mademe feel guilty and bad**. I am being one hundred percent honest when I say I did not want to brag or show off how good I am in German. … Most of the time I was teased for being "a nerd" when it comes to languages, so I would rather stay quiet unless I was asked. … **I haven't spoken any German in years. I am kind of ashamed of this** and haven't really talked about it to anyone, but my German got really rusty in the past three years. … I hope to have children in the future, and I most definitely want them to be bilingual, just like me and my little brother. Unfortunately, **I doubt I will be able to use German like my dad did, but I think English will work perfectly** as well.* (bold by author)

Tamara's problems with SLA stemmed from unique socialization processes first in the family and then in education. In her case, German learning became a family affair and so family dynamics became part and parcel of her SLA. Therefore, Tamara's unwillingness to speak German with her father did not originate from linguistic difficulties but from a unique socialization process that made her different from the rest of her Hungarian-speaking family and the rest of the Hungarian-speaking children and adults around her, possibly resulting in a sense of social isolation or alienation. In the educational context, despite being proficient in German, she encountered negative emotions and experiences associated with German learning in the classroom. Hungarian schools, especially smaller elementary schools, are mostly unprepared to teach more advanced language learners in a beginner group. Therefore, yet again she experienced alienation for being more proficient than her peers and her teacher did not handle the situation professionally. Unfavorable teaching methods and bullying resulted in Tamara's high anxiety level and demotivation in the classroom. Despite the family's efforts to raise bilingual children, Tamara gave up learning and using German, which generated guilt and frustration in her, poisoning her relationship with the language. Feeling frustrated and guilt-ridden, she embraced English learning instead, which generated positive psychological, emotional, and identity responses in her and thus completely transformed her life and her identities in a way that German could not.

Sarah had learned English and German as a foreign language in formal education because secondary schoolers are required to learn two foreign languages in Hungary. She perceived formal SLA as a struggle and a highly anxiety-producing situation. However, unlike other Hungarian students, she experienced a sojourn while working as an au pair in Sweden where she also learned the local language and had a Swedish boyfriend. The experience was transformative for her: upon returning home, she decided to pursue a BA program in English Studies and later she took up learning Russian to complete a minor in the language.

*I was tested whether I had memorized the vocabulary at home or not and received a bad grade if I took a grammatical mistake or misspelled a word. **Language learning started tolook like other classes I was generally tired of,** such as Math, **which made me dislike English**.*
*… [Later in high school] I can recall **feeling incredibly anxious** to make a grammatical mistake not only in front of the native speakers but the English teacher too. In that period of my language-learning journey, I started to connect the English language with the anxiety of performing well, of*

*not making any grammatical errors. … I moved to **Sweden** to become an au pair. … not only the level of my English proficiency started to enhance significantly, as I could only use English to express myself, but I also started to **'think in English'**. … **Influencedby the culture and the people**, I had spent time with, this other self was imbued with ideas of feminism, the importance of community, and positivity. What is more, while in Hungary I used to remain in my comfort zone by preferring to communicate with the circle of my friends and family, **in the foreign environment** by encountering people from various ethnicities and countries with diverse ideas and beliefs, **I noticed that I was acting like anextrovert when I used English**.* (bold by author)

Moving to Sweden and thus abandoning the old socialization context (i.e., Hungarian formal education) replete with negative social and psychological experiences was a liberating experience for Sarah because in the new socialization context, English learning and use centered around successful communication, meeting people from diverse linguacultural contexts using ELF as intercultural communication, and seeing the world from new perspectives, which enhanced her international posture (Yashima 2009) as an English speaker, shaped her identities, and impacted her life choices. This transformative experience reduced her language anxiety and boosted her linguistic confidence, ultimately motivating her to learn more languages. The transformation she went through in Sweden was linguistic, psychological, social, and cultural, shaping her various identities and generating positive psychological and emotional responses in her. Motivated by the experience, she decided to enroll in the BA in English Studies Program and learn Russian. After graduation, she landed a job in which she could utilize the various languages she spoke.

To experience positive transformation along with positive emotional, psychological, and identity responses to SLA, Tamara left behind the world of German and embraced the favorable emotional, psychological, and social transformative potential and identities afforded by English while Sarah left Hungary to experience SLA as a liberating and eye-opening experience in Sweden that later transformed her identities and her life. The two studies delineated above pinpoint how early and late language socialization has a transformative impact on the L2 learning and life trajectories of multilingual speakers and how changing language socialization contexts interwoven with novel experiences and processes can be a liberating experience for language learners.

The post-structuralist view of identity and emotions in SLA

The post-structuralist view of successful L2 learning is not related to proficiency levels and test results; rather, it is construed in terms of how **meaningful and transformative SLA** is for learners, generating emotional responses to SLA in learners (Fekete 2020, Kramsch 2009). This points out **the embodied nature of language learning** involving learners' brain, mind, and body (Damasio 1994). Kramsch (2009) put forth two interpretations of L2 learning and use as symbolic activities.

On the one hand, **language use is symbolic** because language consists of a set of symbols that represent the social and psychological reality of a speech community agreed upon by social convention. When language learners use the L2 to conform to linguistic and cultural conventions, they are granted symbolic power to enter a historical speech community. However, conforming to such conventions confines SLA by language learners to conventional L2 use. On the other hand, being non-native speakers of the L2, language learners may have ideas and thoughts they have never had before, and oftentimes these subjective meaning-making processes do not follow the conventions agreed upon by the L2 community, providing learners with symbolic space and freedom to subvert conventions and create their subjective ideas, dreams, fears, and projections associated with the L2, the L2 culture or the L2-speaking community. The two types of symbolic language use point out that language and culture and intertwined in SLA and that SLA is embodied triggering a range of emotions in multilingual speakers.

L2 learners heavily draw on their **imagination** to enter new communities using the L2 when they conform to rules or when they create their subjective associations, meanings, ideas, fears, desires, and aspirations related to the L2 or the L2-speaking community, thus utilizing both types of symbolic language use (Kramsch 2009, Norton 2013). This resonates with Anderson's (1983: p. 48) idea that people live in an imagined community. In the same vein, Wenger (2000) proposed the concept of the community of practice that individuals seek to be part of. Both concepts point out that individuals draw on their imagination to belong to certain social, cultural, professional, and linguistic communities.

Language learners invest in their identitieswhen they decide to **learn and use a new language**, pointing out their **desire for self-fulfillment in and through languages** (Kramsch 2009, Kristeva 1980). Some learners embrace the linguistic, emotional, and psychological transformation afforded by the new language along with the sociocultural dimensions encoded in it. Learners displaying a desire to fulfill themselves and their lives via languages draw on the transformative capacity of the new language that enables them to become a "different" person when speaking the L2 while freeing them from the linguacultural limitations implanted in their L1 and L1 culture.

Fekete (2018, 2020, 2023c) coined the term **the language learner's imagined L2 habitus** to point out how some learners speak, think, feel, and behave differently in the L2 compared to how they would do so in their L1.

> Sometimes when I use English… I feel that I am **a different person**. It is like **play-acting.** When you speak in a foreign language, you **want to sound as native as possible** and in order to do so, you **act differently** because you act. And that's like **another version of you**. When I use English, I feel like I'm **thinking differently**. I think I can express myself in English better. I can **talk more freely**, which gives me **more confidence**. When I am abroad and use English…, it feels like **a fresh start**.

> I am **louder in English, my Korean voice is higher, I act more feminine**, and I am not so loud. **My English voice is a lot higher pitched**; my Hungarian, I think, is a lot deeper. Because of that **I always feel it is a lot friendlier and warmer** if you see what I mean, more welcoming. (bold by author)

These learner statements point out how imagined and real-life experiences shape multilingual speakers' identities that act upon the way they speak, think, feel, or behave when switching to their L2 (Fekete 2020). Multilingual speakers embracing the transformative potential of the L2 act upon their desire to fulfill themselves and reconstruct their lives and identities via the new language on which they draw as a novel way of self-expression (Kramsch 2009). For example, Tamara embraced the psychological, sociocultural, emotional, and professional transformation that English provided her with resulting in her abandoning the realm of German. Similarly, Sarah cherished the transformation she underwent in Sweden, and she acted upon these processes when returning to Hungary.

However, some multilingual individuals firmly deny or reject any transformation (to be) experienced in and via SLA. Instead, they embrace the familiar meaning-making processes embedded in their mother tongue and culture. The linguistic, social, or cultural identities of multilingual speakers are threatened by the transformative capacity of the new language in which L2 sociocultural and ideological perspectives are encoded. Their refusal to embrace any L2-related transformation only indexes the magnitude of the transformative potential of SLA potentially impacting the multilingual individual's various identities (Kramsch 2009). The following excerpt from a student's linguistic autobiography pinpoints the learner's desire to fulfill himself via his mother tongue and mother culture.

> I cannot think about any other country, which I would call "home." This is the place where I grew up. **I laugh, cry, love, grieve, and think about everything in Hungarian**. I love our culture, including gastronomy, folklore, literature, and all that. I cannot imagine establishing a family abroad. I know that if I do that, then my children might not, but my grandchildren would eventually lose their

*Hungarian identity. I do not want this**. I am a proud Magyar [Hungarian], even my mother's last name is 'Magyar', and so I will be a Magyar until I die**.* (bold by author)

Researchers (Fekete 2020, Kramsch 2009, Ótott 2023) confirmed that (type 1 or 2) **desire** is an important and inherent emotional response to SLA. Related to desire, a sense of **freedom** was reported to be another significant emotional response resulting from a desire to achieve self-fulfillment via language.

*I often feel that it is **more comfortable** to use it [English] than Hungarian.*
*Well, sometimes I feel that **I can express myself much more accurately in English** than inmy mother tongue.*

These learners utilize **conceptual blending** (Fauconnier & Turner 2002) to draw on the English meaning of freedom instead of the Hungarian meaning of the word. The historical-cultural connotation of freedom in Hungarian is freedom from restraint and freedom from domination while the English meaning of the word is associated with the freedom to act, do something, and become a person one desires (https://en.oxforddictionaries.com/definition/freedom). In this case, conceptual blending facilitates the multilingual speaker's desire to feel, think, speak, and act differently in the L2 in a way that is liberating for the individual. Therefore, the feeling of freedom experienced by these English learners does not stem from their proficiency level being at the upper B2 level but from the cultural connotation of the words in English.

Pain is yet another emotional response reported by L2 learners, since with a new language always comes a new consciousness (Lacan 1977), which may be a painful experience for learners. This emotional response results from the first type of symbolic language use requiring learners to conform to linguistic, social, and cultural conventions when using the L2. The following testimony is like a religious confession imbued with powerful emotions.

*The other activity when I prefer my second language is writing my diary or just putting my thoughts and ideas on a piece of paper. Sometimes it is painful to recognize your mistakes, but if you admit them in a different language: they are not your **sins** anymore. You confess them and do not at the same time, and it gives you relief.* (bold in original)

Related to pain, L2 identities are often a place of **struggle** as described by Sarah when she returned to her home environment being a 'different' person.

*I was **struggling to identify myself with either the Hungarian or the English self**: I could neither entirely associate myself with my former Hungarian self, constrained both linguistically and culturally… **My English self was different from the Swedish people** because it adopted ideas and beliefs from various cultures. At that time, I also managed to learn Swedish on an elementary level and dated a Swedish boy, thus I was constantly struggling to identify myself. **I was not satisfied with my Hungarian self or my English (or multilingual) self**.* (bold by author)

Sarah's testimony sheds light on the heterogeneous, fragmented, incomplete, and contradictory nature of identity, especially due to intense linguacultural stimuli. The above-presented excerpts from different studies (Fekete 2018, 2020, 2023c) point out that SLA is embodied and that it acts upon learners' various identities resulting in different emotional, psychological, and identity responses. Researchers (Fekete 2020, Kramsch, 2009; Ótott, 2023) revealed that **desire, freedom, pain, and struggle are recurring emotional and identity responses to SLA**.

Conclusions

My interdisciplinary research approach allowed me to combine and thus reconcile two seemingly contradictory research approaches: traditional IDs research focusing on a select of factors and holistic research into individuals and their identities examining special cases. By involving a relatively high number of participants (between 14 and 38) in my case studies, I could reveal patterns, calculate trends and frequencies, and thus draw some general conclusions from the emerging patterns. On the other hand, the collected qualitative datasets shed light on the whys and hows of the trends explaining subtle details and idiosyncrasies.

Drawing on CDST, I integrated identity with other individual differences research, which is a major development in the classification and interpretation of individual differences. I construe **identity construction as a complex dynamic system of perpetually interacting individual differences that respond to learner-internal changes as well as to environmental stimuli**. In addition, I detected **different behavioral patterns in offline and online education** and pointed out how key properties of complex dynamic systems emerge in the psychology of learners and teachers.

Language ecology focuses on how past and present socialization experiences and processes as macro- and micro-contextual stimuli impact the individual. In the field of SLA, ecological linguists examine the impact of the language learner's past L1 and L2 socialization processes on SLA and the interaction between past experiences, present processes, and future goals. Drawing on the ecological perspective in SLA, my studies pointed out **how past formal and informal L1 and L2 socialization processes shape multilingual learners' language learning trajectories, motivation, and linguacultural profiles, as well as their emotional, psychological, and identity responses to the various languages they speak**.

Post-structuralist research into SLA looks at how multilingual individuals construct consciously or unconsciously and drawing on their imagination and real-life experiences their various identities in the different languages they speak in response to their symbolic language use and their desire to fulfill themselves in and via languages as well as in response to social interactions. Such transformative experiences trigger emotional responses in learners pointing out the fact that SLA is embodied. My research showed that **desire, pain, struggle, and freedom are recurring, powerful, and transformative emotional and identity responses to SLA**. Consequently, **the language learner's imagined L2 habitus** points out how multilingual individuals speak, think, feel, and behave differently using different languages.

In conclusion, the three approaches presented in the paper originating in different disciplines have the following important principles in common. They take a holistic look at multilingual individuals in their entirety and complexity. They regard learner-internal factors and environmental stimuli including the languages spoken by the individual as a dynamic and perpetually interacting relationship that has a major impact on SLA.

References

Anderson, B. (1983). *Imagined communities: Reflections on the origin and spread of nationalism.* Verso.

Byram, M. (2008). *From foreign language education to education for intercultural citizenship*. Multilingual Matters. doi:10.21832/9781847690807

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches.* Sage.

Bailey, K. M. (1983). Competitiveness and anxiety in adult second language learning: Looking at and through the diary studies. In H. Seliger & M. H. Long (Eds.), *Classroom oriented research in second language acquisition* (pp. 67-103). Newbury House.

Damasio, A. (1994). *Descartes' error: Emotion, reason, and the human brain*. Putman Books.

Deci, E. L., Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior.* Plenum.

Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in secondlanguage acquisition.* Lawrence Erlbaum.

Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative and mixed methodologies.* Oxford University Press.

Dörnyei, Z., Ryan, S. (2015). *The psychology of the language learner revisited*. Routledge.

Ellis, N. C., Larsen-Freeman, D. (2006). Language emergence: Implications for applied linguistics – Introduction to the special issue. *Applied Linguistics,* 27(4): 558-589.

Ellis, N. C., Larsen-Freeman, D. (2009). *Language as a complex adaptive system*. Wiley-Blackwell.

Fauconnier, G., Turner, M. (2002). *The way we think.* Basic Books.

Fekete, A. (2018). *Exploring advanced English learners' multilingual identity construction from multiple perspectives.* (Doctoral dissertation, University of Pécs. Retrieved from:http://nydi.btk.pte.hu/content/exploring-advanced-english-learners-multilingual-identityconstruction-multiple-perspectives?language=en Accessed on 31 October 2023.

Fekete, A. (2020). Desire, freedom, and pain in English learners' emotional responses to SLA: A holistic look at English learners' multilingual identity construction. *ERL Journal,* 2(4), 84-99.

Fekete, A. (2021). Examining teachers' well-being during the pandemic: A mixed methods study on teachers' psychological, emotional and identity responses to online education. *ERL Journal,* 2(6), 46-65.

Fekete, A. (2022). Introducing an identity-based model of teaching and facilitating intercultural communication: A learner centered approach. In E. Charamba (Ed.) *Handbook of Research on Teaching in Multicultural and Multilingual Contexts* (pp. 391-430). IGI Global.

Fekete, A. (2023a). The impact of socialization in the context of family, education, and sojourn on emotional, psychological, and identity responses to language learning and use: a language ecological perspective. *Educational Role of Language Journal,* 1(9), 94-110.

Fekete, A. (2023b). The impact of language socialization on the language learning motivation of multilingual learners. *Linguo Didáctica,* 2,70-88.

Fekete, A. (2023c). Linguistic and cultural identities, emotions, and attitudes towards varieties of English in interpreting: A case study of an interpreter. In A. Fekete, K. Farkas, R. Lugossy, K. Simon (Eds.) *UPRT 2021: Empirical studies in English applied linguistics* (pp. 19-40)*.* Lingua Franca Csoport.

Fekete, A. (in press). Understanding changes in motivation, anxiety, and willingness to communicate in online and offline education from the perspective of complex dynamic Systems Theory. In M. D. Ramírez-Verdugo (Ed.) *Interdisciplinary Research and Innovation in Bilingual and Second Language Teacher Education.* Routledge.

Hall, S. (1996). Introduction: Who needs 'identity'? In S. Hall & P. du Gay (Eds.), *Questions of cultural identity* (pp. 1-17). SAGE Publications.

Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review,* 94(3), 319-340.

Jenkins, J. (2007). *English as a lingua franca: Attitude and identity.* Oxford University Press.

Kramsch, C. (1998). *Language and culture.* Oxford University Press.

Kramsch, C. (2009). *The multilingual subject.* Oxford University Press.

Kristeva, J. (1980). Word, dialogue and novel. In L. S. Roudiez (Ed.), *Desire in language: A semiotic approach to literature and art* (pp. 64-91). Colombia University Press.

Lacan, J. (1977). *Écritis: A selection.* (A. Sheridan, Trans.). Norton.

Larsen-Freeman, D. (1997). Chaos/complexity science in second language acquisition, *Applied Linguistics,* 18(2), 141-165.

Larsen-Freeman, D. (2017). Complexity theory: The lessons continue. In L. Ortega & Z. H. Han (Eds.), *Complexity theory and language development: In celebration of Diane Larsen-Freeman* (pp. 51-58). John Benjamins Publishing Company.

Larsen-Freeman, D., Cameron, L. (2008). *Complex systems and applied linguistics.* Oxford University Press.

Markus, H. R., Nurius, P. (1986). Possible selves. *American Psychologist,* 41, 954-969.

Neisser, U. (1988). Five kinds of self-knowledge, *Philosophical Psychology,* 1(1), 35-59.

Norton, B. (2013). *Identity and language learning: Extending the conversation* (2nd ed.). Multilingual Matters.

Nowak, A., Vallacher, R. R., Strawinska, U., Brée, S. (2013). Dynamical social psychology: An introduction. In A. Nowak, K. Winkowska-Nowak, & S. Brée (Eds.), *Complex human dynamics: From mind to societies* (pp. 1-20). Springer-Verlag.

Ochs, E., Schieffelin, B. (2017). Language socialization: A historical overview. In P. Duff & S. May (Eds.) *Language socialization* (3rd ed.) (pp. 3-16). Springer.

Ótott, Zs. (2023). Changing lives via language learning: A case study of language majors' linguistic identity construction. In A. Fekete, K. Farkas, Lugossy, R., K. Simon (Eds.). *UPRT* 2021: S*tudies in English applied linguistics* (pp. 2-18). Lingua Franca Csoport.

Steffensen, S. V., Kramsch, C. (2017). The ecology of second language acquisition and socialization. In P. Duff & S. May (Eds.), *Language socialization* (3rd ed.) (pp. 17-28). Springer.

Wenger, E. (2000). Communities of practice and social learning systems, *Organization,* 7(2), 225-246.

Yashima, T. (2009). International posture and the ideal L2 self in the Japanese EFL context. In Z. Dörnyei & E. Ushioda (Eds.), *Motivation, language identity and the L2 self* (pp. 144-163). Multilingual Matters.